



# Joint Convention NEWS

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



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## President’s Message

### Managing the Unexpected

Dear readers,

Due to the COVID-19 pandemic, the Contracting Parties to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management agreed in November 2020 to postpone the Seventh Review Meeting of the Joint Convention to 27 June – 8 July 2022. We remain hopeful that the postponement of the Meeting will enable the full implementation of the review process as well as fruitful in-person discussions and the widest possible global participation.

As you are aware, during the Sixth Review Meeting of the Joint Convention, the Contracting Parties agreed to convene a Fourth Extraordinary Meeting in order to evaluate the review process in its present form and thereby enhance its effectiveness. Subsequently, a Working Group was established which met twice in 2019 and worked out a total of seven draft proposals, all of which aim to further develop the review process and consequently the global safety framework related to spent fuel and radioactive waste management, as well as to address existing deficiencies therein.

However, today, as in the previous weeks and months, we are still facing many uncertainties caused by the ongoing COVID-19 pandemic. It was for the same reason that we were unable to carry out the Fourth Extraordinary Meeting in February 2022. By now, the Contracting Parties agreed to hold the Fourth Extraordinary Meeting from 4 to 6 May 2022.

The Presidency is confident that this decision will allow for more nuanced and thus more beneficial discussions on the proposals submitted. Preparations for the Fourth Extraordinary Meeting are ongoing and the Presidency has consulted numerous delegations to discuss their respective positions on the submitted proposals. To ensure the efficacy of the Extraordinary Meeting and to foster transparency, I would like to once more encourage the Contracting Parties, especially the authors of the respective proposals, to utilize bilateral channels and to seek dialogue in the run-up to the meeting.

We are convinced that, despite the ongoing challenges, the present activities will contribute to raising global safety standards while reinforcing cooperation for the benefit of all Contracting Parties. We are also very pleased to welcome new Contracting Parties and would like to encourage other countries to follow their lead. Congo, Rwanda, Zimbabwe and the Syrian Arab Republic acceded the Joint Convention in 2021 and Malawi in early 2022. The number of Contracting Parties thus increased to 88 since the publication of the last JC Newsletter of January 2021.



*Hans Wanner,  
President, Seventh Review Meeting of the Joint Convention*

## Past Events and Meetings

### Joint Convention 20<sup>th</sup> Anniversary

The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (Joint Convention) entered into force on 18 June 2001 under the auspices of the IAEA. This occurred on exactly the ninetieth day after the date of deposit of the twenty-fifth instrument of accession, including those of fifteen States each having an operational nuclear power plant.

The Joint Convention applies to all countries, whether they generate radioactive waste and spent fuel from the production of nuclear energy or from other nuclear facilities but also to the countries that use radioactive materials in medicine, agriculture, industry, education and research. *“What motivated Botswana to join the Joint Convention is that, as a country, we are utilising radioactive sources in all sectors of the economy. Hence, we found it fitting as a country to join the Convention, so that we could learn best practices and strategies deployed by other Contracting Parties in the management of radioactive waste and disused sealed radioactive sources.”*, said Her Excellency Dr. Athaliah Lesiba Molokomme, Ambassador and Permanent Representative of Botswana to the United Nations Office at Geneva and Other International Organizations.

In 20 years, there has been considerable awareness of the importance of a unique “incentive” instrument addressing the safety of two subject matters, namely spent fuel and radioactive waste, on a global scale. *“Being a*

*party to the Joint Convention enables to prove country’s commitment to highest safety standards and gives a possibility to receive unbiased feedback to the country’s policy and strategy of radioactive waste management. You might not have answers to all of the challenges that country is facing in radioactive waste management issues, but there is a great chance that you will receive a good advice during the Joint Convention meetings that might take you several steps forward in finding a solution.”*, said Mr. Meelis Münt, Secretary General of the Estonian Ministry of the Environment.

