

International Conference on Safety and Security of Radioactive Sources – Accomplishments and Future Endeavours

20 – 24 June 2022

PROGRAMME

Organized by the
International Atomic Energy Agency (IAEA)

IAEA Headquarters Vienna, Austria

Introduction

The purpose of the conference is to foster the exchange of experiences and anticipated future developments related to establishing and maintaining a high level of safety and security of radioactive sources throughout their life cycle.

The conference will provide a forum to:

- Exchange information on meeting current challenges relating to the safety and security of radioactive sources, including lessons learned during the COVID 19 pandemic;
- Increase awareness about and exchange experience regarding preparedness for and response to radiological incidents and emergencies involving radioactive sources;
- Foster coordination among national competent authorities for the safety and security of radioactive sources;
- Share experiences in the development of governmental (e.g., policy and strategy), legislative and regulatory frameworks for radioactive sources and associated facilities;
- Exchange information regarding the planning, establishment, maintenance and sustainability of national radiation safety and nuclear security regimes for radioactive sources, including safety and security systems for facilities and activities (other than transport), as well as knowledge management, education and training;
- Review the impact of research and technological advancements relating to future applications of nuclear sciences and technologies on safety and security of radioactive sources;
- Share experiences in technological advances and future planning for establishment, maintenance and sustainability of safety and security measures;
- Facilitate cooperation among all competent authorities and other stakeholders at the national and international levels, as applicable;
- Promote IAEA safety standards and nuclear security guidance, and their use by States;
- Promote the universalization and use of relevant legally binding (e.g., Joint Convention of the Safety Spent Fuel Management and on the Safety of Radioactive Waste Management – “Joint Convention”, Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency – “Assistance Convention”, and International Convention on the Suppression of Acts of Nuclear Terrorism – ICSANT) and non-legally binding (e.g., Code of Conduct on the Safety and Security of Radioactive Sources and its supplementary Guidance) international instruments.

The conference will not address the safety and security of nuclear material in use, transport and storage, nor the response to related nuclear security events. Further, the conference will not discuss any sensitive nuclear security information and issues of a political nature. The safe and secure transport of radioactive sources was addressed separately during the IAEA “International Conference on the Safe and Secure Transport of Nuclear and Radioactive Materials” (CN-280), held in Vienna on 12-17 December 2021, which will inform the conference.

Registration and Attendance

Conference participants are advised to arrive at Checkpoint 1/Gate 1 of the Vienna International Center one hour before the start of the meeting on the first day in order to allow for timely registration, security check and issue of grounds passes. Alternatively, participants can also register on Sunday 19 June from 15:00 to 18:00.

Grantees and Invited Speakers who have received financial support from the IAEA should please register their attendance at the Information Desk at the entrance of the M Building. The Information Desk and the Conference Secretariat in MOE67 will be staffed throughout the Conference and ready to assist at any time.

Conference App

The IAEA Conferences and Meetings App provides a one-stop access to information on the Conference Programme, the exhibition, and scheduled side events. The app also allows users to put together their own personalized schedule of events. Via this app participants will also be able to follow the livestreaming of the conference, view the abstract associated with each presentation, the latest conference programme, interact with other participants, and view PowerPoint presentations released after the event. Participants will receive an email inviting them to register for the app approximately one week before the conference.

Conference Website & NUSEC Portal

In addition to the Conference App, most conference information will be available either on the Conference Website or the IAEA's Nuclear Security Information Portal (NUSEC). The conference schedule, registration procedures and more general information can be found on the Conference website at <https://www.iaea.org/events/safety-security-radioactive-sources-2022>.

NUSEC is a secure, centralized and interactive online platform designed to help strengthen the Nuclear Security community worldwide by facilitating the exchange of up-to-date Nuclear Security information between the IAEA, its Member States and its international partners. After the Conference, full papers and presentations will be posted on NUSEC. Please visit <https://nusec.iaea.org> for access and new member registration.

Conference Overview

Monday will comprise an opening session and panel sessions involving national and international leaders and expert discussion. Tuesday, Wednesday, Thursday and Friday will commence with a panel session followed by parallel technical sessions. Friday will conclude with the Presidents' Report.

The panel sessions will take place in Board Room B/M1, and the parallel technical sessions will take place in Board Room B/M1, Board Room A and Conference Room M2.

Interactive Content Presentations

This Conference features digital poster presentations called Interactive Content Presentations (ICPs). ICPs will be briefly introduced at the conclusion of the panel session prior to the ICP session, and will be presented on the ground floor in the Press Room.

All ICP presenters are kindly requested to attend the ICP briefing to receive final logistical instructions. These briefings will occur at 08:30 every day at the ICP Station on the assigned day of their presentation (M Building, Ground Floor, Press room).

Further, ICP presenters are suggested to make use of the preview centre on the ground floor (M0E61) for a final check of their presentations, and to familiarize themselves with the touch-screen displays at least one day in advance of their respective presentations.

Poster Presentations

Poster presentations will be held in the Poster Area outside Board Room B/M1 (1st Floor, M Building) Board Room A (2nd Floor, M Building) on Tuesday, Wednesday and Thursday during afternoon during the coffee/tea breaks. Poster presenters are kindly requested to affix their poster on the assigned poster board latest by Tuesday 09.00 am and to be at their poster during the poster session assigned to them (this information is available in this programme). Posters will remain on display for the entire week of the Conference, and should be removed by 14:00 pm on Friday.

Discussions

All sessions are being recorded. Anyone who wishes to take the floor, e.g. during discussions, should, after having been recognized by the Chairperson, use one of the microphones available in the meeting room and begin their question or comment by stating their name, country or organization and be as concise as possible.

The Media

The opening session is open to the press. All other sessions will be limited to Conference participants.

Scenario-Based Policy Discussion

A Scenario-Based Policy Discussion is scheduled to be held on Monday afternoon. This will be an interactive session where audience members can use their personal electronic devices, such as a mobile phone, tablet or laptop, to provide input into questions raised regarding themes and topics relevant to the Conference. The Scenario-Based Policy Discussion will take place in Board Room B/M1.

Side Events

A number of side events are scheduled throughout the Conference Programme, organized by interested Member States and Organizations and the IAEA, and relate to a number of topics relevant to the safety and security of radioactive sources. Side events are open to all Conference participants. A full schedule of side events can be found at the end of this Programme.

Exhibition and Coffee Breaks

Coffee and tea will be available during the morning and afternoon breaks courtesy of voluntary contributions provided by exhibitors. The coffee breaks will be held on the ground floor and first floor of the M Building. Please take the time to visit and talk with the exhibitors.

Internet Access

Public access Wi-Fi is available throughout the IAEA buildings. Select access point WLAN-GUEST and the connection will be automatic, no password is needed.

Bank and Post Office

Banking Services and a post office are located on the first floor of the C building.

Conference Presidency:

Co-Presidents: Ms Nathalie Semblat
Deputy Director and Senior Program Manager
Nuclear and Radiological Security, Weapons Threat
Reduction Program Division, Global Affairs Canada

Mr Luis Pedro Huerta Torchio
Executive Director
Head of the Division of Research and Nuclear
Applications
Chilean Nuclear Energy Commission (Comisión Chilena
de Energía Nuclear)

IAEA Secretariat:

Scientific Secretaries: Ms Alessia Maria Rodriguez y Baena
Mr Ronald Pacheco Jimenez

Scientific and
Administrative Support: Ms Charlotte Grace Gherardini
Ms Leeza Duval
Ms Muzna Assi
Mr Juan Carlos Benitez Navarro
Mr Ayham Aldairi
Ms Sharlin Shirur
Mr Jonathan Huang
Mr Adem Mutluer

Conference Coordinator: Mr Sanjai Padmanabhan

Conference Venue:

International Atomic Energy Agency
Vienna International Centre (VIC)
Building M

Wagramer Strasse 5
A-1400 Vienna, Austria
Tel.: (+43 1) 2600 21330

Working Language: English

Resolutions: No resolutions may be submitted for consideration on any
subject; no votes will be taken.

Carina Martinez Fuentes	Mexico
Fernando Sanchez Castillo	Mexico
Bouchra Boustani	Morocco
Rachid Mellouki	Morocco
Zineb El Faicali	Morocco
Majid Saleemi	Pakistan
Muhammad Rizwan Liaquat	Pakistan
Abdul Mannan	Pakistan
Rizwana Kousar	Pakistan
Ramirez Renan	Peru
Susana Petrick Casagrande	Peru
Dmitry Bokov	Russian Federation
Vladimir Ostropikov	Russian Federation
Larisa Slinchenko	Russian Federation
Evgeny Shamin	Russian Federation
Pavel Tsvetov	Russian Federation
Ndeye Arame Boye Faye	Senegal
Talla Niang	Senegal
Mone Dye	South Africa
Sarah Ayers	USA
Nancy Fragoyannis	USA
Kristina Hatcher	USA
Frederic Morris	USA
Pallabi Mitra	USA
George Smith	USA
Gabriel González Sprinberg	Uruguay
Minh Quang Than	Viet Nam

IAEA Mobile Conference Application



Participants are encouraged to download the “IAEA Conference and Meetings” App available on Google Play and the iTunes Store.

Android



iPhone



The functions and features of the App for smartphones and tablets will be used for various purposes during the event:



View an up-to-date Programme



Check floor map of the sessions and exhibitors



Read abstracts and full-papers of speakers



Participate in voting during sessions



Raise questions to speakers during session



Send message to other participants



Receive announcements via push-notification

If you have questions or require assistance on the App, please contact the Registration Desk.

