



Joint Convention NEWS

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



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President's Message

REFLECTION ON SIXTH REVIEW MEETING AND VIEW AHEAD TO THE SEVENTH REVIEW MEETING

I am delighted to deliver this message through the seventh Newsletter of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

I would like to take this opportunity to congratulate the Contracting Parties and Joint Convention Officers on a highly successful Sixth Review Meeting. With more than 850 delegates from 69 Contracting Parties participating, this Review Meeting had the highest participation of all Joint Convention Review Meetings. This trend of increasing meeting participation underlines the Joint Convention's relevance and importance.

The Sixth Review Meeting, for the first time featured eight country groups and, on a trial basis, identified Areas of Good Performance. The overall presentations and discussions in the Country Group Sessions and Plenary were of high quality. I was extremely pleased with the dedication of each of the delegations to this Review Meeting, the steady improvement of the National Reports and the deliberations thereon, the depth of the questions that were posed by Contracting Parties, the serious attitude to try to provide as accurate answers as possible to these questions, and the very high quality of Rapporteurs' Reports to the Plenary. These personal and professional dedications, as well as Governments' commitment, are the essential components of the mutual learning process that is the premise on which this Convention is based.

Through the Review Meeting process, participants, collectively, not only identified and shared Good Practices, Areas of Good Performance and Challenges amongst themselves; but they also discussed common international challenges to be taken into consideration at the next Review Meeting. These include funding aspects of radioactive waste and spent fuel management, the licensing process for radioactive waste and spent fuel management, and the long-term management of disused sealed sources. Contracting Parties agreed to address some of these issues in their National Reports for the next Review Meeting.

As part of the continuous review and improvement of the Joint Convention, the Contracting Parties agreed, during the Sixth Review Meeting, to convene an Extraordinary Meeting with the view to discuss possible ways to improve procedural mechanisms of the Joint Convention, taking into account the growing number of Contracting Parties to the Joint Convention, and with the view to identify and eliminate technical discrepancies between existing procedural documents of the Joint Convention.

In support of developing and proposing a comprehensive and inclusive provisional agenda for the Extraordinary Meeting, I had, on 21 August 2018, requested Contracting Parties to submit proposed Agenda items by 25 October 2018. The proposal received were considered by the two Vice-Presidents and myself, together with the Secretariat and a provisional agenda for the Joint Convention Fourth Extraordinary Meeting was circulated to all Contracting Parties on 4 December 2018. It would be greatly appreciated if Contracting Parties submitted their views and comments on the provisional agenda to the Secretariat by 25 February 2019.

It is my great pleasure to inform you that since our Sixth Review Meeting, the number of Contracting Parties has further increased from 78 to 80, with the Joint Convention entering into force for Thailand and Paraguay on 1 October 2018 and 14 November 2018, respectively.

As we look to the future of the Joint Convention, I would like to share some thoughts to supplement your continued initiatives for improvement. Up to now, there seemed to be a great focus on tackling administrative and managerial issues of concern in the areas of safe management of spent fuel and radioactive waste in the world. The challenge is to continue to focus on substantive safety issues in the next Review Meetings and not to fall into complacency resulting from the success and maturity of the Joint Convention peer review process.

This reflects Contracting Parties recognition of the need for all organizations, operator and regulators to focus on continuous improvement. Such improvement can only be attained if there is sustained commitment and vigilance concerning safety at all organizational levels, effective mechanisms for the early detection and assessment of problems, comprehensive plans to address and remedy these problems and prevent their recurrence and, most importantly, effective networks and systems to share the lessons learned. The Joint Convention and the communications channels that it fosters are essential to attain this goal.

Thank you for your continued commitment to ensuring a robust peer review process under the Joint Convention and for contributing to the global improvement of the safety of spent fuel management and the safety of radioactive waste management.

Bismark M. Tyobeka
President
Sixth Review Meeting
of the Joint Convention



Regional Workshop to Promote the JC and CNS 21 – 23 November 2017

A “Regional Workshop to Promote the Convention on Nuclear Safety and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management” was held in Vienna, Austria, in November 2017. The purpose of the workshop was to inform representatives from interested countries about the advantages of being a Contracting Party of the Joint Convention and the associated obligations. As the Convention on Nuclear Safety (CNS) has similar objectives and applies similar procedures, both Conventions were addressed during the workshop.