Over the past two decades, Contracting Parties to the Joint Convention have collectively – through the process of peer review – improved safety levels related to spent fuel and radioactive waste management in their countries and endeavoured to provide an incentive to strengthen the global safety framework. *“A key benefit of being a Contracting Party is the review meetings, which provide a forum for national policy makers, operators and regulators to come together as one team. The collective experience and suggestions of other Contracting Parties helps challenge and encourage Australia to review and discuss waste and spent fuel safety issues.”* said Dr Gillian Hirth, Deputy CEO of the Australian Radiation Protection and Nuclear Safety Agency. *“From Australia’s practical experience, the benefits for all parties concerned (operators, regulators and the public) far outweigh the additional effort required to draft a national report and participate in review meetings every three years.”*

Although progress is still being made and looked for, the Joint Convention is now a well-established instrument, with a well-functioning



process which in addition to work to continually further enhance safety on spent fuel and radioactive waste management, also contributes to foster transparency and increase public confidence. *“The Joint Convention process assures the Canadian public that national arrangements for spent fuel and radioactive waste management conform to international arrangements, through the open publishing of Canada’s National Reports, questions and answers resulting from the peer review of these Reports, and our National Presentations to the Review Meetings.”*, said Mr Ramzi Jammal, executive Vice-President and Chief Regulatory Operations Officer, Canadian Nuclear Safety Commission. *“Canada’s National Reports to the Joint Convention have become an effective resource, frequently used by CNSC staff.”*

Contracting Parties to the Joint Convention, with the support of the IAEA Secretariat, have now acquired 20 years of significant experience and the strength of the Joint Convention will further be enhanced with as many Contracting Parties as IAEA Member States. *“The Convention supports the strengthening of an international safety regime and favors more rigorous instruments, making it possible to protect people and the environment.”*, said Ms Isabel Casas, National Contact of the Republic of Chile for the Joint Convention. *“Along with the commitment a Member State reflects about safety, on a voluntary basis, the instrument allows Member States to improve their transparency and safety parameters, being the solely international instrument of its kind.”*

On 18 June 2021, an article and video message by IAEA Director General Rafael Mariano Grossi were published on the [IAEA website](#) to mark the anniversary. In his video message, Mr Grossi

said that *“the Convention fosters transparency and public confidence. This confidence enables Member States to use nuclear energy and its applications towards their sustainable development goals and to mitigate climate change.”*

## Joint Convention Promotional and Implementation Assistance Events

### Virtual workshop to promote the Joint Convention, 15 to 19 March 2021

A virtual “Workshop to Provide Technical Assistance in Adhering to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management” was held in March 2021. The event was organised at the request of the Islamic Republic of Pakistan in response to IAEA outreach activities aimed at promoting the adherence of the Islamic Republic of Pakistan to the Joint Convention.

The objective of this workshop was to describe the effective implementation of the Joint Convention in Member States and to provide a forum for discussion with invited experts from Canada and United Arab Emirates on the benefits and challenges of being a Contracting Party to the Joint Convention. The objective had been achieved through offering comprehensive information on the obligations of the Joint Convention, the review process and accession procedure, and engaging in an open dialogue and information exchange with the 17 representatives from various governmental organizations of the Islamic Republic of Pakistan. The invited experts also shared their

experience of being a Contracting Party to the Convention.

The programme for the workshop was structured into five sessions, framed by an opening and closing session:

- Introduction to the international instruments on the safety of spent fuel and radioactive waste management;
- Main obligations contained in the Joint Convention;
- The peer review process under the Joint Convention;
- Lessons learned and main outcomes of past Review Meetings, and future activities;
- Practical exercise.

Through a practical exercise consisting of a mock Country Group session with a presentation of the National Report submitted by Canada for the Sixth Review Meeting, representatives of the Islamic Republic of Pakistan had the opportunity to learn how the peer review process of the Joint Convention works.

### **Virtual workshops to assist in developing the first National Report to the Joint Convention**

Two virtual workshops were held in January 2022 to assist the Republic of Zimbabwe and the Syrian Arab Republic (from 11 to 13 January 2022) and the Republic of Congo (from 25 to 27 January 2022) by providing tools and assistance to new Contracting Parties in developing the first national report to the Joint Convention, including preparation and participation in the Review Meeting.

For more targeted assistance, the new Contracting Parties presented to the invited experts from the Republic of South Africa and

France their national nuclear programme including, as appropriate, national nuclear policy, national programme for spent fuel and radioactive waste management, existing legal and regulatory framework, infrastructure and allocation of responsibilities within the national framework, etc.

