

DIRECTIVES

COUNCIL DIRECTIVE 2011/70/EURATOM

of 19 July 2011

establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Articles 31 and 32 thereof,

Having regard to the proposal from the European Commission, drawn up after obtaining the opinion of a group of persons appointed by the Scientific and Technical Committee from among scientific experts in the Member States,

Having regard to the opinion of the European Economic and Social Committee ⁽¹⁾,

Having regard to the opinion of the European Parliament ⁽²⁾,

Whereas:

- (1) Article 2(b) of the Treaty establishing the European Atomic Energy Community ('Euratom Treaty') provides for the establishment of uniform safety standards to protect the health of workers and of the general public.
- (2) Article 30 of the Euratom Treaty provides for the establishment of basic standards for the protection of the health of workers and the general public against the dangers arising from ionising radiations.
- (3) Article 37 of the Euratom Treaty requires Member States to provide the Commission with general data relating to any plan for the disposal of radioactive waste.
- (4) Council Directive 96/29/Euratom ⁽³⁾ establishes basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation. That Directive has been supplemented by more specific legislation.
- (5) As recognised by the Court of Justice of the European Union in its case-law, the provisions of Chapter 3 of the

Euratom Treaty, on health and safety, form a coherent whole conferring upon the Commission powers of some considerable scope in order to protect the population and the environment against the risks of nuclear contamination ⁽⁴⁾.

- (6) Council Decision 87/600/Euratom of 14 December 1987 on Community arrangements for the early exchange of information in the event of a radiological emergency ⁽⁵⁾ established a framework for notification and provision of information to be used by the Member States in order to protect the general public in case of a radiological emergency. Council Directive 89/618/Euratom of 27 November 1989 on informing the general public about health protection measures to be applied and steps to be taken in the event of a radiological emergency ⁽⁶⁾ imposed obligations on the Member States to inform the general public in the event of a radiological emergency.
- (7) Council Directive 2003/122/Euratom ⁽⁷⁾ provides for the control of high-activity sealed radioactive sources and orphan sources, including disused sources. In accordance with the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management ('the Joint Convention') and the International Atomic Energy Agency (IAEA) Code of Conduct on the Safety and Security of Radioactive Sources, and current industrial practices, disused sealed sources can be reused, recycled or disposed of. In many cases, this needs a return of the source or return of the equipment, including the source, to a supplier or a manufacturer, for requalification or processing.
- (8) Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries ⁽⁸⁾ covers the management of waste from extractive industries which may be radioactive, but excluding such aspects as are specific to radioactivity, which are matters dealt with under the Euratom Treaty.

⁽⁴⁾ C-187/87 (1988 ECR p.5013) and C-29/99 (2002 ECR p. I-11221).

⁽⁵⁾ OJ L 371, 30.12.1987, p. 76.

⁽⁶⁾ OJ L 357, 7.12.1989, p. 31.

⁽⁷⁾ OJ L 346, 31.12.2003, p. 57.

⁽⁸⁾ OJ L 102, 11.4.2006, p. 15.

⁽¹⁾ Opinion of 4 May 2011 (not yet published in the Official Journal).

⁽²⁾ Opinion of 23 June 2011 (not yet published in the Official Journal).

⁽³⁾ OJ L 159, 29.6.1996, p. 1.

