

## **The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management**

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### **I. Introduction**

The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (Joint Convention) was adopted on 5 September 1997 – after two years of *travaux préparatoires* – by 84 states at a Diplomatic Conference convened at Vienna by the International Atomic Energy Agency (IAEA).<sup>1</sup>

The Joint Convention was opened for signature on 29 September 1997 in conjunction with the 41<sup>st</sup> session of the General Conference of the IAEA. As of one week following opening for signature, 23 states had signed the convention.

The convention will enter into force on the 19<sup>th</sup> day after the 25<sup>th</sup> instrument of ratification is deposited with the IAEA, including the instruments of 15 states that each have an operational nuclear power plant.

### **II. The Joint Convention (a summary description)**

The convention combines two discrete subject matters, namely the safety of spent fuel management and the safety of radioactive waste management in a “joint” structure which constitutes its essential originality.

There is a common Preamble and common Chapter 1 on “Objectives, Definitions and Scope of Application”, which sets out the two distinct subjects; Chapters 2 and 3 contain parallel sets of requirements governing the “Safety of Spent Fuel Management” and the “Safety of Radioactive Waste Management”; Chapter 4 “General Safety Provisions” contains those requirements which apply both to the safety of spent fuel management and to the safety of radioactive waste management; Chapter 5 entitled “Miscellaneous Provisions” covers the transboundary movement of spent fuel and radioactive waste and, separately, legal commitments concerning disused sealed sources. Finally, Chapters 6 and 7

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1. The text of the Joint Convention and the summary records of the plenary meetings are contained in IAEA document GOV/INF/821-GC(41)/INF/12.

on “Meetings of the Contracting Parties” and “Final Clauses” again join both spent fuel and radioactive waste management.

### *The Preamble*

The Preamble, drafted as a quasi resolution, consists of explanatory elements regarding certain provisions in the convention text, elements that found no consensus to be written as obligations and, given the subject matter of the convention, a reference to a broad array of other instruments of a binding and non-binding nature relating to nuclear safety, adopted under IAEA auspices, and, reflecting environmental consensus, a reference to Agenda 21 as well as to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention).

Particularly worth mentioning are paragraphs (i), (ii), (iii) and (vii) of the Preamble which explain, in short, why the joint structure for the convention was adopted, paragraphs (ix) and (x) of the Preamble on technical co-operation originally drafted as obligations under the convention, and paragraph (xi), an attempt to combine the concept that waste should be disposed of in the state in which it was generated with the possibility, or even encouragement to establish regional or international repositories, should safety and efficiency criteria so warrant. The concept of public participation in the siting process is also confined to a preambular paragraph.

### *Objectives, definitions and scope of application*

In addition to the general premises enumerated in the Preamble, the convention defines in Article 1 three sets of “objectives”: (i) the General Nuclear Safety Objective, (ii) the Radiation Protection Objective and (iii) the Technical Safety Objective.<sup>2</sup>

Article 3 on “scope of application” is focused predominantly on specific activities rather than on substances.

Pursuant to this article, the convention applies, with certain restrictions to: (i) the safety of spent fuel management, defined as “all activities that relate to the handling or storage of spent fuel, excluding off-site transportation”, (ii) the safety of radioactive waste management, defined as “all activities, including decommissioning activities, that relate to the handling, pretreatment, treatment, conditioning, storage, or disposal of radioactive waste, excluding off-site transportation”, (iii) the safety of management of spent fuel or radioactive waste resulting from military or defence programmes (if and when such materials are transferred permanently to and managed within exclusively civilian programmes, or when declared as spent fuel or radioactive waste for the purpose of the convention by the Contracting Party) and (iv) to discharges, defined as “planned and controlled releases into the environment, as a legitimate practice, within limits authorised by the regulatory body, of liquid or gaseous radioactive materials that originate from regulated nuclear facilities during normal operation”.

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2. The convention thereby strictly follows Article 1 of the Convention on Nuclear Safety (for further reference see article by Odette Jankowitsch on the Convention on Nuclear Safety, *Nuclear Law Bulletin* No. 54/1994).

## ***Obligations***

The obligations to be undertaken by the Contracting Parties are principally of two types.