The topics addressed during the workshops include:

- Procedures regarding the structure and format of the national report and the submission of the national report to the Contracting Parties for their review;
- Reviewing the national reports of Contracting Parties, submitting questions and/or comments on the national reports and responding to those questions and comments;
- Preparation and participation in the Review Meetings of the Joint Convention;
- Practical considerations such as attendance at meetings and working languages, interpretation and recordings of meetings, public and secure websites of the Joint Convention.

As part of the workshops, the National Reports of the Republic of South Africa and France were presented at practical sessions by invited experts from the above referenced Contracting Parties, followed by peer discussions and a dynamic exchange of information with 23 local participants representing all key national authorities involved in radioactive waste and, as appropriate, spent fuel management in the respective Contracting Parties. The invited experts also shared their experiences in presentation and subsequent discussion of the National Report at the Country Group session during the Review Meeting.

## Recent Developments

### 4<sup>th</sup> Extraordinary Meeting

As part of the continuous review and improvement of the Joint Convention, the Contracting Parties agreed, during the Sixth Review Meeting in 2018, to convene an Extraordinary Meeting.

The purpose of the Fourth Extraordinary Meeting, as decided by Contracting Parties at the Sixth Review Meeting, is to discuss possible ways to improve procedural mechanisms of the Joint Convention, taking into account the growing number of Contracting Parties and with a view to identifying and eliminating technical discrepancies between existing procedural documents of the Joint Convention.

Owing to the COVID-19 global pandemic, the Fourth Extraordinary Meeting, originally scheduled for May 2020, was postponed by Contracting Parties to a date to be determined in due course. In early 2021, considering the additional time available due to postponement of the Joint Convention Seventh Review Meeting, and the potential lack of time at the Seventh Review Meeting to thoroughly discuss and reach consensus on a list of proposals to improve procedural mechanisms, Contracting Parties agreed by consensus to hold the Fourth Extraordinary Meeting as an in-person meeting in February 2022.

In preparation for the Fourth Extraordinary Meeting, all proposals for improvement were translated into Arabic, Chinese, English, French,

Russian and Spanish and made available to Contracting Parties for their consideration.

Due to continuing uncertainty surrounding the COVID-19 pandemic, in early 2022 the Contracting Parties agreed to postpone the Fourth Extraordinary Meeting by setting a new date, agreed by consensus, from 4 to 6 May 2022.

## Topics of Interest

### The World's First Spent Fuel Repository: How to tackle safety, security and safeguards needs?

How to dispose of spent nuclear fuel safely and permanently? This is one of the fundamental questions related to the use of nuclear energy, that has been waiting for an answer since criticality of the first commercial reactors some sixty years ago. Also, in Finland, discussion on the question of nuclear waste was on the public agenda already when the first reactor was commissioned in the late 1970s and nuclear waste management policy and strategy were actively developed on the national level.

In 1978, the Finnish Government decided that each producer of nuclear waste is responsible for the management of spent nuclear fuel. This decision was the beginning of a long process, the result of which is the world's first spent nuclear fuel repository Onkalo, where the final disposal of spent nuclear fuel inside the Finnish bedrock is expected to start in the mid-2020s.



Source: Posivia

A publication called, “The World’s First Spent Fuel Repository: How to tackle safety, security and safeguards needs?” was published by STUK – the Finnish Radiation and Nuclear Safety Authority – during the IAEA General Conference in September 2021. The paper describes from the regulatory perspective how a safe and sustainable solution for disposal of spent nuclear fuel has been developed in Finland.

It explains the political decision-making process and how the long-term safety of the solution is being demonstrated and how regulatory challenges related to safety, security and safeguards are being resolved.

In broad terms, it will illustrate how the progress in geological disposal has been made possible in Finland and further highlight topical issues that are of interest to professionals and policymakers.

The publication discusses the following topics: public acceptance and development of nuclear waste management policy and strategy, the long-term safety of the final repository, and finally illustrates for the first time how safeguards methodology is planned to be applied to the final repository.