- (9) Council Directive 2006/117/Euratom⁽¹⁾ lays down a European Atomic Energy Community ('Community') system of supervision and control of transboundary shipments of radioactive waste and spent fuel. That Directive was supplemented by Commission Recommendation 2008/956/Euratom of 4 December 2008 on criteria for the export of radioactive waste and spent fuel to third countries⁽²⁾.
- (10) Council Directive 2009/71/Euratom of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations⁽³⁾ imposes obligations on the Member States to establish and maintain a national framework for nuclear safety. While that Directive concerns principally the nuclear safety of nuclear installations, it states that it is also important to ensure the safe management of spent fuel and radioactive waste, including at storage and disposal facilities. Therefore, those facilities, addressed both in Directive 2009/71/Euratom and in this Directive, should not be subject to disproportionate or unnecessary obligations, especially as regards reporting.
- (11) Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment⁽⁴⁾ applies to certain plans and programmes within the scope of Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment⁽⁵⁾.
- (12) Commission Recommendation 2006/851/Euratom of 24 October 2006 on the management of the financial resources for the decommissioning of nuclear installations, spent fuel and radioactive waste⁽⁶⁾ focuses on the adequacy of funding, its financial security and its transparency in order to ensure that the funds are only used for the intended purposes.
- (13) Under the specific terms of accession of Lithuania, Slovakia and Bulgaria to the European Union, where certain nuclear power plants were subject to early shutdown, the Community has taken part in the raising of financial resources and provides financial support subject to certain conditions to various decommissioning projects, including management of radioactive waste and spent fuel.
- (14) The Joint Convention, concluded under the auspices of the IAEA, represents an incentive instrument which aims at achieving and maintaining a high level of safety worldwide in spent fuel and radioactive waste management through the enhancement of national measures and international cooperation.
- (15) Some Member States have already participated and intend to participate further in the US-Russian driven programme, called the Global Threat Reduction Initiative, by shipping the spent fuel of research reactors to the United States of America and to the Russian Federation.
- (16) In 2006, the IAEA updated the structure of standards and published the Fundamental Safety Principles, which were jointly sponsored by the Community, the Organisation for Economic Cooperation and Development/Nuclear Energy Agency and other international organisations. Applying the Fundamental Safety Principles will facilitate the application of international safety standards and will make for greater consistency between the arrangements of different states.
- (17) Following the Council's invitation to set up a High Level Group at EU level, as recorded in its Conclusions of 8 May 2007 on Nuclear Safety and Safe Management of Spent Nuclear Fuel and Radioactive Waste, the European Nuclear Safety Regulators Group (ENSREG) was set up by Commission Decision 2007/530/Euratom of 17 July 2007 on establishing the European High Level Group on Nuclear Safety and Waste Management⁽⁷⁾ to contribute to the achievement of the Community objectives in the field of spent fuel and radioactive waste management. The conclusions and recommendations of ENSREG were reflected in the Council Resolution of 16 December 2008 on Spent Fuel and Radioactive Waste Management and the Council Conclusions of 10 November 2009 on the report by the European Nuclear Safety Regulators Group.
- (18) The European Parliament adopted on 10 May 2007 a Resolution 'Assessing Euratom – 50 Years of European nuclear energy policy' where it called for harmonised standards for radioactive waste management and invited the Commission to review the relevant drafts of its legislative proposal and submit a new proposal for a directive on radioactive waste management.
- (19) While each Member State remains free to define its energy mix, all Member States generate radioactive waste from power generation or in the course of industrial, agricultural, medical and research activities, or through decommissioning of nuclear facilities or in situations of remediation and interventions.

(1) OJ L 337, 5.12.2006, p. 21.

(2) OJ L 338, 17.12.2008, p. 69.

(3) OJ L 172, 2.7.2009, p. 18.

(4) OJ L 156, 25.6.2003, p. 17.

(5) OJ L 197, 21.7.2001, p. 30.

(6) OJ L 330, 28.11.2006, p. 31.

(7) OJ L 195, 17.7.2007, p. 44.