The first type are general obligations *de moyens* contained in Chapters 2, 3 and 4 and are based to a large extent on modified provisions of the Convention on Nuclear Safety and on the principles contained in the IAEA Safety Series document No. 111-F, “The Principles of Radioactive Waste Management”. In particular, they require Contracting Parties to take the appropriate legislative, regulatory and administrative measures to govern the safety of spent fuel and radioactive waste management and to ensure that individuals, society and the environment are adequately protected against radiological and other hazards, *inter alia*, by appropriate siting, design and construction of facilities and by making provision for ensuring the safety of facilities both during their operation and after their closure.

The second set of obligations contained in Chapter 6 of the convention is of a different nature. It is the reporting and peer review mechanism which is directly binding on Contracting Parties.

## ***Final clauses***

Chapter 7 of the convention contains the Final Clauses:

### ***(a) Resolution of disagreements***

The convention, in keeping with the peer review mechanism, provides only for a simple consultation mechanism to resolve disputes. Article 38 of the convention provides that Parties “shall consult within the framework of a meeting of the Contracting Parties with a view to resolving the disagreement”. Only in the event that these consultations prove unproductive can recourse be made to mediation, conciliation and arbitration mechanisms.

### ***(b) Reservations***

No provision is included in the convention regarding reservations, it being understood that in the absence of such a clause, should a Contracting Party choose to make a formal reservation, the mechanism foreseen under Articles 19 *et al.* of the Vienna Convention on the Law of Treaties would apply.

### ***(c) Signature, ratification, acceptance, approval, accession***

The convention is subject to ratification, acceptance or approval by the signatory states; after entry into force it is open for accession by all states. As in most of the international instruments of a more recent date, the article on signature, ratification, acceptance, approval and accession provides for the accession by “regional organisations of an integration or other nature, provided that any such organisation is constituted by sovereign States and has competence in respect of the negotiation, conclusion and application of international agreements in matters covered by the Convention”. What is

referred to here is the European Union, which may claim a certain competence in respect of specific matters regulated by the Joint Convention, notably questions of radiation protection.<sup>3</sup>

### *(d) Amendments*

Also in keeping with the nature of the convention and its peer review mechanism, amendments to the convention can only be made through a stringent formal amendment process laid out in Article 41. Amendments eventually require the convening of a diplomatic conference and a two-thirds majority.

### *(e) Denunciation*

The convention is of unlimited duration. However, each Contracting Party has the right to withdraw from the convention, without providing reasons, by way of written notification to the depositary. Denunciation takes effect one year – or later if so required – following the date of receipt of the notification by the depositary.

### *(f) Secretariat*

According to Article 37 of the convention, the IAEA shall provide the secretariat for “meetings of Contracting Parties” under the peer review mechanism. Other services which Contracting Parties may also require in support of these review meetings shall either be provided by the IAEA in the frame of its regular programme and budget or as a separately funded activity.

According to Article 43, the Director General of the IAEA is the depositary of the convention.

## **III. The Negotiation Process**

### ***III.1 The initial consensus***

During the development of the Convention on Nuclear Safety in the early 1990s, a group of like-minded states argued that all safety issues related to the production of nuclear energy including those related to the management of radioactive waste should be covered by that convention. No consensus was reached on this, and the scope of that convention was therefore limited to the safety of civil nuclear power plants. Preambular paragraph (ix) of that convention, however, did affirm “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”.<sup>4</sup>

This phrase clearly demonstrated that the process of international law making on nuclear safety was not yet completed. Consequently, the Agency’s General Conference in September 1994 “invite[d] the Board of Governors and the Director General... to commence preparations for a convention on the safety of radioactive waste management...”<sup>5</sup> Pursuant to that resolution and following agreement by

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3. See Articles 35 *et al.* Euratom Treaty.

4. INFCIRC/449, IAEA Legal Series No. 16.

5. GC (XXXVIII)/Res/6.

the Board of Governors at its December 1994 session, the Director General convened an open-ended meeting of experts from Member States with the objective of holding preliminary discussions on basic concepts and the possible scope of such a convention and to examine working mechanisms and procedures for its preparations. That meeting was held at the Agency's headquarters in February 1995. The Secretariat of the IAEA at that time provided participants with a list of reference material and a note on conventions and other instruments that could be consulted in the preparation of a convention. The modest outcome of this meeting was an "inventory of issues raised" and a request that the Agency, following concurrence by the Board of Governors, convene a group of experts on a convention on the safety of radioactive waste management.