Representatives from seven countries – Bolivia, Malaysia, Mongolia, Paraguay, the Philippines, Singapore and Thailand – which were at that time not Parties to the Joint Convention¹, attended the workshop. Nuclear power plants are currently not in operation in any of these countries. Two of the countries – Paraguay and Singapore – were already Contracting Parties to the CNS. The Philippines have signed the CNS and the Joint Convention but have not yet ratified them.

The Coordinator of the Joint Convention and the Coordinator of the CNS alternatively chaired the workshop, which included the following five sessions:

- Introduction to the international instruments for nuclear safety;
- Main obligations in the CNS and in the JC;
- The peer review process under the CNS and the JC;
- Practical exercise (simulation of a Country Group session);
- Lessons learned and main outcomes of past Review Meetings, and future activities.

In addition, six of the countries’ representatives

presented the legal framework for the treatment of radioactive waste in their respective countries.

Regional Workshop to Promote the JC in Africa 5 – 7 December 2017

Four IAEA staff from the Division of Radiation, Transport and Waste Safety and the Office of Legal Affairs, and a Consultant – Ms Pui Wai Yuen from Canada – participated in the Regional Workshop to Promote the Joint Convention in Africa, held in Rabat, Morocco, in December 2017. The three-days event helped raise awareness among decision-makers from African countries that have not yet acceded to the JC.

The workshop was hosted by the Moroccan Nuclear and Radiological Safety and Security Agency (AMSSNuR) and opened by its Director General, Mr Khammar Mrabit. Morocco is a Contracting Party to the JC since its entry into force in June 2001.

Representatives from five Member States – Burkina Faso, Egypt, Mali, Sudan and Uganda – heard about the different aspects of the JC: from its history, key requirements, peer review process and achievements, up to its future prospects. They offered national perspectives and shared experiences on policies and programmes aimed at safely managing radioactive waste and, if applicable, spent fuel in their countries.

The Moroccan representatives shared the experience of being a Contracting Party to the JC, by presenting the main benefits and challenges identified. The participants had an opportunity to learn how the JC peer review process works, through an exercise consisting in the simulation of a Country Group Session. The National Presentation delivered by Morocco at the Fifth Review Meeting was used as a basis for the questions and answers and the subsequent finalization of a mock Rapporteur’s Report by the Consultant.

¹ In July 2018, Thailand acceded to both the JC and the CNS. In August 2018, Paraguay acceded to the JC.

“Radioactive waste and spent fuel should be managed safely, securely, and responsibly,” said Mr Mrabit. “The Joint Convention is the only legally binding international instrument that offers a platform for Contracting Parties to contribute to achieving and maintaining a high level of safety of spent fuel and radioactive waste management worldwide.” Mr Mrabit added that “it is in the interest of all countries to join this Convention so that individuals, society and the environment are protected from the harmful effects of ionizing radiation, now and in the future.”

Tailored to African countries, the workshop was part of the IAEA’s effort to encourage universal adherence to, and effective implementation of, the Joint Convention. “The IAEA offers various tools and mechanisms to support States in this endeavour, should they decide to join,” underlined Ms Peri Lynne Johnson, Legal Advisor and Director of the IAEA Office of Legal Affairs.

“The essential feature of this Convention includes the peer review process, which allows Contracting Parties to exchange and discuss experiences in the safe management of spent fuel and radioactive waste,” emphasized Mr Peter Johnston, Director of the IAEA Division of Radiation, Transport and Waste Safety. The Joint Convention is a comprehensive instrument that offers several advantages to its Contracting Parties, he added. “We should aim to ensure that it becomes universal in its adherence and implementation.”

The participants gratefully acknowledged that the workshop offered an excellent opportunity to learn about the relevance, procedure, benefits and obligations regarding the Joint Convention.