- (20) The operation of nuclear reactors generates spent fuel. Each Member State remains free to define its fuel cycle policy. The spent fuel can be regarded either as a valuable resource that may be reprocessed or as radioactive waste that is destined for direct disposal. Whatever option is chosen, the disposal of high-level waste, separated at reprocessing, or of spent fuel regarded as waste should be considered.
- (21) Radioactive waste, including spent fuel considered as waste, requires containment and isolation from humans and the living environment over the long term. Its specific nature, namely that it contains radionuclides, requires arrangements to protect human health and the environment against dangers arising from ionising radiation, including disposal in appropriate facilities as the end location point. The storage of radioactive waste, including long-term storage, is an interim solution, but not an alternative to disposal.
- (22) A national radioactive waste classification scheme should support those arrangements, taking fully into account the specific types and properties of radioactive waste.
- (23) The typical disposal concept for low and intermediate-level waste is near-surface disposal. It is broadly accepted at the technical level that, at this time, deep geological disposal represents the safest and most sustainable option as the end point of the management of high-level waste and spent fuel considered as waste. Member States, while retaining responsibility for their respective policies in respect of the management of their spent fuel and low, intermediate or high-level radioactive waste, should include planning and implementation of disposal options in their national policies. Since the implementation and development of a disposal facility will take place over many decades, many programmes recognise the necessity of remaining flexible and adaptable, e.g. in order to incorporate new knowledge about site conditions or the possible evolution of the disposal system. The activities conducted under the Implementing Geological Disposal of Radioactive Waste Technology Platform (IGD-TP) could facilitate access to expertise and technology in this respect. To that end, reversibility and retrievability as operating and design criteria may be used to guide the technical development of a disposal system. However, those criteria should not be a substitute for a well designed disposal facility that has a defensible basis for closure. A compromise is needed as the management of radioactive waste and spent fuel is based on state-of-the-art science and technology.
- (24) It should be an ethical obligation of each Member State to avoid any undue burden on future generations in respect of spent fuel and radioactive waste including any radioactive waste expected from decommissioning of existing nuclear installations. Through the implementation of this Directive Member States will have demonstrated that they have taken reasonable steps to ensure that that objective is met.
- (25) The ultimate responsibility of Member States for the safety of spent fuel and radioactive waste management is a fundamental principle reaffirmed by the Joint Convention. That principle of national responsibility, as well as the principle of prime responsibility of the licence holder for the safety of spent fuel and radioactive waste management under the supervision of its competent regulatory authority, should be enhanced and the role and independence of the competent regulatory authority should be reinforced by this Directive.
- (26) It is understood that the utilisation of radioactive sources by a competent regulatory authority for the purpose of carrying out its regulatory tasks does not affect its independence.
- (27) Member States should ensure that adequate funding is available for the management of spent fuel and radioactive waste.
- (28) Member States should establish national programmes to ensure the transposition of political decisions into clear provisions for the timely implementation of all steps of spent fuel and radioactive waste management from generation to disposal. It should be possible for such national programmes to be in the form of a single reference document or a set of documents.
- (29) It is understood that national arrangements for the safety of spent fuel and radioactive waste management will be applied through some form of legal, regulatory or organisational instrument, the choice of which rests within the competence of the Member States.
- (30) The different steps in spent fuel and radioactive waste management are closely interrelated. Decisions taken in one individual step may affect a subsequent step. Therefore such interdependencies should be taken into account when developing national programmes.
- (31) Transparency is important in the management of spent fuel and radioactive waste. Transparency should be provided by ensuring effective public information and opportunities for all stakeholders concerned, including local authorities and the public, to participate in the decision-making processes in accordance with national and international obligations.
- (32) Cooperation between Member States and at an international level could facilitate and accelerate decision-making through access to expertise and technology.

- (33) Some Member States consider that the sharing of facilities for spent fuel and radioactive waste management, including disposal facilities, is a potentially beneficial, safe and cost-effective option when based on an agreement between the Member States concerned.
- (34) The documentation of the decision-making process as it relates to safety should be commensurate with the levels of risk (graded approach) and should provide a basis for decisions related to the management of spent fuel and radioactive waste. This should enable the identification of areas of uncertainty on which attention needs to be focused in an assessment of safety. Safety decisions should be based on the findings of an assessment of safety and information on the robustness and reliability of that assessment and the assumptions made therein. The decision-making process should therefore be based on a collection of arguments and evidence that seek to demonstrate that the required standard of safety is achieved for a facility or activity related to the management of spent fuel and radioactive waste. In the particular case of a disposal facility, the documentation should improve understanding of those aspects influencing the safety of the disposal system, including natural (geological) and engineered barriers, and the expected development of the disposal system over time.
- (35) A Member State which has no spent fuel, no immediate prospect of having spent fuel and no present or planned activities related to spent fuel, would be under a disproportionate and unnecessary obligation if it had to transpose and implement the provisions of this Directive with regard to spent fuel. Therefore, such Member States should be exempted, for as long as they have not taken a decision to develop any activity related to nuclear fuel, from the obligation to transpose and implement the provisions related to spent fuel of this Directive.
- (36) A Treaty between the government of the Republic of Slovenia and the government of the Republic of Croatia on the regulation of the status and other legal relations regarding investment, exploitation and decommissioning of the Krško nuclear power plant governs the co-ownership of a nuclear power plant. That Treaty provides for shared responsibility for the management and disposal of radioactive waste and spent fuel. Therefore an exemption to certain provisions of this Directive should be laid down in order not to hinder the full implementation of that bilateral Treaty.
- (37) While recognising that radiological and non-radiological hazards associated with spent fuel and radioactive waste should be taken into account in the national framework, this Directive does not cover non-radiological hazards, which fall under the Treaty on the Functioning of the European Union.
- (38) Maintenance and further development of competences and skills in the management of spent fuel and radio-

active waste, as an essential element to ensure high levels of safety, should be based on learning through operational experience.

