

**BACKGROUND PAPER**

**THE EXPORT OF  
SPENT NUCLEAR FUEL AND  
HIGH-LEVEL RADIOACTIVE WASTES  
TO THE RUSSIAN FEDERATION:  
LEGAL AND POLICY ISSUES**

***GREENPEACE INTERNATIONAL***

**Introduction**

Although Russian Federation law currently prohibits the import of radioactive waste and spent fuel for storage and disposal, there exist a number of proposals to export spent nuclear fuel and/or high-level radioactive wastes to the Russian Federation. Irrespective of whether such exports are for "reprocessing", "storage", or "disposal" of radioactive materials, there are fundamental legal and policy barriers to any plans to export such radioactive materials to Russia. This paper reviews briefly some of the international, regional and national legal and policy measures applicable to such exports.

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

The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (here referred to as the "Joint Convention"), is the fundamental relevant international legal instrument addressing the safety of spent fuel and radioactive waste management. It was adopted in 1997 and is shortly expected to enter into force.<sup>1</sup>

According to the Joint Convention, a State assumes the ultimate responsibility of ensuring that, at all stages of spent fuel and radioactive waste management, individuals, society and the environment are adequately protected against radiological hazards.<sup>2</sup> The Convention also recognises that any State has the right to ban import into its territory of foreign spent fuel and radioactive waste.<sup>3</sup>

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<sup>1</sup> As of 31<sup>st</sup> July 2000, 41 States had signed the Joint Convention of which 22 have ratified (see list at annex). A total of 25 countries must ratify the Convention before it can enter into force, of which 15 must have an operational power plant (this latter requirement has been met already). Once the number of ratifications reaches 25, the Joint Convention will enter into force 90 days later.

<sup>2</sup> Article 4 and preambular paragraph (vi)

<sup>3</sup> Preambular paragraph (xii)

Of particular relevance to the subject of this paper, is paragraph (xi) of the Preamble, whereby States affirm that they are:

*Convinced that radioactive waste 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....*

In addition, this preambular paragraph also emphasises that only "*in certain circumstances that 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...*". There are well-documented deficiencies at storage, reprocessing and disposal facilities for spent fuel and radioactive wastes in the Russian Federation. Therefore, it is difficult to see how exports of spent fuel and radioactive waste from countries with advanced reactor programmes to facilities in the Russian Federation would in any way fulfil the objective of attaining safer management.

Article 27 of the Joint Convention addresses transboundary movements of spent fuel and radioactive waste. It sets out five criteria to be met before any transboundary movement may take place. Three of these criteria are of particular relevance to this issue:

- the State of origin shall ensure that the transboundary movement is authorised and takes place only with the prior notification and consent of the State of destination;
- a State of destination shall consent to receive a transboundary movement only if it has the administrative and technical capacity, as well as the regulatory structure needed to manage the spent fuel or radioactive waste in a manner consistent with the Joint Convention; and
- a State of origin shall only authorise the transboundary movement if it can satisfy itself in advance that the State of destination meets these requirements.

It should be noted, however, that **providing the criteria are fulfilled in their entirety**, the practice of exporting spent fuel for reprocessing or, following processing, to return radioactive waste and other products after treatment to the State of origin would be unaffected. As described in the other briefing papers on this issue, it seems clear that the Russian Federation would **not** fulfil the criteria to allow it to receive transports of spent fuel or radioactive waste for storage, reprocessing or disposal or to allow States to export such material to Russia.

### **The International Atomic Energy Agency**

The International Atomic Energy Agency (IAEA) has a programme aimed at establishing "a coherent and comprehensive set of principles and standards for the safe management of waste and formulating the guidelines for their application". This programme (known as RADWASS) produces a four-level hierarchy of publications, with Safety Fundamentals documents at the highest level.