TIMETABLE

Sunday, 19 June 2022

Time	Session Title / Activity	Venue
15:00–18:00	Registration and Distribution of Conference Materials	Gate 1

Monday, 20 June 2022

Time	Session No.	Session Title / Activity	Venue
08:00–ongoing		Registration and Distribution of Conference Materials	Gate 1
10:00–11:00		Opening Session	Board Room B (BR-B)/M1
11:00–12:30	PL1	Panel Session 1: State Experiences in Safety and Security of Radioactive Sources	BR-B/M1
12:30–14:00		<i>Lunch Break</i>	
14:00–16:00		Scenario-Based Policy Discussion	BR-B/M1
16:00–16:30		<i>Coffee / Tea Break</i>	
16:30–18:00	PL2	Panel Session 2: International Instruments to Enhance Safety and Security Globally	BR-B/M1
18:00–20:00		<i>Director General Welcome Reception</i>	M-Building – Ground Floor

Tuesday, 21 June 2022

Time	Session No.	Session Title / Activity	Venue
09:00–10:30	PL3	Panel Session 3: Safety and Security of Radioactive Sources from Cradle to Grave	BR-B/M1
10:30–11:00		<i>Interactive Content Presentations</i> <i>Coffee / Tea Break</i>	Press Room Outside BR-B/M1
11:00–12:30	PS3.A	Technical Session: International Legal Instruments	BR-B/M1
11:00–12:30	PS3.B	Technical Session: Regulatory Oversight	Board Room A
11:00–12:30	PS3.C	Technical Session: Radioactive Sources Security and Safety by Design	M2
12:30–14:00		<i>Lunch Break</i>	
14:00–16:00	PS3.D	Technical Session: Assessment of Facilities and Activities	BR-B/M1
14:00–16:00	PS3.E	Technical Session: Regulatory Oversight	Board Room A

Time	Session No.	Session Title / Activity	Venue
14:00–16:00	PS3.F	Technical Session: Management of Disused Sealed Radioactive Sources	M2
16:00–16:30		<i>Poster Presentations Coffee / Tea Break</i>	M Building Outside BR-B/M1
16:30–18:00	PS3.G	Technical Session: Management of Disused Sealed Radioactive Sources	BR-B/M1
16:30–18:00	PS3.H	Technical Session: Information and Computer Security Related to Radioactive Sources	Board Room A
16:30–18:00	PS3.K	Technical Session: Challenges and Good Practices Throughout the Life Cycle of Radioactive Sources	M2
18:00–20:00		<i>Department of Nuclear Safety and Security Reception in Cooperation with Partners</i>	M-Building – Ground Floor

Wednesday, 22 June 2022

Time	Session No.	Session Title / Activity	Venue
09:00–10:30	PL4	Panel Session: Collaboration and Cooperation to Strengthen Safety and Security of Radioactive Sources	BR-B/M1
10:30–11:00		<i>Interactive Content Presentations Coffee / Tea Break</i>	Press Room Outside BR-B/M1
11:00–12:30	PS4.A	Technical Session: Awareness Raising and Coordination among Stakeholders	BR-B/M1
11:00–12:30	PS4.B	Technical Session: Assessment of Current and Emerging Threats, Hazards and Risks	Board Room A
11:00–12:30	PS4.C	Technical Session: Emergency Preparedness and Response for Radioactive Material Out of Regulatory Control	M2
12:30–14:00		<i>Lunch Break</i>	
14:00–16:00	PS4.D	Technical Session: International Cooperation and Assistance	BR-B/M1
14:00–16:00	PS4.E	Technical Session: Awareness Raising and Coordination Among Stakeholders	Board Room A
14:00–16:00	PS4.F	Technical Session: Assessment of Current and Emerging Threats, Hazards and Risks	M2
16:00–16:30		<i>Poster Presentations Coffee / Tea Break</i>	M Building Outside BR-B/M1
16:30–18:00	PS4.G	Technical Session: Lessons Learned during Covid-19 Pandemic	BR-B/M1
16:30–18:00	PS4.H	Technical Session: Awareness Raising and Coordination among Stakeholders	Board Room A

Time	Session No.	Session Title / Activity	Venue
16:30–18:00	PS4.K	Technical Session: Enhancing National Capabilities in Emergency Preparedness and Response	M2

Thursday, 23 June 2022

Time	Session No.	Session Title / Activity	Venue
09:00–10:30	PL5	Panel Session: Strengthening Sustainability and Effectiveness of National Regimes for the Safety and Security of Radioactive Sources	BR-B/M1
10:30–11:00		<i>Interactive Content Presentations Coffee / Tea Break</i>	Press Room Outside BR-B/M1
11:00–12:30	PS5.A	Technical Session: Human Resources, Safety Culture and Security Culture	BR-B/M1
11:00–12:30	PS5.B	Technical Session: Regulatory Infrastructure	Board Room A
11:00–12:30	PS5.C	Technical Session: Sustainability and Effectiveness of Systems, Measures and Related Emerging Technologies	M2
12:30–14:00		<i>Lunch Break</i>	
14:00–16:00	PS5.D	Technical Session: Non-Source-Based Radiation Technologies	BR-B/M1
14:00–16:00	PS5.E	Technical Session: Regulatory Infrastructure	Board Room A
16:00–16:30		<i>Poster Presentations Coffee / Tea Break</i>	M Building Outside BR-B/M1
16:30–18:00	PS5.G	Technical Session: Regulatory Infrastructure	BR-B/M1
16:30–18:00	PS5.H	Technical Session: Human Resources, Safety Culture and Security Culture	Board Room A
16:30–18:00	PS5.K	Technical Session: Physical Protection Systems and Measures at Facilities	M5
18:00–20:00		Reception: Sponsored by the International Source Suppliers and Producers Association (ISSPA)	M-Building – Ground Floor

Friday, 24 June 2022

Time	Session No.	Session Title / Activity	Venue
09:00–10:30	PL6	Panel Session 6: Managing Radiological Incidents and Emergencies Involving Radioactive Sources	BR-B/M1
10:30–11:00		<i>Coffee / Tea Break</i>	Outside BR-B/M1

Time	Session No.	Session Title / Activity	Venue
11:00–12:30	PS6.A	Technical Session: Nuclear Security Systems and Measures for Radioactive Sources Out of Regulatory Control	BR-B/M1
11:00–12:30	PS6.B	Technical Session: Information Exchange, Preparedness and Response to Incidents and Emergencies	Board Room A
11:00–12:30	PS6.C	Technical Session: Self-Assessment Tools for Safety, Security and EPR	M5
12:30-13:00		<i>Coffee / Tea Break</i>	Outside BR-B/M1
13:00-14:00		Closing Session	BR-B/M1

SUNDAY, 19 June 2022

Time	Session No.	Session Title / Activity	Venue
15:00–18:30		Registration and Distribution of Conference Materials	Gate 1

MONDAY, 20 June 2022

10:00–11:00 **Opening Session** **BR-B/M1**

Name and Title	Affiliation	
Rafael Mariano Grossi Director General	IAEA	Opening Statement (<i>video message</i>)
Nathalie Semblat Conference co- President Deputy Director and Senior Program Manager	Nuclear and Radiological Security, Weapons Threat Reduction Program Division, Global Affairs Canada	Opening Remarks
Luis Pedro Huerta Torchio Conference co- President Executive Director Head of the Division of Research and Nuclear Applications	Chilean Nuclear Energy Commission (Comisión Chilena de Energía Nuclear)	Opening Remarks

MONDAY, 20 June 2022

11:00–12:30 **Panel Session 1:** **BR-B/M1**
State Experiences in Safety and Security of
Radioactive Sources

Moderator: **N. Semblat**, Conference Co-President, Canada

Technical **H. Mansoux**, IAEA
Officer:

Invited Speaker, Title	Country	Affiliation
P. Kanchana Deputy Secretary General	Thailand	Office of Atoms for Peace
E. Romera Commissioner	Spain	Spanish Nuclear Safety Council
F. Mansoor Chairman	Pakistan	Pakistan Nuclear Regulatory Authority (PNRA)
T. Djurovic Head of the Department for Air, Water and Soil	Montenegro	Ministry of Sustainable Development and Tourism
S. Getachew Director General	Ethiopia	Radiation Protection Authority of Ethiopia (ERPA)
A. Facure General Coordinator	Brazil	National Nuclear Energy Commission
M. Grzechnik Director, Modelling, Assessment and Emergency Preparedness	Australia	Australian Radiation Protection and Nuclear Safety Agency
<i>12:30-14:00 Lunch break / Side Events</i>		

MONDAY, 20 June 2022

14:00–16:00 Scenario-Based Policy Discussion

BR-B/M1

Moderator: F. Wong, Senior Scientist, U.S. Department of Energy, Lawrence Livermore National Laboratory

Technical Officer: L. Duval, IAEA

The interactive scenario-based policy discussion will present a fictitious scenario to explore good and bad practices in radioactive material security in addressing an evolving threat involving such material in a major metropolitan area. Brief video vignettes will be used to set the scene, and anonymous polling technology will garner responses from the audience. A panel of experts will provide perspectives to real-time polling results to explore the nexus of safety and security culture for radioactive material given such an evolving threat.

Ms Maxime Russell, Director General, Hazardous Substances Regulatory Authority (HSRA) of Jamaica and **Ms Corey Hinderstein**, Deputy Administrator, U.S. National Nuclear Security Administration's will be delivering opening remarks.

Invited Speaker, Title	Country/ Organisation	Affiliation
C. John Buchanan , Coordinator	INTERPOL	Radiological Nuclear Terrorism Prevention Unit
K. Heppell-Masys , Director General	Canada	Canadian Nuclear Safety Commission
K. Adhikari Associate Professor in Medical Physics / Radiation Safety Officer	Nepal	National Academy of Medical Sciences, Bir Hospital
<i>16:00-16:30 Coffee/ Tea Break</i>		

MONDAY, 20 June 2022

16:30–18:00

Panel Session 2:

BR-B/M1

International Instruments to Enhance Safety and Security Globally

Moderator:

L. Huerta Torchio, Conference Co-President, Chile

**Technical
Officer:**

J. Silye, IAEA

Invited Speaker, Title	Country	Affiliation
C. Dominguez Head of Legal Department	Argentina	Nuclear Regulatory Authority
K. Heppell-Masys Director General	Canada	Canadian Nuclear Safety Commission
F. Feron Director	France	Nuclear Safety Authority
R. Handayani Head	Indonesia	Centre for Regulatory Assessment of Radiation Facilities and Radioactive Materials (BAPETEN)
F. Ollite Director	Mauritius	Radiation Safety and Nuclear Security Authority
D. Bokov Head of Department of Special Security	Russian Federation	Federal Environmental, Industrial and Nuclear Supervision Service of Russia, Rostekhnadzor
<i>18:00–20:00 Director General Welcome Reception Building</i>		<i>Ground Floor M</i>

TUESDAY, 21 June 2022

09:00–10:30

Panel Session 3:

BR-B/M1

Safety and Security of Radioactive Sources from Cradle to Grave

Moderator: M. Russell, Director General, Hazardous Substances Regulatory Authority, Jamaica