- (39) Scientific research and technological development supported by technical cooperation between actors may open horizons to improve the safe management of spent fuel and radioactive waste, as well as contribute to reducing the risk of the radiotoxicity of high-level waste.
- (40) Peer review could serve as an excellent means of building confidence and trust in the management of radioactive waste and spent fuel in the European Union, with the aim of developing and exchanging experience and ensuring high standards,

HAS ADOPTED THIS DIRECTIVE:

CHAPTER 1

SCOPE, DEFINITIONS AND GENERAL PRINCIPLES

Article 1

Subject-matter

1. This Directive establishes a Community framework for ensuring responsible and safe management of spent fuel and radioactive waste to avoid imposing undue burdens on future generations.
2. It ensures that Member States provide for appropriate national arrangements for a high level of safety in spent fuel and radioactive waste management to protect workers and the general public against the dangers arising from ionising radiation.
3. It ensures the provision of necessary public information and participation in relation to spent fuel and radioactive waste management while having due regard to security and proprietary information issues.
4. Without prejudice to Directive 96/29/Euratom, this Directive supplements the basic standards referred to in Article 30 of the Euratom Treaty as regards the safety of spent fuel and radioactive waste.

Article 2

Scope

1. This Directive shall apply to all stages of:
 - (a) spent fuel management when the spent fuel results from civilian activities;
 - (b) radioactive waste management, from generation to disposal, when the radioactive waste results from civilian activities.
2. This Directive shall not apply to:
 - (a) waste from extractive industries which may be radioactive and which falls within the scope of Directive 2006/21/EC;
 - (b) authorised releases.

3. Article 4(4) of this Directive shall not apply to:

- (a) repatriation of disused sealed sources to a supplier or manufacturer;
- (b) shipment of spent fuel of research reactors to a country where research reactor fuels are supplied or manufactured, taking into account applicable international agreements;
- (c) the waste and spent fuel of the existing Krško nuclear power plant, when it concerns shipments between Slovenia and Croatia.

4. This Directive shall not affect the right of a Member State or an undertaking in that Member State to return radioactive waste after processing to its country of origin where:

- (a) the radioactive waste is to be shipped to that Member State or undertaking for processing; or
- (b) other material is to be shipped to that Member State or undertaking with the purpose of recovering the radioactive waste.

This Directive shall not affect the right of a Member State or an undertaking in that Member State to which spent fuel is to be shipped for treatment or reprocessing to return to its country of origin radioactive waste recovered from the treatment or reprocessing operation, or an agreed equivalent.

Article 3

Definitions

For the purpose of this Directive the following definitions shall apply:

- (1) 'closure' means the completion of all operations at some time after the emplacement of spent fuel or radioactive waste in a disposal facility, including the final engineering or other work required to bring the facility to a condition that will be safe in the long term;
- (2) 'competent regulatory authority' means an authority or a system of authorities designated in a Member State in the field of regulation of the safety of spent fuel or radioactive waste management as referred to in Article 6;
- (3) 'disposal' means the emplacement of spent fuel or radioactive waste in a facility without the intention of retrieval;
- (4) 'disposal facility' means any facility or installation the primary purpose of which is radioactive waste disposal;
- (5) 'licence' means any legal document granted under the jurisdiction of a Member State to carry out any activity related to the management of spent fuel or radioactive waste, or to confer responsibility for siting, design, construction, commissioning, operation, decommissioning or closure of a spent fuel management facility or of a radioactive waste management facility;
- (6) 'licence holder' means a legal or natural person having overall responsibility for any activity or facility related to the management of spent fuel or radioactive waste as specified in a licence;
- (7) 'radioactive waste' means radioactive material in gaseous, liquid or solid form for which no further use is foreseen or considered by the Member State or by a legal or natural person whose decision is accepted by the Member State, and which is regulated as radioactive waste by a competent regulatory authority under the legislative and regulatory framework of the Member State;
- (8) 'radioactive waste management' means all activities that relate to handling, pretreatment, treatment, conditioning, storage, or disposal of radioactive waste, excluding off-site transportation;
- (9) 'radioactive waste management facility' means any facility or installation the primary purpose of which is radioactive waste management;
- (10) 'reprocessing' means a process or operation, the purpose of which is to extract fissile and fertile materials from spent fuel for further use;
- (11) 'spent fuel' means nuclear fuel that has been irradiated in and permanently removed from a reactor core; spent fuel may either be considered as a usable resource that can be reprocessed or be destined for disposal if regarded as radioactive waste;
- (12) 'spent fuel management' means all activities that relate to the handling, storage, reprocessing, or disposal of spent fuel, excluding off-site transportation;
- (13) 'spent fuel management facility' means any facility or installation the primary purpose of which is spent fuel management;
- (14) 'storage' means the holding of spent fuel or of radioactive waste in a facility with the intention of retrieval.

