

**Open-Ended Meeting of Technical and Legal Experts for Sharing Information of States'
Implementation of the Code of Conduct on the Safety and Security of Radioactive Sources and
its Supplementary Guidance**

IAEA Headquarters, Vienna, Austria

6 -10 July 2026

Report of the Chair

1. An Open-Ended Meeting of Technical and Legal Experts for Sharing of Information on States' Implementation of the Code of Conduct on the Safety and Security of Radioactive Sources (the Code) and its supplementary Guidance (Guidance on the Import and Export of Radioactive Sources and Guidance on the Management of Disused Radioactive Sources), was held from 6 to 10 July 2026, at the IAEA Headquarters in Vienna. The Chair of the meeting was Ms Isabel Villanueva (Spain).
2. 180 experts from 115 Member States of the IAEA (Albania, Algeria, Angola, Argentina, Armenia, Australia, Azerbaijan, Bangladesh, Belgium, Benin, Botswana, Brazil, Brunei Darussalam, Burkina Faso, Burundi, Cameroon, Canada, Chad, Chile, China, Colombia, Comoros, Costa Rica, Croatia, Cuba, Cyprus, Czech Republic, Côte d'Ivoire, Democratic Republic of the Congo, Egypt, El Salvador, Estonia, Eswatini, Ethiopia, Fiji, Finland, France, Gabon, The Gambia, Georgia, Germany, Ghana, Greece, Hungary, Indonesia, Iraq, Israel, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Latvia, Lebanon, Lesotho, Libya, Lithuania, Madagascar, Malawi, Malaysia, Maldives, Mali, Malta, Marshall Islands, Mauritania, Mauritius, Mongolia, Montenegro, Morocco, Mozambique, Namibia, Kingdom of the Netherlands, Nicaragua, Niger, Nigeria, Oman, Pakistan, Paraguay, Poland, Portugal, Qatar, North Macedonia, Romania, Russian Federation, Rwanda, Saint Kitts and Nevis, Saint Lucia, Senegal, Serbia, Seychelles, Sierra Leone, Slovakia, Spain, Sri Lanka, Sudan, Syrian Arab Republic, Tajikistan, Thailand, Togo, Trinidad and Tobago, Tunisia, Türkiye, Uganda, Ukraine, United Republic of Tanzania, United States of America, Uruguay, Uzbekistan, Viet Nam, Yemen, Zambia, Zimbabwe) attended the meeting. The participants included representatives from the Food and Agriculture Organization (FAO), the International Criminal Police Organization (INTERPOL), the United Nations Office on Drugs and Crime (UNODC), and the International Source Suppliers and Producers Association (ISSPA) observing the meeting. The Scientific Secretaries for the meeting were Mr Timothy Hayes (Division of Radiation, Transport and Waste Safety) and Ms Luisa Betancourt Hernandez (Division of Nuclear Security).
3. The objective of the meeting was to promote a wide exchange of information on national implementation of the Code and Guidance. In line with the legally non-binding nature of the Code and Guidance, participation in the meeting and submission of National Papers, Survey, and presentations were on a voluntary basis, and the meeting was opened to all Member and non-Member States of the IAEA, whether or not they had made a political commitment to the Code and/or to the Guidance.
4. 153 States have made political commitment to implement the Code. 140 States have also notified the Agency of their intention to act in accordance with the Code's supplementary Guidance on the Import and Export of Radioactive Sources, and 78 have done the same for the Guidance on the Management of Disused Radioactive Sources.
5. The meeting was opened by IAEA Director General Rafael Mariano Grossi in video remarks. In his opening remarks, DG Grossi noted that the strong and positive impact of radioactive sources across the world can be seen firsthand. However, radioactive sources carry risk that

must be managed in the right way, as the failure of safety and security can be devastating. He stated that the Code highlights the importance of maintaining effective regulatory control through the lifecycle of radioactive sources, while the supplementary Guidance highlights the importance of safety and security at critical stages. DG Grossi asserted that the Code and its supplementary Guidance are not simply about providing direction, and that the IAEA supports States in concrete ways to achieve the principles of safety and security. He called on participants in the Open-ended Meeting to play their part by identifying gaps in implementation of the Code and reflecting on future needs.