Sixth Review Meeting 21 May – 1 June 2018

The Sixth Review Meeting of the Contracting Parties, pursuant to Article 30 of the Joint Convention, was held in Vienna from the 21st May to 1st June 2018. The President of the Review Meeting was Mr Bismark Tyobeka, Chief Executive Officer of the National Nuclear Regulator (NNR) of South Africa. The Vice-Presidents were Mr Donald Tonkay, Director of the Office of Waste Disposal in the Office of Environmental Management at the U.S. Department of Energy, and Mr Geoff Williams, Director of Radioactive Waste Safety in the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).

69 of 78 Contracting Parties attended the Review Meeting. National Reports were provided by 75 out of 78 Contracting Parties. Four observers attended selected parts of the Plenary Sessions: two Signatory States of the Joint Convention (Lebanon and the Philippines); the Islamic Republic of Iran; and the Nuclear Energy Agency of the Organisation for Economic Cooperation and Development (OECD/NEA).

During the Final Plenary, two sequential Topical Sessions were held, dealing with:

- Recent developments and challenges in the safe management of disused sealed radioactive sources; and
- General safety issues, challenges and public acceptance aspects associated with the long-term storage and disposal of higher-level radioactive waste.

Since the Fifth Review Meeting, various Contracting Parties have made good progress and had significant accomplishments in implementing their national programmes. Major progress has been made in:

- The development of geological disposal facilities, with a licence issued for construction of one facility and two more projects in an advanced stage of development;
- The development of national policies, strategies and programmes for spent fuel and radioactive waste management;

- Demonstration of efforts to enhance openness, transparency and public involvement;
- Safety improvements in the regulatory control and funding of disused radioactive sealed source activities;
- Construction, and commissioning of new or expanded storage facilities for spent fuel;
- Construction and commissioning of near surface disposal facilities for low-level waste;
- Safety of spent fuel storage in light of the Fukushima Daiichi accident;
- Research and development activities for spent fuel and radioactive waste management;
- The remediation of sites containing legacy waste from mining and minerals processing activities;
- Expanded use of international co-operation and published peer reviews;
- Recruiting, training, maintaining and developing human resources to address emerging issues and expanding programmes);
- Review of arrangements related to funding of decommissioning and waste management activities; and
- Minimization of radioactive waste volumes.

At the Second Extraordinary Meeting in May 2014, it had been decided to revise and clarify the meaning of the term '*Good Practice*' with respect to the Joint Convention. This new definition was applied for the second time in this Review Meeting. The results from the review sessions of the Joint Convention demonstrated significant progress in the consistent use of the definition.

According to a decision at the Third Extraordinary Meeting in May 2017, and similar to the approach used during the Seventh Review Meeting of Contracting Parties to the Convention on Nuclear Safety (CNS), the concept of '*Areas of Good Performance*' was introduced on a trial basis.

The Country Groups identified overarching issues resulting from cumulative discussions throughout the first week. The Contracting Parties highlighted these areas on overarching issues during the Final Plenary. The overarching issues considered most relevant were:

- Implementation of national strategies for spent fuel and radioactive waste management;
- Safety implications of long term management of spent fuel;
- Linking long term management and disposal of disused sealed radioactive sources;
- Remediation of legacy sites and facilities.

The Contracting Parties agreed that National Reports for the next Review Meeting should address, as appropriate, the actual measures that have been taken in implementing these issues. Other overarching issues considered relevant were:

- Staffing, staff development, funding and other Human Resources areas;
- Strengthening regulatory effectiveness to meet the challenges associated with the implementation of national strategies;
- International and regional cooperation.

Regarding the outcome of the Open-Ended Working Group it had proven difficult to achieve consensus on the proposals for changing the guidelines to the Joint Convention procedures. The discussions in the Plenary resulted in four of the amended proposals, which were presented to Contracting Parties being approved. Other issues for which no consensus could be reached will be discussed again at the Fourth Extraordinary Meeting in May 2020.

Regional Workshop to Promote the JC in Asia 23 – 25 October 2018

Two IAEA staff from the Division of Radiation, Transport and Waste Safety, and a Consultant – the Vice-President of the Sixth Review Meeting, Mr Geoff Williams from ARPANSA – participated in the Regional Workshop to Promote the Joint

Convention in Asia, held in Jakarta, Indonesia, in October 2018.