The IAEA's Board of Governors in March 1995 approved the convening of such a group of experts and at the same time also adopted the relevant Safety Series Document at the fundamentals level, namely that on "The Principles of Radioactive Waste Management".<sup>6</sup> Having so been provided with a generally accepted guide to best practices in this area, the condition contained in the Preamble of the Convention on Nuclear Safety was met and the road was paved for the work of the group of experts to commence.

The first meeting of what then became a formal Group of Legal and Technical Experts on a Convention on the Safety of Radioactive Waste Management open to all states was held in Vienna in July 1995 with well over 100 participants from 53 countries and observers from four international organisations. The meeting elected Professor Alec Jean Baer, the former Deputy Director General of the Federal Office for Energy of Switzerland, as its chair.

Based on the broad consensus just reached in the Convention on Nuclear Safety on main modalities, language and implementation mechanism, work on the future instrument seemed to be clearly marked: to many experts, there already existed a blueprint for the new instrument; indeed even the technical input was available and generally agreed. It was therefore no surprise that the first meeting of the Group of Experts rapidly agreed on the following points:

- that the Convention on Nuclear Safety was to be considered as a model for the Convention on the Safety of Radioactive Waste Management, notably, that it should also be an "incentive" convention, a term created during the negotiating process of the Convention on Nuclear Safety;
- that a Convention on the Safety of Radioactive Waste Management should take over where the Convention on Nuclear Safety ceases to apply so as to avoid gaps in coverage; and
- that consideration should also be given to including in the convention the substance of the IAEA Code of Practice on the International Transboundary Movement of Radioactive Waste.

Regarding the technical aspects of the convention, there was broad agreement that the general message embodied in the Safety Series Document No. 111-F, as adopted by the IAEA Board of Governors in March 1995, was suitable for incorporation in the convention and that even a number of safety related provisions which are contained in the Convention on Nuclear Safety could be transferred to the new convention, of course, with the appropriate adjustments and changes in wording.

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6. The "Principles of Radioactive Waste Management", IAEA Safety Series No. 111-F.

Finally, the Group of Experts felt that the convention should apply to the full range of radioactive wastes as described in the Safety Series Document No. 111-F, namely to radioactive wastes in “liquid”, “gaseous” and in a “solid form”.

### ***III.2 The first draft text***

With these conclusions, the basic concepts for the convention appeared to be clearly laid down and the chair of the Group of Experts was thus assigned the task of producing a first draft text for consideration at the next meeting – without any request for national positions or drafted contributions by other experts.

The chair prepared his first draft text in the summer months of 1995 in consultation with so-called “friends of the chair”, a small group of national, mainly technical experts in the field of radioactive waste management and with the help of the IAEA Secretariat.

Basically, all articles of the Convention on Nuclear Safety except for Article 12 on “Human Factors”, and the “Principles of Radioactive Waste Management” as contained in the Safety Series Document No. 111-F found their counterpart, with appropriate modifications, in the first draft text of the convention.

The chair’s first draft achieved wide support at the second meeting of the Group of Experts in December 1995 and was considered a very good basis for further discussion. Consequently, the second and also the third meeting of the Group of Experts mainly focused on an article-by-article review of the first draft text and within the fairly short period between July 1995 and April 1996, the Group of Experts was able to agree on most of the radioactive waste management provisions in the convention.

With that consensus achieved, it seemed that the Group of Experts, from their fourth meeting on, could focus on refinement of the draft.

Specific elements, however, which had been shelved during the first three meetings of the Group of Experts and which went beyond the original understanding of the Group i.e. the modified contents of the Convention on Nuclear Safety and the IAEA Safety Series Document No. 111-F, had to be added. The entire negotiating and drafting process concentrated thereafter on these specific issues, some of them only to be resolved at the Diplomatic Conference, or even not resolved, thus resulting in a voted majority adoption of the instrument.