6. As recommended in the 2023 Open-ended Meeting, the IAEA Secretariat organized the 7th Open-ended Meeting to include thematic and interactive sessions, side events with States' participation, and an appropriate number of Country Groups to facilitate and increase the participation of all Member States. The participants were divided into four Country Groups as provided in the meeting agenda and worked in parallel sessions from 7-9 July. The Country Groups were chaired by Mr Simon Vleugels (The Netherlands), Mr Justice Chipuru (Zimbabwe), Ms Cristina Dominguez (Argentina), and Ms Houda Idihia (Morocco). The Country Group Chairs were supported by Technical Officers from the IAEA: Mr Armin Lagumdzija, Ms Mercedes Salgado Mojena, Mr Frank Cocina, Ms Merinda Volia, Ms Margaret Cervera, Ms Leeza Duval, Mr Rosbell Bosch, and Mr Yo Nakamura.
7. Based on the outcomes of the 106 National Papers and 112 Surveys submitted by States to the IAEA Secretariat for the Open-ended Meeting, three thematic topics were identified for their particular importance: the infrastructure for regulatory control of the safety and security of radioactive sources, implementation of the safety and security culture, and implementation of the disused radioactive sources recommendations. All presentations of the Open-ended Meeting were made available to participants on a secured shared webpage. Therefore, their detailed contents are not replicated in this report and only a short summary is provided below.
8. In the corresponding thematic Country Group Sessions, around 290 oral presentations were made by Member States to reflect their national implementation of the Code and Guidance with emphasis on the three thematic topics. A summary report was prepared by each Country Group and delivered in Plenary. The corresponding presentations were made available to participants while the main findings are provided in the sections below.

Special Session: Evolution and Impact of the Code of Conduct on the Safety and Security of Radioactive Sources

9. During the Special Session that was held to explore the evolution and impact of the Code and its supplementary Guidance, Mr Carlos Nogueira de Oliveira (Brazil) provided a first-hand account of the radiological event that occurred in Goiânia, Brazil in 1987, and emphasized the institutional and ethical responsibilities of lifecycle management of radioactive sources. Mr Artem Lazarev (UNODC) highlighted the complementary nature of the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT) provisions and the Code, while Mr David Simm (INTERPOL) presented alignments between the Code and INTERPOL's operational focuses. Ms Rola Bou Khozam (FAO/IAEA) shared insights on how the Code ensures the continued use of radioactive sources for sustainable development. In addition, an industry representative, Mr Richard Wassenaar of the International Source Suppliers and Producers Association (ISSPA), was invited to share the industry perspective on the benefits of implementing the Code and supplementary Guidance.

10. During the discussions on the evolution and impact of the Code, it was noted that commitment to and implementation of the Code and supplementary Guidance helps ensure that radioactive sources are kept safe and secure throughout their lifecycle. Participants emphasized the need to continuously learn from historical radiological events to improve current and future safety and security practices. Cooperation among States, international organizations, and industry was highlighted as vital to advancing global implementation. However, gaps in the implementation of the provisions of the Code still exist, particularly regarding the end-of-life management of radioactive sources.

Update on Activities Since 2023 and Overview of Results from the Survey and National Papers on Implementation of the Code of Conduct

11. The Scientific Secretaries provided updates from the IAEA on activities since 2023 and results from the National Papers and Surveys prepared by participants. Ms Luisa Betancourt Hernandez (IAEA/NSNS) provided a status update on IAEA activities pertaining to the Code and its Supplementary Guidance. 92% of States (106 total) at the Open-ended Meeting submitted National Papers, a significant increase from 47% in 2023. Mr Timothy Hayes (IAEA/NSRW) presented preliminary analysis of the National Papers and Surveys and expressed the need to continue analysis to identify gaps, compare strengths and weaknesses. The analysis will assist the IAEA with identifying targeted activities to advance the implementation of provisions of the Code.
12. Preliminary analysis found that the infrastructure for the control of the safety and security of radioactive sources appears to be strong globally. With respect to implementation of the Code, the existence of a regulatory framework may no longer be the primary constraint. However, the data indicates that the capacity of the regulatory body is a key element that determines the effectiveness of the regulatory infrastructure. While the reporting of orphan source detection and response capabilities in the National Papers demonstrate progress, participating States continue to report challenges with recovery, response, and notification of incidents. Additionally, there is broad understanding of the import and export provisions of the Code and Guidance, but the gaps identified in the Survey regarding international cooperation and inconsistent processes and use of the import and export provisions related to request for consent and notifications require attention.

Overview of Tools – Assisting Implementation of the Code of Conduct on the Safety and Security of Radioactive Sources

13. The IAEA Secretariat provided updates on tools for assisting in the implementation of the Code. Mr Richard Samba and Mr Shaju Chittilappily (IAEA/NSNS) presented on the NUSIMS Self-Assessment Tool. Ms Shiwani Goswami (IAEA/NSRW) presented on the Code of Conduct Self-Assessment Tool, to become available by the end of 2026. Finally, Ms Mathilde Prevost (IAEA/NSRW) presented on the latest update of the Regulatory Authority Information System (RAIS+). All presenters provided participants with information on how to request access to and IAEA assistance for using the tools. Continued improvement based on assessment, reflection, and action taken was emphasised as requirements to continue improving implementation of provisions of the Code and its supplementary Guidance.