Article 4

General principles

1. Member States shall establish and maintain national policies on spent fuel and radioactive waste management. Without prejudice to Article 2(3), each Member State shall have ultimate responsibility for management of the spent fuel and radioactive waste generated in it.

2. Where radioactive waste or spent fuel is shipped for processing or reprocessing to a Member State or a third country, the ultimate responsibility for the safe and responsible disposal of those materials, including any waste as a by-product, shall remain with the Member State or third country from which the radioactive material was shipped.

3. National policies shall be based on all of the following principles:

- (a) the generation of radioactive waste shall be kept to the minimum which is reasonably practicable, both in terms of activity and volume, by means of appropriate design measures and of operating and decommissioning practices, including the recycling and reuse of materials;
- (b) the interdependencies between all steps in spent fuel and radioactive waste generation and management shall be taken into account;
- (c) spent fuel and radioactive waste shall be safely managed, including in the long term with passive safety features;
- (d) implementation of measures shall follow a graded approach;
- (e) the costs for the management of spent fuel and radioactive waste shall be borne by those who generated those materials;
- (f) an evidence-based and documented decision-making process shall be applied with regard to all stages of the management of spent fuel and radioactive waste.

4. Radioactive waste shall be disposed of in the Member State in which it was generated, unless at the time of shipment an agreement, taking into account the criteria established by the Commission in accordance with Article 16(2) of Directive 2006/117/Euratom, has entered into force between the Member State concerned and another Member State or a third country to use a disposal facility in one of them.

Prior to a shipment to a third country, the exporting Member State shall inform the Commission of the content of any such agreement and take reasonable measures to be assured that:

- (a) the country of destination has concluded an agreement with the Community covering spent fuel and radioactive waste management or is a party to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management ('the Joint Convention');
- (b) the country of destination has radioactive waste management and disposal programmes with objectives representing a high level of safety equivalent to those established by this Directive; and
- (c) the disposal facility in the country of destination is authorised for the radioactive waste to be shipped, is operating prior to the shipment, and is managed in accordance with

the requirements set down in the radioactive waste management and disposal programme of that country of destination.

CHAPTER 2

OBLIGATIONS

Article 5

National framework

1. Member States shall establish and maintain a national legislative, regulatory and organisational framework ('national framework') for spent fuel and radioactive waste management that allocates responsibility and provides for coordination between relevant competent bodies. The national framework shall provide for all of the following:

- (a) a national programme for the implementation of spent fuel and radioactive waste management policy;
- (b) national arrangements for the safety of spent fuel and radioactive waste management. The determination of how those arrangements are to be adopted and through which instrument they are to be applied rests within the competence of the Member States;
- (c) a system of licensing of spent fuel and radioactive waste management activities, facilities or both, including the prohibition of spent fuel or radioactive waste management activities, of the operation of a spent fuel or radioactive waste management facility without a licence or both and, if appropriate, prescribing conditions for further management of the activity, facility or both;
- (d) a system of appropriate control, a management system, regulatory inspections, documentation and reporting obligations for radioactive waste and spent fuel management activities, facilities or both, including appropriate measures for the post-closure periods of disposal facilities;
- (e) enforcement actions, including the suspension of activities and the modification, expiration or revocation of a licence together with requirements, if appropriate, for alternative solutions that lead to improved safety;
- (f) the allocation of responsibility to the bodies involved in the different steps of spent fuel and radioactive waste management; in particular, the national framework shall give primary responsibility for the spent fuel and radioactive waste to their generators or, under specific circumstances, to a licence holder to whom this responsibility has been entrusted by competent bodies;
- (g) national requirements for public information and participation;
- (h) the financing scheme(s) for spent fuel and radioactive waste management in accordance with Article 9.