The objective of the workshop was to promote adherence to the JC within the Asian region, to describe the effective implementation of the JC in Member States, and to provide a forum for discussing, with the collaboration of Member States in the region that are already Contracting Parties, the benefits of being a Contracting Party to the JC. This was achieved through offering comprehensive information on the obligations of the JC, the review process and accession procedure, and engaging in an open dialogue and information exchange with the participants.

The target audience consisted of Member States from the Asian region that have not yet acceded to the JC. Ten representatives from Bangladesh, Cambodia, Lao People's Democratic Republic, Mongolia, Myanmar, Nepal and Sri Lanka attended. In addition, the host country Indonesia – a Contracting Party to the JC since June 2011 – was represented by eight delegates. Each of the participating countries presented a summary of their national policies and programmes regarding the management of radioactive waste and, if applicable, spent fuel.

The workshop was hosted by the Nuclear Energy Regulatory Agency of Indonesia (BAPETEN) and opened by the Chairman of BAPETEN, Prof. Jazi Eko Istiyanto. The programme for the workshop was structured into five sessions, framed by an Opening and Closing Session:

- Introduction to the international legal instruments;
- Main obligations contained in the JC;
- The peer review process under the JC;
- Lessons learned and main outcomes of past Review Meetings, and future activities;
- Practical exercise (simulation of a Country Group Session during a JC Review Meeting).

Participants had an opportunity to learn about every aspect of the JC from its history, key requirements, peer review process and achievements, up to its future prospects. Information on

- Past Events and Meetings -

the procedure of becoming a Contracting Party to the JC was also provided.

The highlights of the workshop included the summary reports presented by the countries, focusing on issues relevant to a prospective accession to the JC, and the mock Country Group review of the Indonesian National Presentation from the Sixth Review Meeting in May 2018. In this exercise, each representative from the region participated enthusiastically and a mock Rapporteur's Report was developed and presented. This report not only reflected very well the real Rapporteur's Report for Indonesia from the past Review Meeting, but also included some prescient insights from a regional perspective, which were greatly appreciated by the host country.

Based on the feedback received at the workshop, the following elements are noted:

- All participants expressed appreciation for the opportunity to learn about the JC in a holistic manner. They advised of their intention to report to the decision-makers in their countries, thus supporting the process of considering the accession to this international legal instrument. The IAEA staff encouraged such an approach, to ensure that maximum benefit is

gained from the workshop and that the information received by the delegates is shared widely.

- Several participating countries emphasized that additional support from the IAEA may be needed, for example in the frame of a Technical Cooperation project, for developing their first National Report after accession to the JC. The IAEA confirmed readiness to carry out such missions upon request of Member States, subject to the availability of funds.
- Several participating countries are still in the process of enacting a national nuclear law and/or establishing an independent regulatory body.

The workshop was characterized by active and enthusiastic participation of the delegates, who constantly raised questions and comments, as well as displaying openness to share experiences and acquire knowledge about the various aspects being discussed. The event provided an excellent opportunity to highlight the relevance of adhering to the JC, as well as to stimulate exchange of information and experience between the participants and the IAEA staff.



Decommissioning and Environmental Remediation – Training the Next Generation

At the 6th Review Meeting of the JC, the area of ‘staffing, staff development, funding and other human resources areas’ was identified as an ‘overarching common issue’ that is important to improving safety.

In the disciplines of decommissioning and environmental remediation (D&ER), staff training and development together with knowledge transfer and retention are especially important, due to the longevity of such programmes. Indeed, for some large and complex nuclear sites such as Sellafield, it is sobering to reflect that the generation who will complete the decommissioning and environmental remediation of the site has yet to be born.

The most recent IAEA International Conference on the subject, *Advancing the Global Implementation of Decommissioning and Environmental Remediation Programmes*, was held in Madrid in May 2016. In this International Conference, skills requirements for the future were discussed, including the need to foster mobility. It was noted that continued efforts are needed in developing relationships with universities and training institutions to ensure that the necessary qualified personnel are available in future. For immediate dismantling, staffing is a key factor because operators have essential knowledge required for decommissioning. In this context, the age profile of current workforces in many programmes is a serious issue, together with the need for skills re-training among existing personnel.