In 1995, following approval of the text by the IAEA's Board of Governors, the IAEA published its Safety Fundamentals document entitled "*The Principles of Radioactive Waste Management*"<sup>4</sup> This document sets out the objective of radioactive waste management and a set of associated fundamental principles. These reflect an internationally agreed **minimum** basis for radioactive waste management from which more detailed requirements could be based. There are numerous parallels with provisions of the Joint Convention..

The objective of radioactive waste management is defined as:

*... to deal with radioactive waste in a manner that protects human health and the environment now and in the future without imposing undue burdens on future generations.*

Principle 3, concerning Protection Beyond National Borders and its supporting text is of particular relevance to the question of exports of spent fuel and radioactive waste to Russia. Principle 3 states:

*Radioactive waste shall be managed in such a way as to assure that possible effects on human health and the environment beyond national borders will be taken into account.*

In the supporting text, it is noted that this principle is based "***on the premise that a country has a duty to act responsibly and, as a minimum, not to impose effects on human health and the environment in other countries more detrimental than those which have been judged acceptable within its own borders***".<sup>5</sup> Clearly, to the extent that any decisions to export spent fuel and radioactive waste to Russia might involve facilities that could not be licensed or operated in their own countries, then an unacceptable double standard applies.

Referring to the IAEA "*Code of Practice on the International Transboundary Movement of Radioactive Waste*" the supporting text stresses that export and import of radioactive waste should only take place where the State receiving the waste "*has the administrative and technical capacity and regulatory structure to manage and dispose of such waste in a manner consistent with international safety standards*".<sup>6</sup> As noted above, with respect to the Joint Convention, this would not appear to be the case with exports to and imports into the Russian Federation.

### **The European Union**

The legal and regulatory framework for radioactive waste management within the European Union is essentially the prerogative of the individual Member States. However, the European Union has regulated certain aspects of radioactive waste management including the supervision and control of shipments of radioactive waste between Member States and into and out of the Community.<sup>7</sup>

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<sup>4</sup> The Principles of Radioactive Waste Management, Safety Series No. 111-F, IAEA, Vienna, 1995.

<sup>5</sup> Paragraph 312.

<sup>6</sup> Paragraph 314.

<sup>7</sup> Council Directive 92/3/EURATOM, 3 February 1992.

The core provisions for exports of radioactive waste outside the European Union are similar to those of Article 27 of the Joint Convention.<sup>8</sup> In essence, an export from a European Union Member State can only be authorised following consultation and approval by the importing State - i.e. prior and informed consent is required. In addition, it is recognised that an export should only take place if the receiving country has the administrative and technical capacity, as well as the regulatory structure needed to manage the spent fuel or radioactive waste adequately and that the exporting Member State's authorities must satisfy themselves of this before the export is authorised.

An important difference between the European Union Directive and the relevant provisions of the Joint Convention, is that the Directive **is** legally enforceable before the Courts of Member States and the European Court of Justice, whereas enforcement of the provisions of the Joint Convention must await its entry into force.

Finally it is worth noting that the European Union Directive completely prohibits the export of radioactive waste from the European Union to more than 100 countries who are Parties to the Lomé Convention. This prohibition of export of radioactive waste (and non-radioactive hazardous wastes) was included owing to concerns from the African, Caribbean and Pacific Island (ACP) States that their territories might become dumping sites for wastes from the European Union. The European Union recognised that it should bear the burden of its own industrial practices given that its Member States are amongst the wealthiest countries of the world.

### **National Laws and Policies**

Finland and Sweden have legislation which explicitly require that their radioactive wastes be managed almost exclusively within their own territory.

Through its Nuclear Energy Act<sup>9</sup>, Finland requires that all nuclear waste which has been generated in Finland must be handled, stored and finally disposed of in its territory. Exceptions may be permitted for small amounts of waste for research purposes only and for return of research reactor fuel. The Act also provides that foreign nuclear waste cannot be handled, stored or finally disposed of in Finland.