2. Member States shall ensure that the national framework is improved where appropriate, taking into account operating experience, insights gained from the decision-making process referred to in Article 4(3)(f), and the development of relevant technology and research.

Article 6

Competent regulatory authority

1. Each Member State shall establish and maintain a competent regulatory authority in the field of safety of spent fuel and radioactive waste management.

2. Member States shall ensure that the competent regulatory authority is functionally separate from any other body or organisation concerned with the promotion or utilisation of nuclear energy or radioactive material, including electricity production and radioisotope applications, or with the management of spent fuel and radioactive waste, in order to ensure effective independence from undue influence on its regulatory function.

3. Member States shall ensure that the competent regulatory authority is given the legal powers and human and financial resources necessary to fulfil its obligations in connection with the national framework as described in Article 5(1)(b), (c), (d) and (e).

Article 7

Licence holders

1. Member States shall ensure that the prime responsibility for the safety of spent fuel and radioactive waste management facilities and/or activities rest with the licence holder. That responsibility can not be delegated.

2. Member States shall ensure that the national framework in place require licence holders, under the regulatory control of the competent regulatory authority, to regularly assess, verify and continuously improve, as far as is reasonably achievable, the safety of the radioactive waste and spent fuel management facility or activity in a systematic and verifiable manner. This shall be achieved through an appropriate safety assessment, other arguments and evidence.

3. As part of the licensing of a facility or activity the safety demonstration shall cover the development and operation of an activity and the development, operation and decommissioning of a facility or closure of a disposal facility as well as the post-closure phase of a disposal facility. The extent of the safety demonstration shall be commensurate with the complexity of the operation and the magnitude of the hazards associated with the radioactive waste and spent fuel, and the facility or activity. The licensing process shall contribute to safety in the facility or activity during normal operating conditions, anticipated operational occurrences and design basis accidents. It shall provide the required assurance of safety in the facility or activity. Measures shall be in place to prevent accidents and mitigate the consequences of accidents, including verification of

physical barriers and the licence holder's administrative protection procedures that would have to fail before workers and the general public would be significantly affected by ionising radiation. That approach shall identify and reduce uncertainties.

4. Member States shall ensure that the national framework require licence holders to establish and implement integrated management systems, including quality assurance, which give due priority for overall management of spent fuel and radioactive waste to safety and are regularly verified by the competent regulatory authority.

5. Member States shall ensure that the national framework require licence holders to provide for and maintain adequate financial and human resources to fulfil their obligations with respect to the safety of spent fuel and radioactive waste management as laid down in paragraphs 1 to 4.

Article 8

Expertise and skills

Member States shall ensure that the national framework require all parties to make arrangements for education and training for their staff, as well as research and development activities to cover the needs of the national programme for spent fuel and radioactive waste management in order to obtain, maintain and to further develop necessary expertise and skills.

Article 9

Financial resources

Member States shall ensure that the national framework require that adequate financial resources be available when needed for the implementation of national programmes referred to in Article 11, especially for the management of spent fuel and radioactive waste, taking due account of the responsibility of spent fuel and radioactive waste generators.

Article 10

Transparency

1. Member States shall ensure that necessary information on the management of spent fuel and radioactive waste be made available to workers and the general public. This obligation includes ensuring that the competent regulatory authority inform the public in the fields of its competence. Information shall be made available to the public in accordance with national legislation and international obligations, provided that this does not jeopardise other interests such as, inter alia, security, recognised in national legislation or international obligations.

2. Member States shall ensure that the public be given the necessary opportunities to participate effectively in the decision-making process regarding spent fuel and radioactive waste management in accordance with national legislation and international obligations.