### ***III.3 The search for a new consensus: specific elements of disagreement***

#### ***(1) The subject of spent fuel and the concomitant question of the structure of the convention***

The first and single most important issue of the negotiation was the subject of spent fuel and inseparable therefrom the question of the structure of the convention.

The Group of Experts was faced with the problem of whether or not a convention covering the safety of radioactive waste could and should include or exclude the safety issue associated with what, in fact, can be defined as a “mixture” of radioactive waste and other material, called spent fuel.

Initially, a number of countries, notably these concerned with reprocessing, were opposed to the inclusion of spent fuel in a Convention on Radioactive Waste. Various arguments were forwarded: one

of the arguments was that the Group of Experts as established by the Board of Governors had no specific mandate to consider spent fuel, as its mandate seemed to read as *expressis verbis* limited to radioactive waste. Another argument was that spent fuel, considered a resource as part of the nuclear energy production cycle, could not legally be included in any definition of radioactive waste – or associated with the phrase generally applied “for which no further use is foreseen”. National policy arguments were raised.

After a long impasse, an informal open-ended meeting of the Group of Experts expressly devoted to this issue was convened by the chair of the Group in September 1996. The negotiating problem seemed to be how to reach a common denominator – a common basis – for three divergent schools of opinion: some states advocating a single text, still modeled on the Convention on Nuclear Safety, which would include radioactive waste and also spent fuel; others, as mentioned above, remaining strictly opposed to any attempt to address spent fuel and, a third group arguing for two texts, a double or two-track text which would sufficiently separate the two subject matters and at the same time cover the common denominator, namely the safe management of certain nuclear matters not regulated elsewhere. Among the latter school of opinion proposals circulated for twin conventions, i.e. two separate instruments adopted at the same time or a main convention and an optional protocol on spent fuel.

A first breakthrough was achieved during the fifth meeting of the Group of Experts in South Africa in November 1996, a meeting which was originally designated to focus on general topics, in particular those relevant to African countries: (i) France submitted a proposal for a single convention text with two parallel sets of requirements, one on the safety of spent fuel management and one on the safety of radioactive waste management in an order reflecting the logical sequence of the nuclear fuel cycle; (ii) the Group objected in principle to an additional protocol on spent fuel which entailed the risk of two sets of Contracting Parties or, worse, a protocol treated as an option; and (iii) the Group was concerned that two legally separate instruments may create a lacuna in the safety regime of spent fuel and radioactive waste, as states may choose not to sign or ratify a protocol (as it turned out later, it was in fact the inclusion of spent fuel in the Joint Convention that ensured that there would be no gap with the scope of application of the Convention on Nuclear Safety). The concept of a “joint convention” therefore prevailed from the sixth meeting onward, based on the consensus that the safety of management as the common denominator for both types of materials would justify the common legal instrument.

### (2) *The relation of the Joint Convention with the Convention on Nuclear Safety*

A second specific element of both technical and legal relevance was that of the relation of the Joint Convention with the Convention on Nuclear Safety.

Three issues emerged in this context: (i) the question of a possible overlap of the two conventions both applying to radioactive waste “on site”, (ii) the coverage of nuclear installations that ceased to be covered by the Convention on Nuclear Safety and therefore the possibility of a gap between the two conventions, and (iii) the content of the reporting requirements, notably for States Parties to the Convention on Nuclear Safety. It is recalled that the Convention on Nuclear Safety defines its scope of application as to

“the safety of nuclear installations...[i.e.] any land-based civil nuclear power plant under [the] jurisdiction [of a Contracting Party] including such storage, handling and treatment facilities for radioactive materials as are on the same site and are directly related to the operation of the nuclear plant”.

This language, in the view of many experts, allowed for a different interpretation as to what is located “on site”.

Regarding the first and in effect the third above topic, it was felt that an overlap between the two conventions was not harmful and could, in any event, be clarified at the respective meetings of Contracting Parties, should the Contracting Parties of the Convention on Nuclear Safety adhere to the new Joint Convention. Moreover, the two conventions had different objectives and it was preferable and caused no practical difficulties to accept the possibility of some double reporting rather than accept gaps in the reporting mechanism thus allowing Contracting Parties to keep sites, facilities or wastes outside the report.