The publication is available online – free of charge – and its intention is to pass on certain lessons learned in Finland: responsible decision-making and a long-term political commitment to the chosen method, together with the research and development of the technical solution and enabling regulatory framework, are the keys for accomplishing the difficult task of disposing of spent nuclear fuel safely and permanently.

Link to the publication: <https://www.julkari.fi/handle/10024/143113>

## **Mexico advances in its technical and regulatory infrastructure for the management of radioactive waste**

With the recent signature of Mexico to the Joint Convention, the country promotes improvements in the safe management of radioactive waste, both in development actions of the main generators and managers, as well as in the revision of their technical regulations.

Mexico signed the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management on December 7, 2017, which entered into force on May 17, 2018. It should be noted that the first National Report was presented in 2020.

Before the signature of the Joint Convention, Mexico had already followed its principles, however, as a result of its adherence, the country's commitments are ratified.

Mexico follows the Joint Convention objectives, for the development of work programs related to the management of radioactive waste, both in the operational and regulatory fields, as well as in the development of technical cooperation projects of the last years.

Recognizing the need to have a National Radioactive Waste Management Policy, which complements the current management model, with plans for the disposal of radioactive wastes, the Mexican energy sector has received support from the IAEA and from the European

Community to generate proposals in that direction.

To synchronize the Mexican regulations with current international recommendations, the characterization and discharge regulations have been revised. Additionally, the regulations related to clearance and classification of radioactive waste are currently under revision.

On the other hand, in a joint effort, the governments of Canada, the United States, and Mexico agreed to reduce the risks of managing spent radioactive sources of American and Canadian origin, repatriating radioactive sources of long half-life and of high activity. The first shipment was made in 2020, pending the shipment of high activity sources of Co-60 and Cs-137.

The preparation of the National Report of the Joint Convention served as an incentive for the review of the inventories, resulting in the development of methodologies for their registration, making use of computer technologies for their control.

It is important to mention that the Laguna Verde Nuclear Power Plant Unit 1, from the Federal Electricity Commission, received authorization to operate for another 30 years in 2020; and is a bastion for the generation of clean and cheap electricity in Mexico. It currently has a spent nuclear fuel storage on-site, with a system of sealed stainless steel containers within a shielding made of a combination of steel and concrete.

Regarding the radiological characterization of radioactive wastes, current efforts need to be improved to modernize the characterization processes and avoid technical problems and



additional costs, in the medium and long term, and at the same time update the national inventory.

Mexico continues in the analysis for the improvement of the technical and regulatory infrastructure for the safe management of spent nuclear fuel and radioactive waste, posing challenges for the following years. As has been shown, in Mexico the infrastructure and adequate technical capacity have been developed to maintain safety in the management of radioactive wastes. It also has a legal framework that establishes a structure and responsibilities for each of the actors involved in this process. However, there are areas of opportunity that must be addressed in the short and medium-term, in such a way as to avoid unnecessary burdens on future generations.



## Optimization of the repatriation of residues from reprocessing in France

In the past, the reprocessing of spent fuel from German nuclear power plants was a possible waste management option for a long time; until 1994, this even had priority over direct disposal in the sense of the requirement for reuse if this was possible and economically justifiable according to the state of the art in science and technology. Since July 2005, transports for reprocessing spent fuel from nuclear power plants have been prohibited by law in Germany.

The radioactive waste resulting from reprocessing in France and the UK must be returned to Germany by the waste producers, i.e. the power utilities, in accordance with the contractual obligations. The return of this waste is also flanked by international treaties between the Federal Republic of Germany and France.

So far, the plans for the return of radioactive waste from France have involved the following quantities:

- 108 transport and storage casks, each with 28 containers of vitrified high-level radioactive waste (CSD-V) - return already completed.
- 152 transport and storage casks, each with 27 containers of compacted intermediate-level radioactive waste (CSD-C) - return pending; last planned to take place from 2024 onwards.
- 5 transport and storage casks, each with 28 containers of vitrified intermediate-level radioactive waste (CSD-B) - return pending; last planned to take place earliest in 2022.