The 2016 International Conference discussed how young people can be attracted to the multi-disciplinary field of D&ER, with the recommendation that the interest in D&ER at universities and training institutions should be stimulated, because it is an emerging activity which provides important service to society. Development and use of new technologies for D&ER is likely to be an important motivation in attracting young people to decide to devote their careers to working

in an evolving and dynamic industrial sector.

Two important initiatives, one sponsored by the IAEA and the other reported by the People’s Republic of China in their national presentation to the Joint Convention, are summarized below.

[IAEA International Nuclear Management Academy](#)

The International Nuclear Management Academy (INMA) is a framework facilitated by the IAEA in collaboration with nuclear engineering and business faculties at universities and with nuclear employers around the world. Its goal is to support participating universities in the implementation of high quality master’s level management programmes for the nuclear sector.

INMA member universities are encouraged to offer courses in the form of online and distance learning, and also in short-format courses and on a part-time basis. This is intended to give working nuclear professionals more flexibility and options to successfully complete programmes. INMA master’s programmes will not only focus on theory and concepts but include an emphasis on the practical application of management methodology and practice. INMA programmes will include an educational focus on case studies, individual and team projects, internships and direct involvement of industry experts as lecturers and mentors.

These are important areas for the viability of the nuclear industry worldwide and its role in providing power and prosperity for future generations. Without the industry can confidently provide assurance of the safe decommissioning of nuclear power plants when they reach the end of their operational life, as well as remediate safely the environmental legacies of past uranium mining, then societies will struggle to embrace the nuclear industry with confidence in its safety.

At the 2014 IAEA General Conference, a resolution was tabled and passed by the Member States supporting INMA, stating that the General Conference:

Encourages the Secretariat to pursue its International Nuclear Management Academy (INMA) initiative, which supports collaborations among nuclear engineering universities around the world to develop a framework for implementing and delivering master's level education programs in nuclear management, and to facilitate Member State and stakeholder involvement, including financial support for students and course material development.

Training Programmes in the People's Republic of China

China's policy to ensure that nuclear enterprises have sufficient human resources in the future, including for decommissioning, involves multiple channels. These include building a 'human resource information library', creating a human resource 'sharing platform', recruiting experts at home and abroad, enlarging educational communication and co-operation in the nuclear industry field, setting up expert boards at different levels and establishing technical working groups on specialist topics.

China in their national presentation to the 6th Review Meeting of the Joint Convention reported on an impressive training programme for future needs in nuclear facilities staff, radiation safety workers, nuclear and radiation safety regulatory inspection staff, and key-post technical workers. Currently, education and training courses for nuclear staff are under active development in a number of universities of technology in the professional disciplines of nuclear engineering and technology and radiation protection.

Specialized training courses are run with government support and involve co-operation between universities and the nuclear enterprises. The education modes are defined as 'order + joint cultivation' (undergraduates committed to future employment with a particular nuclear enterprise) or 'enterprise + university' (students funded by the nuclear industry with freedom for wider studies).

In the radiation safety field in China, more than 41,000 people have been trained by national-level training bodies in the three years since early 2014, with re-training occurring at 4-yearly intervals.

For regulatory inspection staff, training has been developed leading to the *Management Methods for the Regulatory Inspection Staff Certificate of Nuclear Radiation Safety*, and for key-post technical workers, regulations are in place on registration qualifications for the role of a Nuclear Safety Engineer.

In summary, China has recognized the need to invest vigorously in the education and training – in professional disciplines like nuclear engineering, nuclear technology and radiation protection – of its abundant talent pool of young scientists, to meet the growing demands of nuclear energy and technology expansion for availability of good human resources. This initiative involves government support and co-operation between the higher education institutions and nuclear enterprises, optimizing relevant courses, and enlarging university enrolment of nuclear professionals.