Technical Officer: C. Benitez Navarro, IAEA

Invited Speaker, Title	Country	Affiliation
N. D. Luwalira Secretary & Chief Executive Officer	Uganda	Atomic Energy Council
Mr A. M. Althomali	Saudi Arabia	Nuclear and Radiological Regulatory Commission
M. Ivanov Deputy Head of Department of Special Security	Russian Federation	Federal Environmental, Industrial and Nuclear Supervision Service of Russia, Rostekhnadzor
N. G. Benson Nino Head of the Department of Radiological Protection	Panama	Ministry of Health
M. Kostor Director, Division for Radiation Control and Supervision,	Malaysia	Atomic Energy Licensing Board (AELB)
J. Duffy Senior Inspector	Ireland	Office of Environmental Enforcement
E. Lemoine Director, Transport Licensing and Strategic Support Division	Canada	Canadian Nuclear Safety Commission
B. Sial Senior Consultant	Australia	Health Physicist Radiation Services, Australian Nuclear Science and Technology
L. Valentino Deputy Manager	Argentina	Nuclear Regulatory Authority
<i>Interactive Content Presentations Coffee / Tea Break</i>		

Interactive Content Presentations (ICP)

TUESDAY, 21 June 2022

10:30–11:00 ICP SESSION:

Press Room

Paper No.	Author(s)	Designating Member State/Organization	Title of Paper
276	C. J. Guembou Shouop	Cameroon	The use of Monte Carlo Simulation in Safe and Secure Management of Disused Sealed Radioactive Sources: End-Of-Life-Cycle Management Options
301	C. Tsampanis	Greece	A Smart Underwater Sensor for Localizing Radioactive Sources
333	A. Iovene	Italy	Gamma/Neutron Detection and Identification Systems for Tracking and Inspection of Radioactive Sources

TUESDAY, 21 June 2022

11:00–12:30 **Technical Session (3.A):** **BR-B/M1**

International Legal Instruments

Chairperson: **N. Fragoyannis**, Senior Level Advisor for Nonproliferation and International Nuclear Security, International Nuclear Security, Office of International Programs, U.S. Nuclear Regulatory Commission

Technical Officer: **O. Makarovska**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
11:00–11:10	64	T. Ahmad	Pakistan	Regulatory Experiences in Implementing IAEA Code of Conduct for Safety and Security of Radioactive Sources
11:10–11:20	203	S. Adu	Ghana	National Legal Framework for Prevention of Unauthorized Movement and Illicit Trafficking of Nuclear and Radioactive Materials in Ghana
11:20–11:30	81	R. Cupitt	United States of America	Promoting International Cooperation on the Transport of Radioactive Materials: Comparing National Legal Frameworks and the IAEA Implementing Guide
11:30–11:40	101	C. Dararutana	Thailand	Quality Management Systems—Requirements for Radioactive Sources in Thailand
11:40–11:50	294	A. Lazarev	UNODC	Prevention and suppression of terrorist and other criminal Acts Involving Radioactive Sources Under the International Convention for the Suppression of Acts of Nuclear Terrorism
11:50–12:00	327	M. Man	United States of America	Legislative and Regulatory Frameworks Enabling the Use of Non-Radioactive Technologies: Achieving Nuclear Security Objectives under International Instruments and Guidance
12:00–12:10	61	I. Ninsiima	Uganda	Implementation of the Code on the Safety and Security of Radioactive Materials: Uganda's Situation
12:10–12:20	83	V. Tanner	European Commission	Control of radioactive sources in the European Union
12:30–14:00	<i>Lunch break / Side Events</i>			

TUESDAY, 21 June 2022

11:00–12:30 **Technical Session (3.B):**
Regulatory Oversight

Board Room A

Chairperson: **N. A. Faye**, Senegal

Technical Officer: **D. Bennet**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
11:00–11:10	259	H. G. Abdallah	Chad	Safety and Security of Radiation Sources and their Associated Facilities in the Republic of Chad
11:10–11:20	223	F. P. Gonzalez	Cuba	Effectiveness of Cuban Regulatory Body in the Control of Safety and Security Regime in the East Region of the Country
11:20–11:30	135	A. Hamdan	Jordan	Enhancing Safety and Security of Radioactive Sources from Cradle to Grave in Jordan
11:30–11:40	65	A. Muhammad	Pakistan	Regulatory Oversight for Security of Radioactive Sources from Cradle to Grave
11:40–11:50	186	R. Pacheco Jimenez	IAEA	Revised Approach to Assist Regulatory Bodies to Develop and Sustaining Competences of Staff for Radiation Safety and Security of Radioactive Material
11:50–12:00	4	A. Plevaka	Russian Federation	Scientific and Technical Support to Rostekhnadzor for Safety Supervision during Operation of Radiation Sources
12:00-12:30	Q&A			
12:30-14:00	<i>Lunch break / Side Events</i>			

TUESDAY, 21 June 2022

11:00–12:30 **Technical Session (3.C):** **M2**

Radioactive Sources Security and Safety by Design

Chairperson: **K. Heppell-Masys**, Canada

Technical Officer: **T. Hayes**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
11:00–11:10	157	M. Van Den Avyle	United States of America	Progress Update on Exploring Novel Physical Security Enhancements for Industrial Irradiators Through Government-Industry Partnerships
11:10–11:20	104	M. Comben	United Kingdom	Industry Collaboration to Enhance Security at Industrial Irradiators - A Case Study
11:20–11:30	94	P. Kjall	Sweden	Progress Update on the Development of an International Standard to Protect Medical Equipment that uses Radioactive Sources
11:30–11:40	93	M. Kuca	United States of America	A Successful Virtual Technical Exchange between India, the United Kingdom, and the United States on Security by Design for Devices and Facilities that Use Radioactive Materials
11:40–11:50	23	C. Maican	Romania	Security of Radioactive Sources and Response in Case of Incidents
11:50–12:00	344	A. Nilsson	Sweden	IEC Standards Advance Security of Medical Equipment Containing High-Activity Radioactive Sources
12:00–12:10	267	S. Oh	Republic of Korea	Research Project on Tracking of Portable Radioactive Sources
12:10–12:20	125	K. Zahraman	Lebanon	Toward a Permanent Safe and Secure Radioactive Waste Store in Lebanon
12:30-14:00 Lunch break / Side Events				

TUESDAY, 21 June 2022

14:00–16:00 **Technical Session (3.E):**

Board Room A

Regulatory Oversight

Chairperson: **G. Smith**, United States of America

Technical Officer: **J. T. Zerquera**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
14:00–14:10	127	D. Bokov	Russian Federation	Graded Approach for Security of Radioactive Material: Basis and Interface with Safety
14:10–14:20	7	T. Flury	Switzerland	Action Plan to Strengthen the Radiological Security in Switzerland
14:20–14:30	252	A. Giantelli	United States of America	Modifying the Inspection and Oversight Programs of the U.S. Nuclear Regulatory Commission During a Global Pandemic
14:30–14:40	90	N. D. Luwalira	Uganda	Ten Years of Regulatory Control of Radioactive Sources in Uganda: Achievements, Challenges and Future Plans
14:40–14:50	180	H. Pappinisseri	IAEA	New IAEA Safety Guides on Radiation Safety in Well Logging and in the Use of Nuclear Gauges

16:00–16:30 *Poster Presentations, Coffee / Tea Break*

TUESDAY, 21 June 2022

14:00–16:00 **Technical Session (3.F):** **M2**

Management of Disused Sealed Radioactive Sources

Chairperson: **M. Kostor**, Malaysia

Technical Officer: **A. Lagumdzija**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
14:00–14:10	250	L. Al Attar	Syrian Arab Republic	Recycling Of 137cs and 60co Disused Sealed Radioactive Sources
14:10–14:20	121	R. Baydoun	Lebanon	Management of Disused Radioactive Sources and Alternative Technology
14:20–14:30	39	A. Ibrahim	Nigeria	Design of Radioactive Storage Container for Safely and Security of Legacies Sources in Nigeria
14:30–14:40	217	A. Malekifarsani	Islamic Republic of Iran	Diseased Sealed Radioactive Source management in IRAN
14:40–14:50	102	M. Liaquat	Pakistan	Life Cycle Management of Radioactive Sources in Pakistan
14:50–15:00	210	Y. Liu	United States of America	A Compact Type B Packaging Design for End-of-Life Management of Disused Radiological Sources
15:00-15:10	40	I. Tremblay	Canada	Analysis of Canada's implementation of the IAEA Guidance on the Management of Disused Radioactive Sources
<i>16:00–16:30 Poster Presentations, Coffee / Tea Break</i>				

TUESDAY, 21 June 2022

16:00–16:30

Poster Session 1:

M01 (first floor M-building)

Poster Presentations

Poster Station	Paper No.	Name	Designating Member State/Organization	Title of Paper
1	9	A. Asaker	Egypt	Iris Cryptosystem Based on Elliptic Curve Cryptography
3	10	O. Agbenorku	Ghana	Regulatory Functions and Practices to Prevent and Detect Illicit Trafficking of Radioactive Sources in Ghana
5	13	N. Harun	Malaysia	Slope Hazard Mapping and Findings Influencing Risk to the Radioactive Waste Facility
7	14	I. Vujcic	Serbia	Safety plan as a mandatory document for obtaining a license to perform radiation activities
9	17	S. Masic	Serbia	New Security system for Irradiation Facility at the Vinča Institute, Belgrade - Serbia (second phase)
11	20	I. Balan	Moldova	Progress of the Republic of Moldova in establishment of the nuclear security system
13	28	M. M. Escobar	Cuba	Financial Provisions for the Management of Disused Radioactive Sources in Cuba
15	30	A. Bashir	Sudan	Sudan Radioactive Sources Safety and Security, Status and Future Prospectus
17	32	H. A. Briso	Chile	Radiation Risk Minimization
19	36	M. S. Rahman	Bangladesh	Safety Systems of Radioactive Sources in Atomic Energy Centre Dhaka, Bangladesh and its Implication on Public Health
21	37	P. Gyan	Ghana	Optimizing Maintenance of Handheld Detection Equipment for Front Line Officers in Ghana: A Systems Engineering Perspective
23	44	A. H. B. Mohd SARI	Malaysia	Tracking system for radioactive isotope casing

Poster Station	Paper No.	Name	Designating Member State/Organization	Title of Paper
25	45	V. V. Morgunov	Ukraine	Numerical Calculation of Absorbed Dose Received by Glass Matrices for Immobilization Nuclear Waste and its Simulated Irradiation
27	47	M. Diordiy	Russian Federation	The Container for Storage and Disposal of Disused Sealed Radiation Sources