Test run of empty Castor® HAW28M cask at Biblis storage facility

Photo: © BGZ

Regarding the return of the 152 casks with compacted intermediate-level radioactive waste (CSD-C), the power utilities have commissioned a Franco-German consortium AGC, consisting of the French Orano TN and the German GNS Gesellschaft für Nuklear-Service, to develop a new cask concept of the TGC27 design. Since this consortium has not yet succeeded in providing approved casks for transport in time, the current concept would probably delay the return of this waste until the 2040s.

In view of this situation, France and Germany have therefore agreed on a new solution for the return of the outstanding radioactive waste. Instead of the 157 casks with intermediate-level radioactive waste (CSD-C and CSD-B), it is now planned to transfer only three to five casks with vitrified high-level radioactive waste (CSD-V) to the Philippsburg storage facility and an additional 30 end used empty transport casks to the Ahaus storage facility as a mass equivalent.

This new agreement has advantages for both sides. Germany will take back the same amount of radioactivity from France as originally agreed. However, the number of transports and the associated costs will be significantly reduced. Instead of the up to 17 transport operations previously planned, only one transport from France to Germany will have to be carried out. The return of reprocessing waste from France could thus be completed by 2024 in line with the international agreements between the Governments of the Federal Republic of Germany and the Republic of France. The French side, in turn, will receive financial compensation from the German power utilities for the additional costs of disposal resulting from the larger volume of waste. The fund for the financing of nuclear waste management (Fonds zur Finanzierung der kerntechnischen Entsorgung - KENFO) is to make a financial contribution, as the costs to be borne by KENFO for the disposal of reprocessing waste in Germany will be reduced.

The law amending the Waste Management Transfer Act, which is necessary for the new concept, was passed in the German Bundestag on 10 June 2021. According to this law, costs for measures that significantly reduce waste management costs can be paid by the fund even if they are not associated with direct waste management tasks.

In this context, Germany expressly appreciates the constructive attitude of the French side in the negotiations that led to this solution.