Regarding the second topic, the Group of Experts felt that as nuclear installations ceased to be covered by the Convention on Nuclear Safety once a decommissioning programme had been agreed [see Article 2 (i) of the Convention on Nuclear Safety] there was a need to cover such installations under the Joint Convention and, accordingly, the definition of the term “radioactive waste management” was expanded to include “decommissioning” to mean “all steps leading to the release of a nuclear facility, other than a disposal facility, from regulatory control; [including] the processes of decontamination and dismantling”.<sup>7</sup> The term “nuclear facility” should be understood as defined in the Safety Series Document No. 111-F, i.e.

“a facility and its associated land, buildings and equipment in which radioactive materials are produced, used, handled, stored or disposed of (for example, repository) on such scale that consideration of safety is required”.

### (3) *Radioactive waste or spent fuel resulting from military or defence programmes*

A third element in the Joint Convention was whether, and if so, how, to cover radioactive waste and spent fuel within or resulting from military or defence programmes under the jurisdiction of states with nuclear weapons programmes, under the convention.

After much negotiation conducted in open-ended sub-groups, essentially among states with such programmes, radioactive waste or spent fuel within or resulting from military or defence programmes were dealt with in a package and covered under three different items in the Joint Convention:

- Article 3(3) on scope reads: “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.”
- For spent fuel or radioactive waste excluded from the Joint Convention because it is within military or defence programmes a reference is contained in the Preamble: paragraph (viii) of the Preamble recognises that such fuel and waste “should be managed in accordance with the objectives stated in the Joint Convention”.

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7. See Article 2 (b) of the Joint Convention.

- Finally, an extensive confidentiality clause was adopted in Article 36 (3) to provide for the “exclusive discretion” of the Contracting Parties concerned to decide “(i) whether such information is classified or otherwise controlled to preclude release; (ii) whether to provide information referred to in sub-paragraph (i) above in the context of the Convention; and (iii) what conditions of confidentiality are attached to such information if it is provided in the context of this Convention”.

The experts, when considering this issue, discussed what was termed a “voluntary submission” of such fuels and wastes under the convention versus what was termed a “mandatory inclusion”. This distinction, coded in language either as “shall not apply to such wastes, unless...” or “shall apply to such wastes, except...” was negotiated with arguments of transparency and public perception in mind. In the end, the views of the majority of the five nuclear weapon states prevailed and the concept of “voluntary submission”, as described in (1) above, was adopted. However, this did not happen without a number of non-nuclear weapon states maintaining their preference for the “mandatory” submission of military fuels and wastes and expressing their concern that with the above-mentioned provisions in the convention text, such material could be managed at a lower safety level than that accorded to similar material from civilian nuclear applications.

#### (4) *Transboundary movement of spent fuel or radioactive waste*

A fourth controversial issue in the negotiation was that of drafting international norms regarding the transboundary movement of spent fuel or radioactive waste.

The subject is dealt with in Article 27 of the Joint Convention and is also addressed in preambular paragraph (xii) of the text, and is largely based on the IAEA’s Code of Practice on International Transboundary Movement of Radioactive Waste as adopted by the General Conference in September 1990.<sup>8</sup> The code presumably will continue existing as a non-binding text reflecting good state practice.

Following the spirit and the purpose of the Code of Practice, preambular paragraph (xii) of the Joint Convention text recognises the sovereign right of every state to prohibit the import of radioactive waste into its territory. Furthermore, Article 27 of the Joint Convention ensures that transboundary movements of radioactive waste take place in accordance with internationally accepted safety standards and respective national laws and regulations. Finally, as did the Code of Practice in the form of a recommendation only, Article 27 of the Joint Convention, in effect, definitely disappplies the Basel Convention on Transboundary Movement of Hazardous Waste. Article 1 (3) of the Basel Convention reads: “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.”