TUESDAY, 21 June 2022

16:00–16:30

Poster Session 1:
Poster Presentations

M02 (second floor M-building)

Poster Station	Paper No.	Name	Designating Member State/Organization	Title of Paper
2	49	M. N. M. Kamari	Malaysia	Disposal of Cobalt-60 (Co-60) Teletherapy System in Medical Institution: Involvement of Stakeholders in Ensuring the Safety and Security of Radioactive Sources
4	60	F. A. Badrul Hisham	Malaysia	Security Culture at Medical Facilities in Malaysia: The Efforts Towards Sustainability
6	68	P. Bhe-Ouhariot	Central African Republic	Response Procedure in the Event of an Industrial Radiography Accident, Challenge in the Central African Republic
8	77	TBC	TBC	A new type of ⁷⁵ Se Gamma Radiography Design with Enhanced Inherent Safety
10	89	A. Krauleidis	Lithuania	Safety and Analysis of 18 Mev Photons Activated Radioisotopes in Siemens Oncor Impression 3d Linac Decomisioning Experence at Klaipeda University Hospital
12	92	A. Chetaine	Morocco	Security of Radioactive Sources Throughout Their Lifecycle
14	99	TBC	Republic of Korea	Regulatory Experience and Improvement Efforts for High-Risk Radiation Sources

Poster Station	Paper No.	Name	Designating Member State/Organization	Title of Paper
16	103	Z. Khalilov	Azerbaijan	Comparison of Measured and Simulated by Numerical Simulation Dose Rates of DRMS During Storage and Irradiation Period of Radioactive Sources in Work Places of Gamma Facility
18	107	S. Abdalwahab Mohmed	Sudan	Reflection of the Implementation Guides on the Sudanese Regulations for the Security of Radioactive Materials
20	110	M. El Oulki	Morocco	CNESTEN's Experience and Current Practices Related to Safety and Security of Radioactive Sources
26	113	L. Khalayi	Uganda	Sustainability and Effectiveness of National Regimes through Public Awareness
30	126	T. Zidouz	Morocco	Establishing Standard X-ray Narrow-beam Radiation Qualities for CNESTEN Calibration Laboratory

TUESDAY, 21 June 2022

16:30–18:00 **Technical Session (3.G):** **BR-B/M1**

Management of Disused Sealed Radioactive Sources

Chairperson: **A. M. Farsani**, Islamic Republic of Iran

Technical Officer: **J. C. Benitez-Navarro**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
16:30–16:40	319	J. F. B. Ateba	Cameroon	Safety and Security Interface Within the Cameroon Centralized Storage Facility
16:40–16:50	192	V. Emenyonu	Nigeria	Sustainable Security of Radioactive Sources Within the Context of Extended Producer Responsibility (EPR) Programme
16:50–17:00	27	G. Gbeddy	Ghana	The Establishment and Maintenance of Effective Safety and Security Systems for Disused Sealed Radioactive Sources in Ghana: Accomplishments, Knowledge Management, Challenges, and Future Projections
17:00–17:10	57	M. de las Mercedes Salgado Mojena	Cuba	Twenty Years of Experience in the Management of Disused Sealed Radioactive Sources in Cuba
17:10–17:20	130	A. Muzongomerwa	Zimbabwe	Zimbabwe Experience in The Management of Disused Sealed Radioactive Sources
17:20–17:30	248	J. Tompkins	United States of America	US/IAEA Transuranic (TRU) Source Repatriation: Accomplishments 2010-2021
17:30-17:40	313	M. Wald-Hopkins	United States of America	Designed for Safety: 380-B Type B(U) Packaging for Disused Sealed Radioactive Source Recovery
17:40-17:50	75	E. Yuliati	Indonesia	Authorization of Radioactive Waste Management Facility in Supporting the Management of Radioactive Sources Waste
17:50-18:00	Q&A			

18:00–20:00 *Department of Nuclear Safety and Security Reception in Cooperation with Partners*
Ground Floor M

Building

TUESDAY, 21 June 2022

16:30–18:00 **Technical Session (3.H):** **Board Room A**

**Information and Computer Security Related
to Radioactive Sources**

Chairperson: **P. Mutale**, Zambia

**Technical
Officer:** **M. Hewes**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
16:30–16:40	67	N. K. Agbemava	Ghana	Information Security in the Transport of Radioactive Materials in Ghana
16:40–16:50	19	I. Alrammah	Kingdom of Saudi Arabia	COVID-19 Pandemic as a Trigger for Enhancing Information Security of Radioactive Sources
16:50–17:00	295	A. H. Bezu	Ethiopia	The Role of Computer Security System for the Safety and Security of Radioactive Sources: Computer Security System Gaps and Regulatory Challenges A Case Review of Radioactive Waste Facility (Ethiopia) and Tikur Anbessa Hospital Radiotherapy Center
17:00–17:10	193	M. Rowland	United States of America	Managing Cyber Security Supply Chain Risks for the Security of Radioactive Materials
17:10–17:20	194	G. White	United States of America	Recent Trends Affecting Cybersecurity at Radioactive Material Sites
17:20–18:00	Q&A			
18:00–20:00	<i>Department of Nuclear Safety and Security Reception in Cooperation with Partners Ground Floor M Building</i>			

TUESDAY, 21 June 2022

16:30–18:00 **Technical Session (3.K):** **M2**

Challenges and Good Practices Throughout the Life Cycle of Radioactive Sources

Chairperson: **G. Wolf**, United States of America

Technical Officer: **Y. El Abbari**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
16:30–16:40	2	R. Agalga	Ghana	Ghana's Nuclear Security; Progress, Challenges and The Way Forward
16:40–16:50	334	E. Fanchini	Italy	A software Infrastructure and Procedure for The Safe Use and Tracking of HASS for Infield Operations
16:50–17:00	329	E. Kroshkin	Russian Federation	Bringing the RTG to a Safe State in The Countries of The Former USSR. The First Steps
17:00–17:10	239	T. Kui Ngu	Malaysia	Experience in Regulating Radioactive Lighting Arrester as Consumer Product in Malaysia
17:10–17:20	46	R. Karanam	India	Desirability of International Oversight Framework for Ensuring Security of Radioactive Sources
17:20–17:30	133	H. Shames	Libya	Strengthening Sustainability and Effectiveness of The Libyan Regimes for the Safety and Security of Radioactive Sources
17:30–17:40	106	T. Siru	Finland	Recent Challenges, Accomplishments, and Future Endeavours in Nuclear Security for Radioactive Sources
17:50–18:00	Q&A			
18:00–20:00	<i>Department of Nuclear Safety and Security Reception in Cooperation with Partners Ground Floor M Building</i>			

WEDNESDAY, 22 June 2022

09:00–10:30

Panel Session 4:

BR-B/M1

Collaboration and Cooperation to Strengthen Safety and Security of Radioactive Sources

Moderator: T. Clark, Deputy Director, Division of Materials Safety, Security, State, and Tribal Programs, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission

Technical Officer: T. Pelletier, IAEA

Invited Speaker, Title	Country	Affiliation
A. A. Zapata Expert in Radiological Protection	Colombia	Ministry of Mines and Energy
K. Velichkov Senior Program Manager and Diplomatic Advisor	ISTC	International Science and Technology Center
J. Miller Chairman	ISSPA	International Source Suppliers and Producers Association (ISSPA)
A. de los Reyes Head of International Programs	Spain	Spanish Nuclear Safety Council
M. Mkhosi Chief Executive Officer	South Africa	National Radioactive Waste Disposal Institute
A. Franzen Scientific Counsellor to the Embassy of Sweden in Vienna	Sweden	Swedish Radiation Safety Authority
I. Mirsaidzoda Director	Tajikistan	Chemical, Biological, Radiological, And Nuclear Safety & Security Agency (CBRN SSA)
R. Lewis Deputy Director	United States of America	U.S. Nuclear Regulatory Commission

Interactive Content Presentations / Coffee Break

Interactive Content Presentations (ICP)

WEDNESDAY, 22 June 2022

10:30–11:00

ICP SESSION:

Press Room

Paper No.	Author(s) [presenting author in bold]	Designating Member State/Organization	Title of Paper
326	V. Kamenopoulou	IAEA	Advisory Missions on Regulatory Infrastructure for Radiation Safety and Nuclear Security
78	H. Janzekovic	Slovenia	Challenges of the Inspection Program related to Activities and Facilities with Radiation Sources
73	J-T. Eisheh	Germany	Lessons Learned from a Recent Nuclear Forensic Investigation of An Orphan Sealed Source

WEDNESDAY, 22 June 2022

11:00–12:30 **Technical Session (4.A):** **BR-B/M1**

Awareness Raising and Coordination Among Stakeholders

Chairperson: **I. Villanueva**, Spain

**Technical
Officer:** **W. Stewart**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
11:00–11:10	191	S. Adu	Ghana	Regional Approach in Prevention and Control of Movement of the Mobile Radioactive Sources Across the Borders in Africa
11:10–11:20	244	M. Ekman	United States of America	Radiological Security: Enabling Effective Response for Protection, Containment, and Pursue and Recapture
11:20–11:30	80	A. Meliana	Indonesia	Enhancing National Nuclear Security by Engaging Law Enforcement Agencies through Personnel Training
11:30–11:40	238	M. Van Den Avyle	United States of America	Novel Approach to Training Law Enforcement for the Radiological Threat – A Partnership with the Hungarian National Police
11:50–12:30	Q&A			
12:30–14:00	<i>Lunch Break / Side Events</i>			

WEDNESDAY, 22 June 2022

11:00–12:30 **Technical Session (4.B):** **Board Room A**

**Assessment of Current and Emerging
Threats, Hazards and Risks**

Chairperson: **R. M. Tahar**, Malaysia

**Technical
Officer:** **L. Duval**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
11:00–11:10	85	A. Alzyoud	Jordan	Radiological Terrorism: Is the Threat Real?
11:10–11:20	118	G. Bentoumi	Canada	Application of Lessons Learned from Technology Demonstration of Passive Techniques: Muon, Neutron, and Gamma-Rays for Nuclear Disarmament Verification to Enhance Security of Concealed Radioactive Sources
11:20–11:30	105	U. Häusler	Germany	A Survey on the Potential Radiological Hazard of Gaseous Tritium Light Sources
11:30–11:40	263	T. Sfetsos	Greece	Considering Radioactivity Thresholds Based on Security Risk
11:40–11:50	224	T. Shiba	Japan	Aerosol Generation During Nuclear Security Events Using Chemical Explosives
12:00–12:30	Q&A			
12:30–14:00	<i>Lunch Break / Side Events</i>			