## Status of Contracting Parties

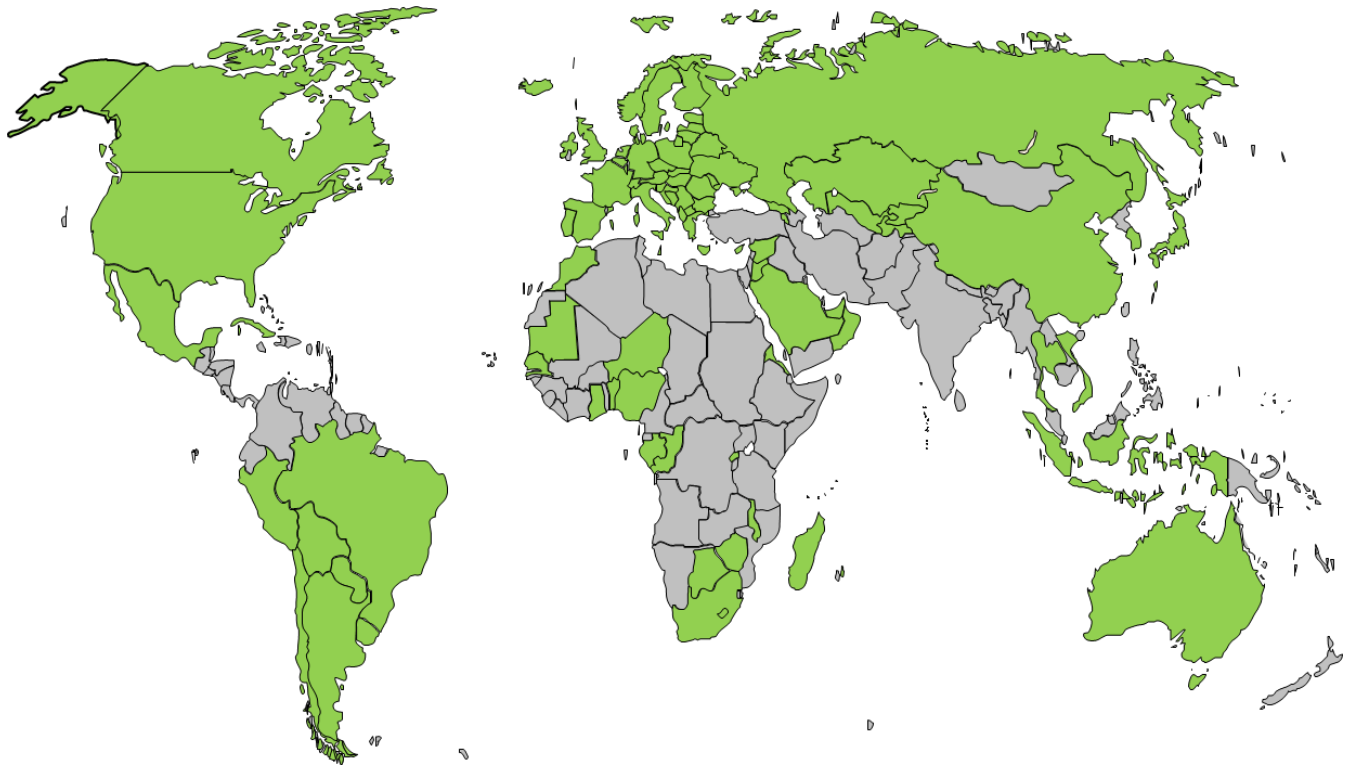


Figure 1 Map of Contracting Parties

## New Contracting Parties

The Joint Convention consists of 88 Contracting Parties as of February 2022. Five Contracting Parties have joined since the last issue of *Joint Convention News* in January 2021.

RECENTLY JOINED CONTRACTING PARTIES		
Continent	Country	Entry into Force
Africa	Congo	12 June 2021
Africa	Zimbabwe	19 December 2021
Africa	Rwanda	22 December 2021
Asia	Syrian Arab Republic	23 February 2022
Africa	Malawi	12 May 2022



## Important Dates

### Seventh Review Meeting Process Schedule

#### 31 March 2022

Deadline for Submission of Answers for National Reports

#### 13 June 2022

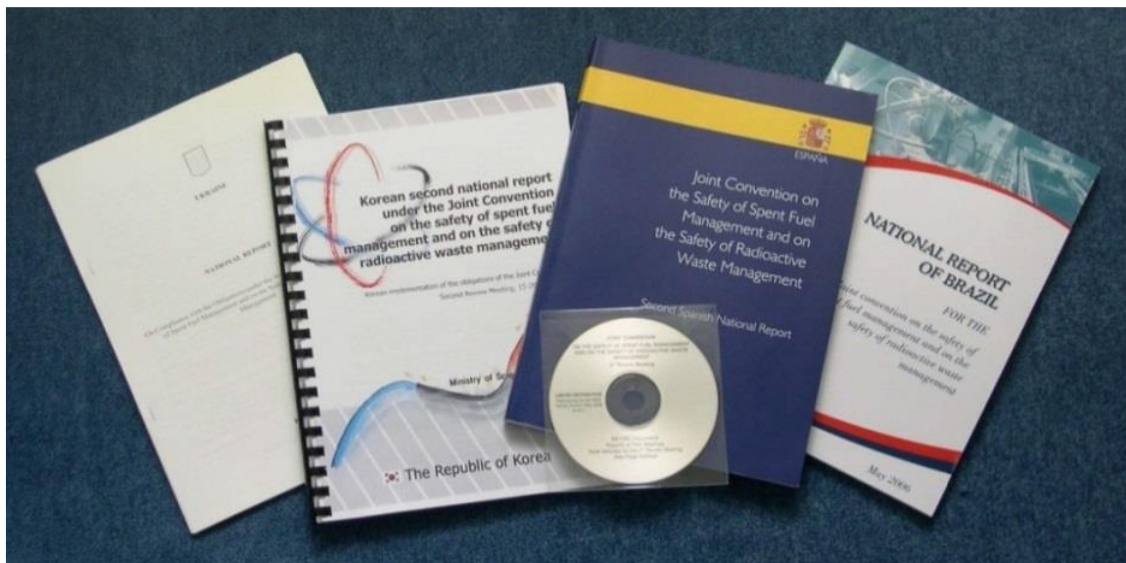
Deadline for Notification of Participation in Country Groups

#### 25 June 2022

Officers' Meeting

#### 27 June 2022

Commencement of the Seventh Review Meeting



# Joint Convention News

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