In discussing the question of transboundary movement of radioactive waste, experts also had to take into account that some states have enacted laws forbidding final disposal of foreign waste on their territory. On the other hand, national industries reprocess foreign radioactive waste and return it to its country of origin. The convention could therefore neither directly encourage the setting up of regional

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8. That code was requested by the IAEA General Conference in 1988, following reports on illicit transfer and disposal of hazardous wastes – a practice commonly called “dumping” – in territories of developing countries, notably in Africa.

repositories, nor prohibit it. The solution found was to refer the matter to the Preamble<sup>9</sup> and adopt language that was similar to the Basel Convention.<sup>10</sup>

Different from the Code of Practice, Article 27 of the Joint Convention prohibits the shipment of spent fuel or radioactive waste to Antarctica and, also different from the Code of Practice, the Joint Convention seems to accord less protection to states of transit, meaning states through whose territory a transboundary movement of spent fuel or radioactive waste takes place. The Group of Experts argued that the Joint Convention could not create new international law in this regard but had to refer to existing law including, *inter alia*, the body of law codified by the United Nations Convention on the Law of the Sea (UNCLOS). States not Parties to that body of law, however, maintained their opposition and achieved the exclusion of any specific reference to UNCLOS.

The Group finally decided upon a reference to existing international instruments in a twofold manner: (1) Article 27(1)(ii) provides that “transboundary movement through states of transit shall be subject to those international obligations which are relevant to the particular modes of transport utilised”, it being understood that international obligations were only to include binding legal instruments; and (2) Article 27(3)(i) of the Joint Convention reads: “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”. The right of innocent passage, whether through straits or the exclusive economic zone, therefore remained unchanged.

### (5) *Disused sealed sources*

A fifth somewhat extraneous element was that of so-called “disused sealed sources” which, depending on the applicable technical definitions, might or might not be considered to be radioactive waste when returned to the manufacturer. Given the safety risk of such sealed sources – if not properly and safely disposed of – notably for developing countries importing them for use in medicine or agriculture, the Group of Experts felt that a specific article in the Joint Convention should address this subject. The problem, however, was that of creating a legal obligation in certain countries with a potentially wide range of producers, sellers, trade companies etc. to import a matter they were not necessarily licensed to handle. The compromise reached was included as Article 28 in the convention text which provides that: “(1) Each Contracting Party shall, in the framework of its national law, take the appropriate steps to ensure that the possession, remanufacturing or disposal of disused sealed sources takes place in a safe manner”, and furthermore, (2) that “A Contracting Party shall allow for reentry into its territory of disused sealed sources if, in the framework of its national law, it has accepted that they be returned to a manufacturer qualified to receive and possess the disused sealed sources.”

### (6) *The reporting requirements*

A sixth element of the Joint Convention was to be found in respect of the reporting requirement which, due to the specific subject matter, could not be modeled after the Convention on Nuclear Safety.

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9. See Section II above.

10. See eighth preambular paragraph of the Basel Convention.

According to Article 32 of the Joint Convention, national reports should not only address the measures taken by each Contracting Party to implement each of the obligations of the convention,<sup>11</sup> but should also contain a national list of radioactive waste and of spent fuel management facilities subject to the convention, their location, main purpose and essential features, and an inventory both of spent fuel and of radioactive waste that is in storage, that has been disposed of, or for radioactive waste, that has resulted from past practices. Furthermore, the inventory to be submitted to the review meetings of Contracting Parties should also contain a list of nuclear facilities in the process of being decommissioned and the status of decommissioning activities at those facilities.

This comprehensive obligation, in fact, requires Contracting Parties to report all national waste sites and facilities including a description of the material held at such facilities. The concept of an international inventory under IAEA auspices, floated by some experts, was not accepted.

### (7) *Participation of Contracting States in the meetings of Contracting Parties*

A seventh element was, in fact, a legal and procedural matter and a “lesson learned” from the Convention on Nuclear Safety. When the preparatory meeting for the Convention on Nuclear Safety was held at the IAEA Headquarters in April 1997, some countries which had ratified the Convention on Nuclear Safety were not yet Contracting Parties due to the delay of ninety days, as provided for in Article 31 of the convention, and hence could not participate in the preparatory meeting for this Convention; a meeting, which, *inter alia*, adopts the rules of procedure and therefore sets the pace for any future review meetings. Article 29(3) of the Joint Convention therefore uses a distinction known to the Vienna Convention on the Law of Treaties between Contracting Parties and Contracting States (i.e. states that have signed and ratified the convention but for which the convention has not yet entered into force) and provides for the participation of Contracting States in the preparatory meeting for the Joint Convention.