Sweden's Nuclear Activities Act<sup>10</sup> requires that wastes and spent fuel produced by the Swedish nuclear power programme be disposed of within the country. Moreover it is an explicit policy that every country should assume full responsibility for the nuclear waste it produces and that each country should manage and dispose of it finally, within its own borders. There is a corresponding prohibition of the import of foreign spent fuel into Sweden for disposal (with very limited exceptions) and also a prohibition on the import of foreign spent fuel for storage.

Two countries - France and the United Kingdom - regularly import spent fuel for reprocessing. While they allow temporary imports for reprocessing purposes they require that the associated radioactive waste be repatriated to the sending countries.

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<sup>8</sup> The Directive only applies to radioactive waste which is defined to exclude spent fuel intended for reprocessing.

<sup>9</sup> No. 990/87.

<sup>10</sup> SFS 1984:3, including as amended by SFS 1995:875.

The details of the application of such policies (in particular "substitution" of higher-level wastes for lower-level wastes, and what "storage" entails) remain under discussion.

Most countries provide a legal framework for issuing import and/or export licenses for radioactive waste. The majority of these appear to have legal and policy provisions detailing national strategies for radioactive waste management which do not allow imports of radioactive waste for disposal within their territory. However, even where there is a legal prohibition of imports for disposal, there is very seldom a corresponding prohibition of exports of radioactive waste from these countries to other countries for disposal and/or storage of radioactive waste. Clearly adopting legally enforceable provisions regarding national self-sufficiency for radioactive waste management (perhaps with very narrowly limited exceptions), as exists already in Finland and Sweden, would be a more responsible and reliable approach.

Exports of spent fuel to the Russian Federation from CEE/CIS countries are, perhaps a special case. Spent fuel has been sent to Russia for reprocessing, disposal or storage, until such time as the Russian Federation prohibited imports for storage and disposal and required, instead, that any imports be for reprocessing. The result has been a trend towards national waste management strategies not involving exports of spent fuel or radioactive waste exports to the Russian Federation.

### **Conclusions**

Full effect should be given to the requirements of the Joint Convention, the IAEA Safety Fundamentals and the European Union when considering possible exports of spent fuel and radioactive waste to the Russian Federation. In addition, the Finnish and Swedish legislation provides models which should be applied by all States with nuclear power programmes.

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Annex

**Signatories to the  
Joint Convention on the Safety of Spent Fuel Management and on the Safety of  
Radioactive Waste Management**

*(Status as of 31 July 2000)*

<b><u>Signatories</u></b>	<b><u>Year of Signature</u></b>
Argentina	1997
Australia	1998
Austria	1998
Belarus	1999
Belgium	1997
Brazil	1997
Indonesia	1997
Ireland	1997
Italy	1998
Kazakhstan	1997
Korea, Republic of	1997
Lebanon	1997
Lithuania	1997
Luxembourg	1997
Peru	1998
Philippines	1998
Russian Federation	1999
United Kingdom	1997
United States of America	1997

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**Contracting Parties to the  
Joint Convention on the Safety of Spent Fuel Management and on the Safety of  
Radioactive Waste Management**

*(Status as of 31 July 2000)*

<u>Contracting Parties</u>	<u>Year of Consent to be Bound<sup>*®</sup></u>
Bulgaria	2000 ®
Canada	1998 ®
Croatia	1999
Czech Republic	1999 ®
Denmark	1999
Finland	2000 ®
France	2000 ®
Germany	1998 ®
Greece	2000
Hungary	1998 ®
Latvia	2000
Morocco	1999
Netherlands	2000 ®
Norway	1998
Poland	2000
Romania	1999 ®
Slovakia	1998 ®
Slovenia	1999 ®
Spain	1999 ®
Sweden	1999 ®
Switzerland	2000 ®
Ukraine	2000 ®

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\* i.e. the year of the deposit of an instrument of ratification, accession, acceptance, etc with the depositary.

® Indicates a State with at least one operational nuclear power plant at the time its instrument was deposited.