Infrastructure for Regulatory Control of the Safety and Security of Radioactive Sources

14. The plenary session started with an overview of the infrastructure for regulatory control of the safety and security of radioactive sources made by Mr Ronald Pacheco (IAEA/NSRW) and Ms Luisa Betancourt Hernandez (IAEA/NSNS). Mr Justice Chipuru (Zimbabwe) highlighted the establishment and maintenance of regulations for the safety and security of Category 1 to 3 radioactive sources. Ms Pascale Bourassa (Canada) discussed the establishment of effective import and export controls for Category 1 and 2 Radioactive sources. Mr Cliff Riley (Jamaica) introduced the successes and challenges in establishing a regulatory framework for control of radioactive sources in Jamaica. Mr Fabien Feron (France) presented the justification of authorizations for Category 1 to 3 radioactive sources based on the French model.
15. The IAEA Secretariat highlighted its ongoing efforts to actively promote political commitment to the Code and its supplementary Guidance, and presented available resources designed to assist States with the practical implementation of their provisions. While it was noted that aligning national regulatory frameworks with IAEA safety and security recommendations provides a strong foundation for oversight, discussions also focused on persistent global challenges, including constrained staffing and budgets, rapid personnel turnover, and orphan sources outside regulatory control. One State noted the challenges of unauthorized cross-border movement of radioactive sources.
16. During the Country Group Sessions, most States reported continued progress in strengthening their regulatory infrastructures through the establishment of independent regulatory authorities, comprehensive legal frameworks, and authorization, inspection, and enforcement programs. Some States noted that aligning national regulatory frameworks with IAEA safety standards and nuclear security recommendations and the Code provides a vital foundation for oversight, though some States continue to face challenges with ongoing legislative enhancements.
17. Many States maintain digitized national inventories and integrated regulatory management databases. The use of electronic licensing and the transition to or implementation of RAIS+ were identified as common good practices for maintaining effective national registries. However, some States highlighted ongoing digitization challenges, specifically regarding IT support, cybersecurity, and data integration.
18. Effective training programs and capacity building were widely recognized as key contributors to the successful implementation of the Code. Furthermore, many States emphasized the necessity of coordination and effective cooperation between regulatory bodies, law enforcement, border control, and emergency responders.
19. Despite overall implementation progress of the Code and supplementary Guidance, common challenges remain. Many States identified constraints in securing sufficient human and financial resources to perform core regulatory functions, as well as difficulties in retaining and training core personnel due to the turnover of staff.
20. Some States continue to face potential vulnerabilities regarding orphan sources remaining outside regulatory control.

Implementation of the Safety and Nuclear Security Culture of Radioactive Sources

21. During the plenary session held to address the implementation of safety and security culture for the control of radioactive sources, Mr Yo Nakamura (IAEA/NSNS) and Ms Caroline Pike (IAEA/NSNI) provided an overview of the human and organizational dimensions of the Code, highlighting IAEA foundations, technical guidance, and self-assessment resources designed to integrate these concepts into regulatory frameworks. Mr Simon Vleugels (Netherlands) shared

practical experiences in promoting nuclear security culture, demonstrating how explicit consideration of operator attitude in inspection strategies and the sharing of real-life threat scenarios can enhance security and awareness. Ms Julie Murray (Australia) discussed how the continuous review of safety culture through self-assessments can promote iterative improvement. Mr Yusuke Oribe (Japan) presented the structural and legal mechanisms required to manage safety and security interfaces holistically, emphasizing the application of a graded approach and the benefits of organizational alignment within a single regulatory space. In addition, Mr Boster Siwila (Zambia) highlighted leadership and personnel behaviours, sharing national policies on visible management commitment, just culture guidelines, and the practical integration of security procedures into daily facility operations.