Germany: BGZ operates storage facilities for radioactive waste from electrical power utilities

In Germany, the legislator has legally reorganised the responsibility for the storage of radioactive waste from the operation and dismantling of nuclear power plants.

The BGZ Gesellschaft für Zwischenlagerung mbH, founded to ensure safe and reliable storage, has been operating the two central storage facilities in Ahaus and Gorleben, respectively, since 1 August 2017. As of 1 January 2019, the storage facilities for high-level radioactive waste at the sites of the German nuclear power plants will be transferred to the BGZ. In a further step, as of 1 January 2020, BGZ will also take over storage facilities for low-level and intermediate-level radioactive waste at the nuclear power plant sites. As a result, the responsibility for the storage of radioactive waste from German electrical power utilities will be centrally placed in the hands of the BGZ. The operators of the nuclear power plants will remain responsible for the decommissioning and dismantling of the power plants as well as for the proper packaging of the radioactive waste.



Figure 1. The BGZ interim storage facility at Ahaus, North Rhine-Westphalia.

The BGZ is an independent federal company organised under private law. The costs of storage and disposal will be covered by a public-law fund into which utilities paid around € 24 billion in July 2017.

Up to now, the storage facilities at the nuclear power plant sites have been closely linked in terms of personnel, organisation and technology with the respective power plant. In a step-by-step process, the BGZ will transfer these storage facilities into self-sufficient operation over the next few years, so that future safe storage will continue to be possible independently of the respective power plant.

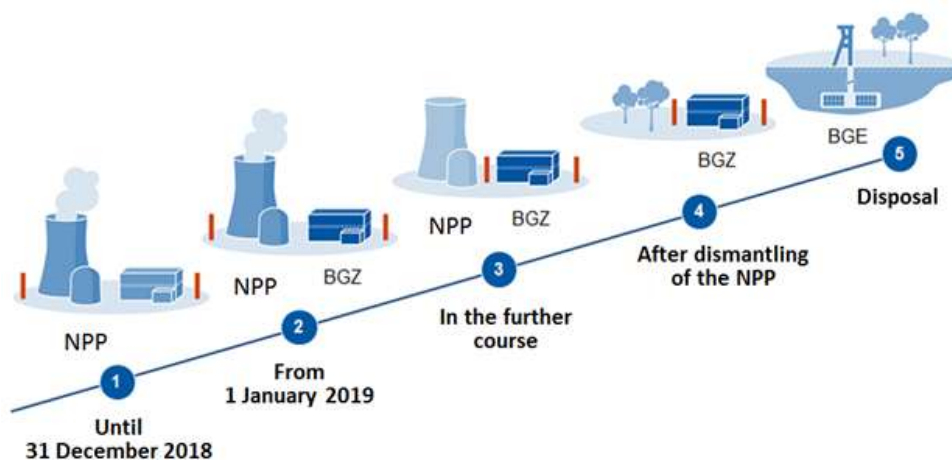


Figure 2. Steps on the way to a self-sufficient operation of the storage facilities.

Status of Contracting Parties



Figure 3. Green shading indicates Contracting Parties to the Joint Convention as of December 2018.

New Contracting Parties

The Joint Convention consists of 80 Contracting Parties as of December 2018. Four Contracting Parties have joined since the last issue of *Joint Convention News* in December 2017.

RECENTLY JOINED CONTRACTING PARTIES		
<i>Continent</i>	<i>Country</i>	<i>Entry into Force</i>
South America	Paraguay	14 November 2018
Asia	Thailand	1 October 2018
North America	Mexico	17 May 2018
Eastern Europe	Serbia	18 March 2018

Seventh Review Meeting Process Schedule

26–27 May 2020

Fourth Extraordinary Meeting

28–29 May 2020

Organizational Meeting for the Seventh Review Meeting

27 October 2020

Deadline for Submission of National Reports

26 February 2021

Deadline for Submission of Questions and Comments on National Reports

26 April 2021

Deadline for Submission of Answers for National Reports

24 May 2021

Commencement of the Seventh Review Meeting



Joint Convention News



Thank you to the Contracting Parties who contributed to this issue of Joint Convention News.