*Article 11***National programmes**

1. Each Member State shall ensure the implementation of its national programme for the management of spent fuel and radioactive waste ('national programme'), covering all types of spent fuel and radioactive waste under its jurisdiction and all stages of spent fuel and radioactive waste management from generation to disposal.

2. Each Member State shall regularly review and update its national programme, taking into account technical and scientific progress as appropriate as well as recommendations, lessons learned and good practices from peer reviews.

*Article 12***Contents of national programmes**

1. The national programmes shall set out how the Member States intend to implement their national policies referred to in Article 4 for the responsible and safe management of spent fuel and radioactive waste to secure the aims of this Directive, and shall include all of the following:

- (a) the overall objectives of the Member State's national policy in respect of spent fuel and radioactive waste management;
- (b) the significant milestones and clear timeframes for the achievement of those milestones in light of the overarching objectives of the national programme;
- (c) an inventory of all spent fuel and radioactive waste and estimates for future quantities, including those from decommissioning, clearly indicating the location and amount of the radioactive waste and spent fuel in accordance with appropriate classification of the radioactive waste;
- (d) the concepts or plans and technical solutions for spent fuel and radioactive waste management from generation to disposal;
- (e) the concepts or plans for the post-closure period of a disposal facility's lifetime, including the period during which appropriate controls are retained and the means to be employed to preserve knowledge of that facility in the longer term;
- (f) the research, development and demonstration activities that are needed in order to implement solutions for the management of spent fuel and radioactive waste;
- (g) the responsibility for the implementation of the national programme and the key performance indicators to monitor progress towards implementation;

(h) an assessment of the national programme costs and the underlying basis and hypotheses for that assessment, which must include a profile over time;

(i) the financing scheme(s) in force;

(j) a transparency policy or process as referred to in Article 10;

(k) if any, the agreement(s) concluded with a Member State or a third country on management of spent fuel or radioactive waste, including on the use of disposal facilities.

2. The national programme together with the national policy may be contained in a single document or in a number of documents.

*Article 13***Notification**

1. Member States shall notify to the Commission their national programmes and any subsequent significant changes.

2. Within 6 months of the date of notification, the Commission may request clarification and/or express its opinion on whether the content of the national programme is in accordance with Article 12.

3. Within 6 months of receiving the Commission's reaction Member States shall provide the requested clarification and/or inform the Commission of any revision of the national programmes.

4. The Commission, when deciding on the provision of Community financial or technical assistance for spent fuel and radioactive waste management facilities or activities, shall take into account the Member States' clarifications and progress regarding the national programmes.

*Article 14***Reporting**

1. Member States shall submit a report to the Commission on the implementation of this Directive for the first time by 23 August 2015, and every 3 years thereafter, taking advantage of the review and reporting under the Joint Convention.

2. On the basis of the Member States' reports, the Commission shall submit to the European Parliament and the Council the following:

(a) a report on progress made with the implementation of this Directive; and

(b) an inventory of radioactive waste and spent fuel present in the Community's territory and the future prospects.

3. Member States shall periodically, and at least every 10 years, arrange for self-assessments of their national framework, competent regulatory authority, national programme and its implementation, and invite international peer review of their national framework, competent regulatory authority and/or national programme with the aim of ensuring that high safety standards are achieved in the safe management of spent fuel and radioactive waste. The outcomes of any peer review shall be reported to the Commission and the other Member States, and may be made available to the public where there is no conflict with security and proprietary information.

CHAPTER 3

FINAL PROVISIONS

Article 15

Transposition

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive before 23 August 2013. They shall forthwith inform the Commission thereof.

When Member States adopt these measures, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such reference shall be laid down by Member States.

2. The obligations for transposition and implementation of provisions related to spent fuel of this Directive shall not apply

to Cyprus, Denmark, Estonia, Ireland, Latvia, Luxembourg and Malta for as long as they decide not to develop any activity related to nuclear fuel.

3. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive and of any subsequent amendments to those provisions.

4. Member States shall for the first time notify to the Commission the content of their national programme covering all the items provided for in Article 12 as soon as possible, but not later than 23 August 2015.

Article 16

Entry into force

This Directive shall enter into force on the 20th day following its publication in the *Official Journal of the European Union*.

Article 17

Addressees

This Directive is addressed to the Member States.

Done at Brussels, 19 July 2011.

For the Council
The President
M. SAWICKI