22. Most States reported an increasing recognition of the vital importance of safety and security culture, with some moving toward incorporating these concepts into national legislation, regulatory guidance, and integrated management systems. Some States have established mandatory requirements for operators to develop culture programmes or incorporate safety, and security culture plans directly into their licensing frameworks.
23. Some States reported the development of specialized training programmes for regulatory staff, which increasingly integrate insider threat awareness and the use of inspectors with specialized backgrounds in human and organizational factors. However, multiple Country Groups emphasized that a regulatory body's internal culture influences its licensees, noting that while license requirements may include culture criteria, systematic implementation within the regulatory bodies themselves remains an ongoing objective.
24. A significant challenge identified by most States is that national frameworks and regulatory oversight remain predominantly focused on traditional regulatory compliance rather than behavioural and leadership dimensions. Many States noted that practical implementation is still in its early stages, and a general lack of understanding or inconsistent interpretation of culture-related concepts persists across both regulators and licensees. In particular, security culture remains less formalized than safety culture, with users often perceiving security responsibilities as secondary to radiation protection.
25. The lack of standardized, formal methodologies for evaluating and measuring safety and security culture was widely reported as a key hurdle. While some States have begun utilizing surveys, benchmarking tools, and key performance indicators (KPIs) to monitor awareness, many reported difficulties in developing tools to quantitatively assess "culture performance" or effectively evaluate safety and security culture. These efforts are further constrained by widespread human, financial, and technical resource limitations, including shortages of qualified personnel and high staff turnover.
26. Some States noted the use of IAEA-TECDOC-1995 Safety Culture in Organizations, Facilities and Activities Related to the Use of Ionizing Radiation Sources, and IAEA Nuclear Security Series No. 7 Implementing Guide on Nuclear Security Culture as important documents for States to utilize in the development of the safety and security culture for radioactive sources.

Implementation of the Disused Radioactive Source Recommendations of the Code of Conduct and Guidance on the Management of Disused Radioactive Sources

27. In the plenary session dedicated to the implementation of the disused radioactive source recommendations of the Code and Guidance on the Management of Disused Radioactive Sources, Mr Frank Cocina (IAEA/NEFW) provided an overview of disused radioactive source management options and challenges. Ms Gloria Zarate Perez (Chile) shared the current status

of Chile's disused radioactive source management strategy and the strategic shift from passive management of disused radioactive sources to actively reducing waste volume within the long-term storage facility. Mr Richard Wassenaar (ISSPA) provided an industry perspective on the management of disused radioactive sources including challenges with reuse, recycling, and return to supplier practices and implementation of relevant provisions of the Code and Guidance. Mr Ronald Pacheco (IAEA/NSRW) shared updates on the IAEA efforts to develop a TECDOC on Establishing Financial Provisions for the Management of Disused Radioactive Sources and associated activities to support States on the establishment of financial provisions for the management of disused radioactive sources. Finally, Ms Cristen Ford (United States of America) shared the experience of the USA in the challenges and cost of source recovery initiatives.

28. Most States acknowledged that the management of disused radioactive sources is technically complex, financial demanding, and globally challenging. While some States reported the lack of a consolidated and integrated national policy and strategy for the management of disused radioactive sources, some states linked this to human, financial, and technical capacity challenges.
29. Some States reported progress in the end-of-life management of disused radioactive sources, aligned with provisions of the Code and Guidance.
30. Some States acknowledged the interconnected nature of end-of-life management strategies, and called on all stakeholders, including States, regulatory bodies, source and device manufacturers, operators, and users of radioactive sources to collaborate on developing sustainable management strategies.
31. While some States reported the presence of long-term storage facilities within their country, many of those noted capacity concerns. One State highlighted volume reduction as a management strategy to optimize available space.
32. Most States noted a dependence on return-to-supplier policies as their principal management option without a secondary solution. However, potential difficulties in the return-to-supplier process were identified and the need for additional options to be considered was emphasized.
33. Most States recognize the need to establish financial provisions for the management of disused radioactive sources but are limited by different factors.
34. Some States reported the removal of disused radioactive sources from their territory with international support to support risk reduction.

Additional topics relevant to the implementation of the Code and the Guidance

35. The IAEA Secretariat continues to work with Points of Contact for Import and Export, including connectivity exercises, sending of periodic reminders to review and where appropriate, revise the Guidance Questionnaire and establishment of a system to notify Points of Contact when changes are made to the List of Points of Contact. The Secretariat encourages States to maintain updated Point of Contact information and request, if needed, assistance to implement import and export provisions of the Code and Guidance.
36. The following four side events took place:
 - a. Celebrating Successes, the Future and the 10th Anniversary of the Ad Hoc Working Group on Alternative Technologies
 - b. Tour of IAEA Incident and Emergency Operations Centre.