### (8) *Environmental aspects*

The last but not least novelty of the Joint Convention, or rather, an additional perspective from which the convention might be seen, are its references to environmental aspects for the safe management of spent fuel and radioactive waste.

The Joint Convention, during the early negotiation phase, was often referred to as the “sister convention” to the Convention on Nuclear Safety. However, as would need to be analysed in depth, the Joint Convention covers a much broader range of subjects and therefore has the potential to attract the attention of different national authorities and groups in society, notably those concerned with the environment.

Of the environmental elements in the Joint Convention the most obvious is contained in paragraph (xi) of the Preamble of the Joint Convention. It is the principle which is reflected in many national waste policies and which was only recently reiterated during the Special Session of the UN General Assembly on Sustainable Development (UNGASS) in June 1997 that “radioactive waste

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11. As does Article 5 of the Convention on Nuclear Safety.

should, as far as is compatible with the safety of the management of such material, be disposed of in the State in which it was generated.”<sup>12</sup>

Moreover, all major technical articles in the convention, such as the Articles on “General Safety Requirements”, “Siting of Proposed Facilities”, “Design and Construction”, “Safety Assessment” of radioactive waste and of spent fuel management facilities contain an explicit reference to the environment. The Articles on “Siting of Proposed Facilities”, in line with Agenda 21, address the potential transboundary effects of radioactive waste or of spent fuel management facilities providing for the need to consult Contracting Parties in the vicinity. Article 32 of the Joint Convention on reporting, as mentioned above, provides for an inventory of spent fuel and radioactive waste held in the territory of a Contracting Party and a resolution recognising, *inter alia*, “States’ responsibilities in respect of the protection and preservation of the environment” and was adopted by consensus at the Diplomatic Conference.

In this context it must be borne in mind that the measures taken to implement each of these Articles not only have to be reported to the review meetings of Contracting Parties but first have to be adopted by legislative assemblies and defended vis-a-vis the public in the respective countries.

#### **IV. The Diplomatic Conference**

##### ***IV.1 The negotiations***

On the basis of the above-described results, the Group of Experts, in March 1997, agreed to present its draft text to a Diplomatic Conference. Informal negotiations on open issues were conducted during the June 1997 session of the IAEA Board of Governors and continued until the eve of the Conference.

The Diplomatic Conference, convened in Vienna from 1 to 5 September 1997 by the IAEA, was attended by representatives from 84 states and four international organisations.

The substance of all of the 44 articles of the Joint Convention, as drafted by the Group of Experts, were agreed to by the Conference without challenge or even further discussion, except for the articles relating to three legal and political points which had eluded consensus.

These points were :

- an amendment to the scope of the Joint Convention [Article 3 (1)], proposed by the United Kingdom;
- the question whether or not the transboundary movement of spent fuel or radioactive waste required notification and consent of a state of transit; and
- the question of waste transactions conducted independently by Contracting Parties with non-sovereign entities.

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12. However, as mentioned in Section II above, this paragraph cannot be interpreted as to preclude regional or international repositories because preambular paragraph (xi) at the same time “recognises that, in certain circumstances, safe and efficient management of spent fuel and radioactive waste might be fostered through agreements among Contracting Parties to use facilities in one of them for the benefit of the other Parties, particularly where waste originates from joint projects”.

Regarding the latter issue, China sought to rule out that Taiwan (China), which has nuclear facilities producing spent fuel and radioactive waste, might receive by implication the status of a sovereign state. A number of delegations, however, felt that express language to this effect was not needed in the convention and therefore opposed the inclusion of a specific paragraph proposed by China during the Diplomatic Conference.

Regarding the question of transboundary movement, some transit states, in particular Turkey, Morocco, some South American countries and New Zealand speaking also for some states in the south pacific region, strongly requested a notification and consent procedure.

These states argued that the principle of prior notification and consent had received widespread support in relation to transboundary movement of hazardous wastes, as was reflected in a number of international instruments such as the Basel Convention, the Convention on the Ban of the Import of Hazardous Wastes into Africa and on the Control of their Transboundary Movements within Africa (Bamako Convention), the IAEA Code of Practice, the IAEA Regulations for the Safe Transport of Radioactive Material and Euratom Directive 92/3. Countries of origin or destination of such transboundary movements however, gave preference to their right of innocent passage as embodied in UNCLOS. By a vote of 57 in favor and 5 against, with 2 abstentions, the article on transboundary movement stayed as drafted by the Group of Experts.