WEDNESDAY, 22 June 2022

11:00–12:30 **Technical Session (4.C):** **M2**

**Emergency Preparedness and Response for
Radioactive Material Out of Regulatory
Control**

Chairperson: **S. Popovic, Croatia**

**Technical
Officer:** **M. Assi, IAEA**

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
11:00–11:10	119	Z. El Faicali	Morocco	Moroccan Experience in Establishing National Plan for Regaining Control over Orphan Sources
11:10–11:20	257	N. A. de Hernandez	Dominican Republic	Dominican Republic Experience on Response to Events Involving Radioactive Material Out of Regulatory Control (MORC) in Scrap
11:20–11:30	29	A. Ioannidou	Greece	Searching and Securing orphan Sources – Case Studies of Orphan Sources in Scrap Metal
11:30–11:40	66	S. Lopatin	Ukraine	Practical Managing of Radiological Incidents Involving Radioactive Materials in Ukraine
11:40–11:50	166	A. Arnwine	United States of America	Creating Radiological Response Tabletop Scenarios using Digital Video Background
11:50–12:00	134	B. Nsouli	Lebanon	MORC Search and Secure to Reinforce Radiation Safety and Nuclear Security Regime in Lebanon
12:00-12:30	Q&A			
12:30-14:00	<i>Lunch break / Side Events</i>			

WEDNESDAY, 22 June 2022

14:00–16:00 Technical Session (4.E):

Board Room A

Awareness Raising and Coordination Among Stakeholders

Chairperson: R. Renan, Peru

Technical Officer: T. Hailu, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
14:00–14:10	54	M. A. Abd. Ahmed	Sudan	Awareness of Nuclear Security in Sudan: Case Study
14:10–14:20	11	J. T. Duffy	Ireland	Security of Radioactive Sources – Practical Implementation in Ireland
14:20–14:30	165	M. Kalinina-Pohl	United States of America	Going Virtual in Times of Crisis: Cases of Successful Engagement with Professional Audiences
14:30–14:40	211	M. S. Tall	Senegal	On the Collaboration among National Stakeholders for the Regulatory Control of Radioactive Sources in Senegal

16:00–16:30 Poster Presentations / Coffee / Tea Break

WEDNESDAY, 22 June 2022

14:00–16:00 **Technical Session (4.F):** **M2**

Assessment of Current and Emerging Threats, Hazards and Risks

Chairperson: **D. Bokov**, Russian Federation

Technical Officer: **D. Ek**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
14:00–14:10	196	A. Hossain	Bangladesh	Risk Assessment on Safety and Security Interfaces of Radioactive Sources: Intelligent Approach
14:10–14:20	247	Z. Myers	Canada	Radiological-Nuclear Security - A New Roadmap for Technological Investment
14:20–14:30	300	R. Mugavero	Italy	A Case Study of New Tools to Assess Current and Emerging Asymmetric Threats Related to Radioactive Sources and Material: The OSDIFE Intelligence Platform
14:30–14:40	117	I. Tsourounakis	Greece	Proposal on Vulnerabilities Assessment for Facilities Owning Radioactive Material
14:40–14:50	86	E. Wallace	United States of America	Prioritizing Radiological Threats: Frameworks for Assessing Risks to Radioactive Materials
14:50–15:00	95	A. Giantelli	United States of America	Given Operating Experience, is the Graded Approach for Security of Radioactive Materials Utilized within the United States by the National Materials Program Effective?
15:00-15:10	185	H. Yücel	Türkiye	The Need for Replacement of 137Cs- Blood Irradiators by X-Ray Devices in Parallel to Technically Advancements: Investigation of The Blood Irradiators in Türkiye in Terms of Source Safety and Security
15:10-16:00	Q&A			
16:00–16:30	<i>Poster Presentations / Coffee/ Tea Break</i>			

WEDNESDAY, 22 June 2022**16:00–16:30****Poster Session 2:****M01 (first floor M-building)****Poster Presentations**

Poster Station	Paper No.	Name	Designating Member State/Organization	Title of Paper
29	128	M. M. Ali	Sudan	Sudanese Legal Framework for Nuclear Security
31	132	I. Sambo	Nigeria	Tackling Potential Insider Threat in Nuclear and Radiological Facilities and Nigeria's Nuclear Security Architecture: Tools, Preventive and Protective Measures
33	154	I. Mayida	Zimbabwe	Evaluation of Occupational Radiation Safety Using Effective Dose Measurements for Workers at Mines that Use Nuclear Gauges in Zimbabwe
35	168	M. Sandoval	United States of America	Virtual Execution of Security System Design, Implementation, and Assurance for Radioactive Sources: Lessons Learned From COVID-19 Global Pandemic
37	169	M. Ekman	United States of America	Tips and Tools for Developing a Sustainability Culture for Radioactive Source Security
39	172	M. A. I. Ralaivelo	Madagascar	Radiological Safety and Source Security in The Cobaltotherapy Center of the CHU JRA hospital
41	178	E. Clement Desmond Kotei Addison	Ghana	Assessment of Radiation Dose Rate Levels and Radiation Risk at the Cobalt -60 Unit, Komfo Anokye Radiotherapy Center, Ghana
43	179	M. S. Gurisha	United Republic of Tanzania	Growth of National Inventory of Sealed Radioactive Sources in Tanzania
45	181	A. Y. Kyei S. Adu	Ghana	Ensuring Safety and Security of Radiation Sources Use in the Oil and Gas Industry in Ghana
47	182	M. M. Mounja	Mauritania	Paths Interfaces Control during Transport of Radioactive Materials in Mauritania

Poster Station	Paper No.	Name	Designating Member State/Organization	Title of Paper
49	187	N. H. G. Mudiyansele	Brunel University London, UK	Gadolinium Based Scintillators for Thermal Neutron Detection
51	190	A. Djibo	Niger	The Safety and Security of Radioactive Sources in Niger
53	202	U. Mirsaidov	Tajikistan	Safety and Security Issues of Radioactive Sources in The Republic of Tajikistan
55	204	C. E. Beogo	Burkina Faso	Modeling and Simulation of Polarization Potential in a Planar Gamma-Ray Detector
57	206	B. Tiefu Kejala	Ethiopia	Challenges in Implementation of Security of Radioactive Sources & Possible Solutions

WEDNESDAY, 22 June 2022

16:00–16:30

Poster Session 2:
Poster Presentations

M02 (second floor M-building)

Poster Station	Paper No.	Name	Designating Member State/Organization	Title of Paper
32	207	L. A. Agyeman	Ghana	Strengthening Safety and Security of Radioactive Sources and their Associated Facilities through AFRA and IAEA TC Projects: Ghana's Perspective
34	209	J. Sekyere	Ghana	Human Capacity Development in Radiological Security: Ghana's Model
36	213	S. Hashim	Malaysia	Radiation Dose from NORM-added Paint Products
38	218	Y. Li	China	A Rapid Nuclide Identification Method for Nuclear Security
40	226	D. Prifti	Albania	Safety Improvement of the Radioactive Waste Storage Facility in Albania
42	227	B. Tolawak	Ethiopia	Nuclear Gauge Application in a Road Construction Industry in Ethiopia
44	230	F. Mohamed	Malaysia	Unmanned Radiation Monitoring System via the Internet of Drone

Poster Station	Paper No.	Name	Designating Member State/Organization	Title of Paper
46	235	A. Ounib	Morocco	Promoting International Cooperation to Strengthen Safety and Security of Radioactive Sources
48	243	C. Sepulveda	Chile	Nuclear Security Regulations in Chile
50	246	I. Toure	Senegal	Radiation Protection Standards on Medical Devices in Sub-Saharan Developing Countries
52	249	A. Bravo D. Pia Salazar	Philippines	Strategic Trade Risk Assessment Matrix: Philippine Approach on Licensing Review and Evaluation
54	253	C. Gamulani	Malawi	Challenges and Good Practices in Implementation of Safety and Security of Radioactive Sources throughout their Life Cycle
56	258	P. Phruksarojanakun	Thailand	Monte Carlo Safety Assessment of Yttrium-90 Bremsstrahlung Radiation from Radiation Shield
58	262	E. Medina Gironzini	Peru	Experience in the use of Social Networks in Radiation Protection

WEDNESDAY, 22 June 2022

16:30–18:00 Technical Session (4.G):

BR-B/M1

Lessons Learned during Covid-19 Pandemic

Chairperson: **S. Repanovici**, Romaia

Technical Officer: **O. Makarovska**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
16:30–16:40	251	A. Giantelli	United States of America	Continued Licensing and Communications of the U.S. Nuclear Regulatory Commission during a Global Pandemic
16:40–16:50	156	H. Janzekovic	Slovenia	Challenges of Inspection Program during COVID-19 Pandemic
16:50–17:00	146	M. Kostor	Malaysia	Addressing Challenges in Inspection and Enforcement of Safety and Security of Radioactive Sources During the COVID
17:00–17:10	198	A. Pandey	India	Regulatory Control of Radioactive Sources During Covid-19 Pandemic and Lesson Learned
17:50-18:00	Q&A			

WEDNESDAY, 22 June 2022

16:30–18:00 Technical Session (4.H):

Board Room A

**Awareness Raising and Coordination
among stakeholders**

Chairperson: A. Atkins, United States of America

**Technical
Officer:** V. Kamenopoulou, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
16:30–16:40	162	M. Ekman	United States of America	Joint Training Exercises Among Radiological Security Stakeholders
16:40–16:50	228	K. Griffith	United Kingdom	The UK Regulatory Regime for The Security of Radioactive Sources
16:50–17:00	231	A. S. Jamaluddin	Malaysia	Applying Nuclear Security in Ensuring Safety in Trade Activity Involving NORM – Case Study in Malaysia
17:00–17:10	282	W. Lorenzen	United States of America	Private Sector Engagement - Opportunities for Success
17:10–17:20	197	R. Mellouki	Morocco	Overview on Facilitation of National Coordination and Communication Among Stakeholders in the Field of Radioactive Sources Security
17:20–18:00	Q&A			

THURSDAY, 23 June 2022

09:00–10:30

Panel Session 5:

BR-B/M1

Strengthening Sustainability and Effectiveness of National Regimes for the Safety and Security of Radioactive Sources

Moderator: **M. Betti**, Director, Joint Research Centre Directorate G - Nuclear Safety and Security, European Commission

Technical Officer: **T. Hayes**, IAEA

Invited Speaker, Title	Country	Affiliation
J. Nettleton Deputy Director	United Kingdom	Environment Agency
N. A. Boye Faye Director General	Senegal	Senegal Authority for Radiation Protection and Nuclear Safety
N. Reguigui Director	Tunisia	National Centre of Radiation Protection
A. Nasir-Bello Director Nuclear Safety, Physical Security and Safeguards	Nigeria	Nigerian Nuclear Regulatory Authority
M. Russell Director General	Jamaica	Hazardous Substances Regulatory Authority (HSRA)
D. Ojha Head, International Coordination and Communications	India	Atomic Energy Regulatory Board
R. Paci Chair	Albania	Radiation Protection Office (RPO)
R. B. Robaina Director	Cuba	La Oficina de Regulación y Seguridad Ambiental (ORSA)

Interactive Content Presentations / Coffee Break

Interactive Content Presentations (ICP)

THURSDAY, 23 June 2022

10:30–11:00

ICP SESSION:

Press Room

Paper No.	Author(s) [presenting author in bold]	Designating Member State/Organization	Title of Paper
205	H. Foy	United States of America	Nonprofits Roles in Strengthening Radiological Security in Africa: Lessons and prospects
72	J. Harris	United States of America	Assessment of Nuclear Security and Safety Culture at Radiological Facilities across the United States

THURSDAY, 23 June 2022

11:00–12:30 Technical Session (5.A):

BR-B/M1

Human Resources, Safety Culture and
Security Culture

Chairperson: **B. Gričienė**, Lithuania

Technical Officer: **Y. Nakamura**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
11:00–11:10	38	M. Kaci	Algeria	Design and Delivery of a Nuclear Security Training Program for Users of Radioactive Sources in Industry
11:10–11:20	245	M. Kalinina-Pohl	United States of America	The Hazards of Scrap Metal Recycling and the Insider Threat Connection
11:20–11:30	236	I. A. Rahman	Malaysia	Arguments for Integrated Radiation Safety and Nuclear Security Educational Programmes in Developing Countries
11:30–11:40	91	L. Spangler	United States of America	Sustaining a Nuclear Security Regime: A Capacity Building Program
11:40–11:50	339	T. Tsvetkov	Russian Federation	Relative Evaluation of The Training Models Implemented by The Global Nuclear Safety and Security Institute in the Field of Nuclear Security
11:50–12:00	18	T. Tularak, R. Delgado	Thailand, WINS	Developing, Maintaining and Sustaining Radioactive Source Security Competence in Thailand

12:30–14:00 *Lunch Break / Side Events*

THURSDAY, 23 June 2022

11:00–12:30 **Technical Session (5.B):**
Regulatory Infrastructure

Board Room A

Chairperson: **J. Chipuru**, Zimbabwe

Technical Officer: **B. Boustani**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
11:00–11:10	150	M. Hazel, K. Adhikari	United States of America, Nepal	Radioactive Source Security in Nepal: A Roadmap for Improved Radiological Security Following Enactment of The Radiological Act
11:10–11:20	208	S. Adu	Ghana	Developing Regulations for the Security of Radioactive Sources; Challenges and Lesson Learn
11:20–11:30	306	M. B. Zinsou	Benin	Trends in Safety and Radiation Protection: Progress During the First Year of Benin's Regulatory Body
11:30–11:40	111	F. Hatimi	Morocco	Functions, Competencies and Effectiveness of Regulatory Bodies, the Case of the Moroccan Regulatory Body
11:40–11:50	63	I. Muhammad	Pakistan	Regulatory Requirements for Security of Radioactive Sources in Pakistan
11:50–12:00	88	S. Nalumansi	Uganda	Regulations for Security of Radioactive Materials in Use and Storage – Uganda's Story
12:00–12:10	186	M. Recio Santamaria	IAEA	Revised Approach to Assist Regulatory Bodies to Develop and Sustaining Competences of Staff for Radiation Safety and Security of Radioactive Material
	164	V. Vargas	United States of America	A Risk-Based Methodology for the Prioritization of Radioactive Sources

12:30–14:00 *Lunch Break / Side Events*

THURSDAY, 23 June 2022

11:00–12:30 **Technical Session (5.C):** **M2**

Sustainability and Effectiveness of Systems, Measures and Related Emerging Technologies

Chairperson: **A. Al Shehhi**, United Arab Emirates

Technical Officer: **W. Stewart**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
11:00–11:10	233	G. Bentoumi	Canada	Cutting-Edge Techniques Toward Reducing False-Positive Event Rate and Increasing Neutron-Gamma Discrimination in Radiation Portal Monitor (RPM) Based on Polyvinyl Toluene (PVT) Scintillators
11:10–11:20	122	I. Della Rocca	United Kingdom	An Autonomous Robot with Radiation Detection Capabilities for Locating, Identifying and Removal of Radioactive Sources and Threats
11:20–11:30	219	E. M. de Souza	Brazil	Multidisciplinary Approach: How to Best Use Detectors to Fulfill the Regulatory Control of Radiation Sources
11:30–11:40	142	B. Higgins	United States of America	Promoting Situational Awareness of Radioactive Materials Using Cloud-Hosted Resources: A Case Study
11:40–11:50	69	H. Kroeger	Germany	Improvements to the German Highly Active Sealed Sources register: Register 2.0
11:50–12:00	138	M. Man	United States of America	Security Management and Security Culture: Complementary Foundations of Effective Security
12:00–12:10	55	V. Venturini	Argentina	Distributed Ledger Technology Adoption in Argentinian External Dosimetry System
12:30–14:00 Lunch Break/ Side Events				

THURSDAY, 23 June 2022

14:00–16:00 **Technical Session (5.D):** **BR-B/M1**

Non-Source-Based Radiation Technologies

Chairperson: **A. Popp**, Australia

Technical Officer: **L. Duval**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
14:00–14:10	149	S. Pillai	United States of America	Can Electron Beam Technology Replace Cobalt-60 Gamma Irradiation for Mutation Breeding for Crop Improvement?
14:10–14:20	199	C. Boyd	United States of America	Reducing Radiological Risk to Enhance Public Safety: Lessons from The Medical Researcher Community Using X-Ray Irradiation Technology
14:20–14:30	147	A. Parnell K. Cwiek	United States of America, Poland	Office of Radiological Security's Reduce Program Implementation in Poland
14:30–14:40	153	I. Kirsten	International Cancer Expert Corps	On-the-ground data from 28 LMICs toward deploying linear accelerators (LINACs) to enhance safety, security and efficacy for cancer treatment.
14:40–14:50	325	T. Kroc	United States of America	National Academies' Study on Radioactive Sources, Applications and Alternative Technologies
14:50–15:00	183	S. Norris	United States of America	DOE/NNSA Office of Radiological Security Support for the Transition from Radioactive Source-Based Technologies to Machine-Based Radiation Technologies
15:00–15:10	137	S. Pillai	United States of America	Lessons Learned from Comparison Studies of Single-Use Medical Product Irradiation with Cobalt and Machine-Based Radiation Technologies
15:10–15:20	31	A. Wilcox	United States of America	Evaluation of Machine-Based Sources for Sterile Insect Technique

16:00–16:30 *Poster*

Presentations, Coffee / Tea Break

THURSDAY, 23 June 2022

14:00–16:00 **Technical Session (5.F):**
Regulatory Infrastructure

Board Room A

Chairperson: **N. F. B. Bakri, Kingdom of Saudi Arabia**

Technical **T. Hailu, IAEA**
Officer:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
14:00–14:10	167	A. Baciú	United States of America	Interfaces Between Safety and Security in the Control of Radioactive Sources
14:10–14:20	323	J. Bosnjak	IAEA	Application of a Graded Approach in Regulating the Safety of Radiation Sources
14:20–14:30	290	G. de la Fuente Rosales	Cuba	Graded Approach to Source Security: The Need to Move from three to four Levels of Security (A, B, C And D)
14:30–14:40	225	F. P. Gonzalez	Cuba	Safety and Security of Radioactive Sources in Medical Facilities
14:40–14:50	212	H. J. Hassan	Malaysia	Radioactivity in the Living Environment: A Need for Harmonization of Legislative Control
14:50–15:00	87	D. Bokov	Russian Federation	Improvement of the Regulatory Framework for The Physical Protection of Radioactive Material and Associated Facilities in The Russian Federation
15:00–15:10	321	R. Paci	Albania	Toward Synergies Between Safety and Security Maintaining Balance in Albania
<i>16:00–16:30 Poster Presentations, Coffee / Tea Break</i>				

THURSDAY, 23 June 2022**16:00–16:30 Poster Session 3:****M01 (first floor M-building)****Poster Presentations**

Poster Station	Paper No.	Name	Designating Member State/Organization	Title of Paper
59	264	E. Ofoegbu	Nigeria	National Efforts in Securing Orphan and Legacy Sources: Lessons Learnt and Challenges
61	270	S. H. Putero	Universitas Gadjah Mada	Nuclear Security Pocketbook for Indonesia's Security Officer
63	272	I. Tkachonak	Belarus	Radiation Safety Documentation for Design of Radiation Facilities
65	277	A. de la Fuente Puch	Cuba	Regulatory Body Staffing Estimation
67	278	K. Seemela	Republic of South Africa	Strengthening the South African Network for Nuclear Education, Science and Technology through Postgraduate Training
69	280	A. A. Tiruneh	Ethiopia	Stakeholders Awareness Raising Programs on the Safety and Security of Radioactive Sources: Challenges and Opportunities a Case Review of Ethiopian Radiation Protection Authority Stakeholder Communication and Consultation Practices
71	281	K. Seemela	South Africa	Safe and Secure Management of Sealed Radioactive Sources at the Centre for Applied Radiation Science and Technology
73	284	K. Adhikari	Nepal	Safety and Security of Radioactive Sources in Nepal
75	285	S. Chuvaev	Russian Federation	A Device for Monitoring Changes in the Radiation Situation in Places where Radioactive Sources are Stored
77	286	K. Mubiru	Uganda	Goal Programming with Application to Budgetary Planning towards Sustainable Radiation Safety