- c. Management of Radioactive Materials Inadvertently Found in Scrap Metal: Member States' Experience and IAEA Initiatives
- d. Enhancing Disused Radioactive Source Management Through Indicators: A Practical Approach for Member States

Conclusions

37. All States highlighted the importance of the Code and its supplementary Guidance in establishing their regulatory frameworks and conducting regulatory activities.
38. Overall, participating States have made progress in strengthening regulatory frameworks. and the establishment of legal frameworks may no longer be the primary constraint in implementation of the Code. Capacity, not legislation, has been identified as the next essential step to effectively implement the Code. Continued investment in resources, workforce development, interagency cooperation, and regulatory modernization remains essential to address persistent challenges.
39. As identified in the National Papers, the establishment and maintenance of a digitized national source registry is a defining characteristic of an advanced implementation of the Code. Digital registry and tracking systems for radioactive sources represent a global threshold for implementation maturity.
40. Many States commented that the implementation of safety and security culture is a challenge, specifically related to identification of practical methods of measurement, assessment and practice of safety and security culture within a regulatory body and license holders.
41. Many States identified the detection and recovery of orphan sources, including the discovery of radioactive sources and other radioactive material in scrap metal and recycling industries, as an ongoing issue. States are encouraged to maintain transparency and promptly share information on incidents involving radioactive sources. Such openness strengthens public confidence, supports international cooperation, and helps prevent recurrence through the exchange of lessons learned. This is consistent with Paragraph 12 of the Code which encourages States to provide timely information on incidents with potential transboundary implications and to cooperate through established IAEA mechanisms.
42. Many States noted that end-of-life management must be considered at the beginning of the source lifecycle, not when the source becomes disused. Financial provisions, take-back arrangements, and disposal pathways should be integrated into licensing decisions from the outset.
43. Many States reported difficulties in establishing long-term storage and disposal facilities. Of those that have long-term storage facilities, many reported challenges with reaching capacity limits. Volume optimization was recommended as a method to increase available storage space within existing facilities.

Recommendations

44. The IAEA Secretariat should continue to promote political commitment to the Code and its supplementary Guidance as well as assist States in their implementation. The Secretariat should continue regional and international activities to support implementation of the Code and its supplementary Guidance, as well direct outreach to policy makers.
45. The IAEA Secretariat should continue to encourage voluntary submission of National Papers and continue the use of the National Survey, continuing from the success of the 2026 Open-ended Meeting submissions. The Secretariat should continue to analyse the National Papers and Surveys to identify trends, gaps, areas of improvement, benchmarking, and areas for support of the implementation of the Code and its supplementary Guidance.
46. The IAEA Secretariat should finalize development of the tool for National Self-Assessment of the implementation of the Code and encourage Member State use of the tool to identify gaps and explore mechanisms to further improve implementation of the Code.
47. The IAEA Secretariat should consider expanding online tools through the IAEA Code of Conduct Platform to better assist States with access and sharing of information, enhance the availability of online information sharing, and facilitate a community of practice related to implementation of the Code.
48. The IAEA Secretariat should continue to encourage States to implement comprehensive inventories of radioactive sources with emphasis on digitization of records and awareness of information security principles. The Secretariat in this regard is encouraged to continue support in the implementation, ongoing maintenance, and advancement of RAIS+ as a comprehensive inventory and regulatory management system.
49. The IAEA Secretariat should consider expanding sections of the National Paper template to further enhance the sharing of information with focus on practical implementation practices, experiences, and distinct challenges.
50. The IAEA Secretariat should, within the scope of the Code, further examine methods to assess the promotion of safety and security culture with respect to radioactive sources, and provide guidance on performance indicators and effectiveness.
51. States are encouraged to ensure the adequate provision for safe and secure storage and management options including disposal pathways for disused radioactive sources.
52. The IAEA Secretariat should continue to assist States in the management of disused radioactive sources with a focus on sustainable management options, establishment of financial provisions, capacity building and targeted assistance.
53. States are encouraged to recall the provisions of the Code related to notification of incidents involving radioactive sources, specifically Paragraph 22 (l): the regulatory body has the authority to “*require the prompt reporting by authorized persons of loss of control over, and of incidents in connection with, radioactive sources*”, and Paragraph 12 “*Every State should ensure that information concerning any loss of control over radioactive sources, or any incidents, with potential transboundary effects involving radioactive sources, is provided promptly to potentially affected States through established IAEA or other mechanisms*”.

54. The IAEA Secretariat should continue conducting the Point of Contact meetings. During these events, the Secretariat should reinforce implementation of the import and export provisions of the Code and supplementary Guidance on Import and Export.
55. The IAEA Secretariat should continue to offer, upon request of Member States, assistance to implement provisions of the Code and Guidance.
56. As foreshadowed in the mechanisms approved by the Board, experts suggested that the Director-General submit this report to the Agency's policy-making organs.



Chair, Isabel Villanueva

July 10, 2026