The question of prior notification and consent, however, endured in a different form, namely, as a resolution adopted by the Conference by consensus and included in the Final Act. In the operative part of this resolution, the Conference “urges all States parties to the Convention to take into full consideration the IAEA Regulations for the Safe Transport of Radioactive Material (1996), in particular in the case of transboundary movement of spent fuel and radioactive waste, notably in the formulation and implementation of their national laws and regulations”. In addition, the Conference invited the Agency, in consultation and where appropriate in collaboration with the competent organs of the United Nations and with the specialised agencies concerned, including IMO and UNEP to keep under review the existing rules and regulations with respect to the safety of the transboundary movement of spent fuel and radioactive waste.<sup>13</sup>

Regarding the first issue, the United Kingdom submitted an amendment to the Diplomatic Conference providing that the Joint Convention apply to the full range of spent fuel management activities and therefore include the reprocessing activity as such. The proposal was understood as a further broadening of the scope of the convention. Other states, while not objecting to this concept, felt that the proposed amendment on such an important matter should have been consulted in advance. In the end, after a number of votes, a drafting proposal submitted by India relating to the scope of application of the Joint Convention was adopted, so that Article 3(1) of the Joint Convention is now divided into two sentences. The first sentence reads: “This Convention shall apply to the safety of spent fuel management when the spent fuel results from the operation of civilian nuclear reactors” thereby clearly including, as a matter of principle, the safety of spent fuel management in the Joint Convention. The second sentence reads: “Spent fuel held at reprocessing facilities as part of a reprocessing activity is not covered in the scope of the Convention unless the Contracting Party declares reprocessing to be part of spent fuel management” and therefore excludes only the reprocessing activity as such from the scope of the convention. In this context, France, the United Kingdom and Japan made a declaration during the Diplomatic Conference to the effect that they “shall report within the context of the Convention on reprocessing as part of spent fuel management”.

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13. See IAEA document GOV/INF/821-GC(41)/INF/12.

### ***IV.2 Adoption by vote***

The Diplomatic Conference rose after a motion by New Zealand to put the convention as a whole to a vote on the grounds that the issue of transboundary movement and more particularly the question of notification and consent of transit states was not sufficiently addressed in the convention.<sup>14</sup>

The adoption of the convention, however, was not at stake. Out of 67 states present at the time of voting 2, namely New Zealand and Pakistan voted against the convention. Three states abstained and an overwhelming majority of 62 states voted in favour. The Final Act of the Diplomatic Conference was signed on 5 September 1997 by 65 states; three states present did not sign the Final Act.

### **V. Outlook**

In establishing a convention with a broad scope of application closely tied to the Convention on Nuclear Safety, the negotiations clearly intended to complete a norm-making project initiated at the 1991 “International Conference on Nuclear Safety: strategies for the future”. This project was to elevate to international law, the body of recommendations, codes and principles generally referred to as “soft law” containing internationally accepted best safety practices applicable to the entire nuclear fuel cycle. Safety culture should indeed cease to be a lofty concept but rather be described in detailed technical terms and worded in the language of international law.

A first analysis could conclude that, added to the existing norms on the physical protection of nuclear material, the rules of international notification, cooperation and assistance in case of accidents and the liability regime, the international community has now endowed itself with a complete finite *corpus juris* – the international law of nuclear safety.

Such static interpretation, however, in the opinion of the authors, does not seem to be satisfactory. The norms established in the 1960s and the 1970s are not necessarily adequate to meet the stricter legal demands of the present and the future – as demonstrated by the recent amendment and complimentary norms adopted in the field of nuclear liability.

Moreover, implementation of the Convention on Nuclear Safety and of the Joint Convention will presumably create new state practice by the mere functioning of the peer review mechanism. Bilateral and regional agreements will further develop the basic principles so far internationally agreed.

Therefore, while the adoption of the Joint Convention no doubt constitutes a major leap in codifying nuclear safety norms, many steps are still required to give this instrument its full potential.

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14. See also the negotiations in the Group of Experts, Section III.3(4) above.