Poster Station	Paper No.	Name	Designating Member State/Organization	Title of Paper
79	293	S. Wiyuniati	Indonesia	The Reuse of Outer Capsule and Pigtail from Obsolete Sealed Sources of Ir-192 Gamma Mat Type
81	296	M. Rweyemamu	Tanzania	Challenges Associated with Ensuring the Safety and Security of Radioactive Sources throughout their Life Cycle
83	303	R. Hadisaputra	Indonesia	Analysis of the Utilization of Depleted Uranium as Shielding Material for the Storage Container of Disused Teletherapy Source
85	304	J. Antonius	Indonesia	Safety Analysis on Land Transportation of Cobalt-60 Radioactive Waste Using Fault Tree Analysis (FTA)
87	305	H. Nursetya Putra	Indonesia	Security Analysis of Unused Teletherapy Cobalt-60 Sources Transport Container Using Attack Tree Analysis Method
28	120	W. F. Sabalza	Venezuela	Advantages of Installing a Storage Center for Disused Sources in a Military Installation for Poor or Developing Countries

THURSDAY, 23 June 2022

16:00–16:30

**Poster Session 3:
Poster Presentations**

M02 (second floor M-building)

Poster Station	Paper No.	Name	Designating Member State/Organization	Title of Paper
60	309	H. Zarate	Chile	Virtual Testing: Checking the Physical Protection System of the CCHEN Facilities in the Pandemic Time
62	310	M. I. Ali	Bangladesh	Enhancing Safety and Security of Radioactive Sources in Bangladesh: Recent Achievements and Future Plans

Poster Station	Paper No.	Name	Designating Member State/Organization	Title of Paper
64	314	W. A. Nurbaiti	Indonesia	Safety Analysis on The Process of Cobalt-60 Teletherapy Sources Displacement from The Transport Container to The Storage Container Using Fault Tree Analysis (FTA) Method
66	315	H. S. Wardanni	Indonesia	Analysis of The Utilization of Lead as Shielding Material of Storage Container for Disused Teletherapy cobalt-60
68	316	L. C. Wahyuni	Indonesia	Accident Analysis of the Process of Transferring Teletherapy Machine Cobalt-60 Radioactive Waste into the Transport Container with Fault Tree Analysis (FTA) Method
F	328	V. Kamenopoulos	IAEA	"Methodology for the Systematic Assessment of the Regulatory Competence Needs (SARCoN) for Regulatory Bodies of Radiation Facilities and Activities"
74	337	Y. V. Ibrahim	Nigeria	Addressing the Human Element of Security at Radioactive Source Facility: Preventative Measures and Strengthening Security Culture
76	338	Y. V. Ibrahim	Nigeria	Enhancing the Security at Radioactive Source Facility through the upgrade of the Physical Protection System
78	340	A. Guliyev	Azerbaijan	Regulation for the Safety and Security of Radioactive Sources in Azerbaijan
80	345	G. Chao	China	The Improved Design for The Mobile Hot Cell for the Conditioning of Spent High Activity Radioactive Sources
82	307	T. Mao	Cambodia	The Future of Nuclear Security in Cambodia: The Collaboration Among National Stakeholders
84	308	A. Mardhi	Indonesia	Development of Psychosocial Model for Detecting the Insider Threat in Trustworthiness Programme

Poster Station	Paper No.	Name	Designating Member State/Organization	Title of Paper
86	257	N. A. de Hernandez	Dominican Republic	Dominican Republic Experience on Response to Events Involving Radioactive Material Out of Regulatory Control (MORC) in Scrap

THURSDAY, 23 June 2022

16:30–18:00 **Technical Session (5.G):**
Regulatory Infrastructure

BR-B/M1

Chairperson: **C. Dominguez, Argentina**

Technical Officer: **L. A. B. Hernandez, IAEA**

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
16:30–16:40	237	M. H. S. Abdullah	Malaysia	Safety and Security Compliance: A Case Study on Government Agencies License Holders
16:40–16:50	220	N. F. Bakri	Kingdom of Saudi Arabia	Interfacing Safety and Security of Radioactive Sources Control Measures in Ensuring Regulatory Effectiveness - Approach in the Kingdom of Saudi Arabia.
16:50–17:00	139	M. Man	United States of America	Threat Assessment and Risk Management in the Legislative and Regulatory Framework for Security
17:00–17:10	261	M. Recio Santamaria	IAEA	Practical Approach to Support States Interested in Establishing a National Policy and Strategy for Radiation Safety and Security of Radioactive Material
17:10–17:20	82	B. Purnomo	Indonesia	An Analysis of the Indonesian Security of Radioactive Source Regulations Relating to Threat Assessment
17:20–17:30	174	A. Simo	Cameroon	Strengthening Safety and Security of Radioactive Sources through Active Cooperation
18:00–20:00	<i>Reception Sponsored by the International Source Suppliers and Producers Association (ISSPA)</i>			<i>Ground Floor M Building</i>

THURSDAY, 23 June 2022

16:30–18:00 Technical Session (5.H):

Board Room A

Human Resources, Safety Culture and Security Culture

Chairperson: K. Khairul, Indonesia

Technical Officer: Y. Nakamura, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
16:30–16:40	292	I. Indragini	Indonesia	Challenges and Strategies in Conducting Effective Safety and Security of Radioactive Sources Training Courses During COVID-19 Pandemic (BATAN Experience)
16:40–16:50	109	M. Jafjaf	Morocco	Human Resources Development, Knowledge Management and Networks, Education and Training in Morocco
16:50–17:00	145	M. Hazel	United States of America	COVID as a Catalyst for the Development of New Tools and Methods for Stakeholder Engagement on Radiological Security
17:00–17:10	163	M. Kalinina-Pohl	United States of America	Supporting Efforts in Safety and Security of Radioactive Sources through Professional Networks
17:10–17:20	97	M. Lin	United States of America	Tools, Platforms, and Methodologies for Engagements in Hybrid Environments in the Future of Nuclear and Radiological Security
17:20–17:30	152	S. Nalumansi	Uganda	Nuclear Security Culture: A Measure in Managing Insider Threats for Users of Radioactive Sources; Ugandan Experience
18:00–20:00 Reception Sponsored by the International Source Suppliers and Producers Association (ISSPA)				Ground Floor M Building

THURSDAY, 23 June 2022

16:30–18:00 **Technical Session (5.K):** **M5**

Physical Protection Systems and Measures at Facilities

Chairperson: **M. Tahir, Pakistan**

**Technical
Officer:** **M. Waseem, IAEA**

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
16:30–16:40	59	T. Gochera	Zimbabwe	Development of a National Physical Protection System: Zimbabwe's Accomplishments and Future Endeavours
16:40–16:50	141	B. Higgins	United States of America	Industry Perspective on Mobile Radioactive Source Tracking
16:50–17:00	320	A. Izmaylov	Russian Federation	Using Interface Between Safety and Security of Radioactive Sources for Effective Physical Protection Systems Development
17:00–17:10	335	J. Petranyi	Hungary	Integration of Radiation Detectors into The Physical Protection System of Facilities Handling Radioactive Sources
17:10–17:20	160	J. Moussa	United States of America	Evolution of Human Interactions with Automation: Exploring Potential Implication to Security of Radioactive Sources
17:20–17:30	115	A. Sfetsos	Greece	An Overview and Future Activities Within Task 1 of the CRPJ02011 "Improving the Security of Radioactive Material Throughout its Lifecycle, Associated Facilities, and Associated Activities"
18:00–20:00 Reception Sponsored by the International Source Suppliers and Producers Association (ISSPA)				<i>Ground Floor M Building</i>

FRIDAY, 24 June 2022

09:00–10:30

Panel Session 6:

BR-B/M1

Managing Radiological Incidents and Emergencies Involving Radioactive Sources

Moderator:

A. Al Khatibeh, Executive Director for Nuclear and Radiation Safety, 3G
Consultancy Engineering

**Technical
Officer:**

M. Assi, IAEA

Invited Speaker, Title	Country	Affiliation
M. L. Duarte Head of Communication	Argentina	Nuclear Regulatory Authority
A. Popp Manager, Radiation Protection Services	Australia	Australian Nuclear Science and Technology
W. Baker Head of Regulations and Nuclear Emergencies Division	Egypt	Nuclear and Radiological Safety Research Centre
A. Makarovi Section Head	Georgia	Agency of Nuclear and Radiation Safety
TBD	TBD	TBD
A. Benider Division Head	Morocco	Agence Marocaine de Sûreté et de Sécurité Nucléaires et Radiologiques (AMSSNuR)
J. O. Martins Director	Portugal	Portuguese Environment Agency
<i>10:30–11:00 Coffee / Tea Break</i>		

FRIDAY, 24 June 2022

11:00–12:30 **Technical Session (6.A):** **BR-B/M1**

Nuclear Security Systems and Measures for Radioactive Sources Out of Regulatory Control

Chairperson: **B. Sial**, Australia

**Technical
Officer:** **T. Pelletier**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
11:00–11:10	222	T. F. A Alshahrani	Kingdom of Saudi Arabia	National Network to Monitor and Detect Nuclear and Other Radioactive Material Out or Regulatory Control: The Case of Saudi Arabia
11:10–11:20	173	O. Ethel	Nigeria	Development of Nigerian Nuclear Security Detection Architecture (NSDA): Current Activities and Future Actions
11:20–11:30	311	G. Dermody	United Kingdom	The Impact of a Single, Multi-Sensor User Interface on The Prevention of Illicit Trafficking and The Interdiction of Radioactive Sources Out of Regulatory Control
11:30–11:40	312	M. M. Mounja	Mauritania	Development of Sustainable and Maintainable Nuclear Security Detection Architecture for Sahel Region
11:40–11:50	297	S. Sihana	Indonesia	Analysis of Radioactive Sources Security Events using Public Domain Information, Case Study Serpong, Indonesia
11:50–12:00	184	A. Turabi	Pakistan	PNRA's Efforts for Combating Illicit Trafficking of Nuclear & Other Radioactive Materials
12:00–12:30	Q&A			
12:30–13:00	<i>Coffee Break</i>			
13:00–14:00	<i>Closing Session</i>			

FRIDAY, 24 June 2022

11:00–12:30 Technical Session (6.B):

Board Room A

Information Exchange, Preparedness and Response to Incidents and Emergencies

Chairperson: **W. Baker**, Egypt

Technical Officer: **M. Hussain**, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
11:00–11:10	68	P. Bhe-Ouhariot	Central African Republic	Response Procedure in the Event of an Industrial Radiography Accident, Challenge in the Central African Republic
11:10–11:20	188	M. Ekman	United States of America	Integrating Emergency Response Communications and Law Enforcement Response Actions for Successful Radioactive Source Threat Outcomes
11:20–11:30	283	G. Moore	United States of America	The Need for International Agreement on Reporting Loss of Control
11:30–11:40	232	W. A. F. Wan Ali	Malaysia	Emergency Communication and Resource Management: A Perspective in Malaysia
11:40–11:50	96	T. Clark	United States of America	“Question: Where are all the Sources?! Answer: Largely Where They Are Supposed to Be!” An Examination of Radioactive Materials Event Reports in The United States
11:50–12:00	43	S. Zeeshan	Pakistan	Role of PNRA for Responding to Nuclear Safety and Security Incidents and Emergencies
12:00–13:00	<i>Coffee Break</i>			
13:00–14:00	<i>Closing Session</i>			

FRIDAY, 24 June 2022

11:00–12:30 **Technical Session (6.C):** **M5**

Self-Assessment Tools for Safety, Security and EPR

Chairperson: **B. Kaboro, Kenya**

Technical Officer: **G. Gökeri, IAEA**

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
11:00–11:10	100	M. Furqan	Pakistan	Assessment of Security Measures for Radioactive Sources at Atomic Energy Cancer Hospitals of Pakistan
11:10–11:20	76	J. Harris	United States of America	Development of a Modified Radiological Safety and Security Potential Facility Risk Index (PRFI)
11:20–11:30	131	I. Mayida	Zimbabwe	Development of Nuclear Security Inventory Management Infrastructure for Category 2, 3, 4 and 5 Radioactive Sources during the Pandemic-COVID-19
11:30–11:40	279	K. Seemela	South Africa	The Importance of Nuclear Forensic in Nuclear Security Preparedness and Response
11:40–11:50	116	A. Sfetsos	Greece	Proposal on Assessing PPS Measures Against an Insider Threat
11:50–12:00	302	C. M. Wandjie	Cameroon	Using Self-Assessment Tools to Set Up and Implement Regulatory Functions for Safety and Security of Radioactive Sources
12:00–12:30	Q&A			
12:30–13:00	<i>Coffee Break</i>			
13:00–14:00	<i>Closing Session</i>			

Friday, 24 June 2022

13:00–14:00 Closing Session

BR-B/M1

Name and Title	Affiliation	
Nathalie Semblat Conference co-President Deputy Director and Senior Program Manager	Nuclear and Radiological Security, Weapons Threat Reduction Program Division, Global Affairs Canada	Summary of the Conference
Luis Pedro Huerta Torchio Conference co-President Executive Director Head of the Division of Research and Nuclear Applications	Chilean Nuclear Energy Commission (Comisión Chilena de Energía Nuclear)	Summary of the Conference
Lydie Evrard Deputy Director General and Head of the Department of Nuclear Safety and Security	IAEA	Closing Remarks

SCHEDULE OF SIDE EVENTS

Monday, 20 June 2022

12:45–13:45 **IAEA Legislative Assistance Programme: Addressing Member States' Needs (SE 1)**

Organized by IAEA Office of Legal Affairs

From the early development of nuclear technology to its uses today, it has always been considered that this technology requires a special legal regime. Through its Legislative Assistance Programme implemented under relevant TC projects, the IAEA supports Member States in their endeavours to adopt nuclear legislation for the safe, secure and peaceful use of nuclear technology implementing the relevant international legal instruments. Panelists will include Member State and IAEA officials who will share their experience and views, respectively, as recipients and providers of legislative assistance.

(BR-B/M1)

12:45–13:45 **Reflections on the Road Ahead for the Ad Hoc Working Group on Alternatives to High-Activity Radioactive Sources (SE 2)**

Organized by Representatives of Germany, France, and the United States

Germany, France, and the United States will host this side event, which will focus on the state of the Ad Hoc Working Group on Alternatives to High-Activity Radioactive Sources (“Working Group”) writ large. Topics will include the growth of the Working Group since its inception, changes and accomplishments in the alternative technology space, and the future of the Working Group, including a discussion on its challenges and role in advancing radiological security by encouraging the use of alternative technologies. The co-hosts also intend to highlight the benefits of participating in the Working Group through participant commentary, a new website overview, and a virtual tour of an electron beam facility.

(M5)

12:45–13:45 **IAEA Hiring Process (SE 3)**

Organized by IAEA Division of Human Resources

During this event, MTHR will provide a high-level overview of the IAEA's recruitment process and existing talent outreach tools. Additionally, MTHR will share information about the different contract modalities that the IAEA offers.

(Board Room A)

12:45–13:45 **Removals of Disused Category 1 and 2 Sealed Radioactive Sources: Reflections and Challenges from the Past and Present, then Looking to the Future Solutions (SE 4)**

Organized by IAEA Division of Nuclear Fuel Cycle and Waste Technology

The panel discussion will focus on the lessons learned and past challenges of removing Category 1 and 2 disused sealed radioactive sources. The solutions to those challenges will be also discussed. In addition, the panel will discuss future challenges and potential technological solutions.

(M2)

Tuesday, 21 June 2022

12:45–13:45 **Safety and Security of Radiotherapy Sources (SE 5)**

Organized by IAEA Division of Human Health and Department of Nuclear Safety and Security

The safety and security of medical sources that are used for the treatment of cancer in radiotherapy, have received attention over the past few years. In many situations, alternative technologies are not available for life-saving treatment modalities and applications. The event seeks to provide the Agency perspective from a coordination point of view and highlight the needs, considerations and resources that are needed for the safe use of sources in radiotherapy.

(Board Room A)

12:45–13:45 **Learning from the Past Radiological Incidents and Emergencies Supporting Member States' Needs in Emergency Preparedness and Response, EPR (SE 8)**

Organized by IAEA Incident and Emergency Center

The purpose of the side event is to provide an overview of the past events involving radioactive sources with focus on two recent examples (in Ireland and Mexico). Furthermore, this session will demonstrate the IAEA's role in providing assistance in the event of such events and highlight the IAEA's support to Member States in building an adequate capacity in order to achieve an appropriate and effective response to similar incidents.

(M2)

12:45–13:45 **Introduction of New Regulatory Authority Information System, RAIS+ (SE 6)**

Organized by IAEA Department of Nuclear Safety and Security

The Regulatory Authority Information System (RAIS) is a software application developed by the IAEA to assist its Member States in managing their regulatory activities in accordance with IAEA Safety Standards and guidance, including the Code of Conduct on the Safety and Security of Radioactive Sources and the supplementary Guidance.

There is a new version of RAIS (RAIS+) that offers a simplified customization mechanism with more possibilities and a complete workflow system that interfaces radiation safety and security of radioactive materials. RAIS+ is a collaboration system that allows Regulators from Regulatory Bodies to cooperate with external stakeholders such as Licensees and Experts. RAIS+ has robust notifications and messages exchange with emails mechanism in place. RAIS+ incorporates advanced user access and management mechanism. In addition, RAIS+ also has central storage for regulatory documentation with rich reporting customization capabilities. Furthermore, RAIS+ can be easily installed in two modes: Basic or Advanced. It is a solution for digitalization of Notification process, Authorization application process, obtaining License Certificates on-line, inspection process and planning with a graded approach, importing data from Excels or similar format and migration of data from previous RAIS versions. Finally, this software, RAIS+, has a Mobile device compatibility with strong Cyber Security and new Software Technology.

(M5)

12:45–13:45 **Gender Gaps Throughout the Generations: Perspectives from Radiological Security Experts (SE 7)**

Organized by Canadian Nuclear Safety Commission (Canada) and U.S. Department of Energy/National Nuclear Security Administration/Office of Radiological Security (United States)

Women working in radiological security and at different stages of their careers, i.e. embarking, at mid-career, and capping off their life's work will share testimonies on their work, their aspirations, and barriers and enablers they have encountered.

The audience will engage in discussing where there are general differences and similarities, where progress has been made and where more focus is needed to make radiological security a viable and successful career of choice for women. Outputs will be shared with existing networks focused on Women in Nuclear.

The session is meant to inspire and empower everyone interested in achieving their full potential in an inclusive and gender-balanced workplace with a focus on security.

(BR-B/M1)

Wednesday, 22 June 2022

12:45–13:45 **RadSecLEXIS: Understanding the National Legal Measures that Support International Radiological Security (SE 9)**

Organized by the Henry L. Stimson Center

Increasing the security of radioactive materials worldwide depends on the national implementation of the Code of Conduct on the Safety and Security of Radioactive Sources and the growing number of new IAEA guidance and technical documents. To build greater understanding of national efforts, the Stimson Center is developing its RadSecLEXIS (the Radiological Source Security Legal Index) tool, with an online, searchable database of the national legal frameworks for radiological security for all UN Member States. This tool will provide a comprehensive overview of the status of international radiological security through a breakdown of domestic implementation of laws, regulations, or their equivalents that implement key elements of the radiological material security standards. In this event, the RadSecLEXIS database will be introduced, the methodology for compilation explained, and the practical application of the tool will be demonstrated to showcase its potential utility for a wide variety of stakeholders. The project is supported through Office of Radiological Security Pacific Northwest National Laboratory.

(M2)

12:45–13:45 **Gender Parity in Safety and Security Activities (SE 10)**

Organized by Representatives of Argentina and Canada

The event aims at advancing gender parity in the nuclear field. The panel will offer all the initiatives that are underway, from a national perspective (Canada and Argentina) and provide an overview presentation about international initiatives and programmes to promote gender-equality-in-the-nuclear-sector. (

Board Room A)

12:45–13:45 **Launch of the WINS International Best Practice Guide on Regulatory Practices for Radioactive Source Security (SE 11)**

Organized by World Institute for Nuclear Security (WINS)

The event will mark the publication of the new WINS International Best Practice Guide on Regulatory Practices for Radioactive Source Security. The event will discuss the context of regulatory practices regarding the security of radioactive sources and will highlight the key messages of the Best Practice Guide. Together with invited speakers, the best practices identified in the guide will be discussed and considered.

(M5)

12:45–13:45 **Coordination, Cooperation and Communication: A Canada-US Study in the Export and Import of Radioactive Sources (SE 12)**

Organized by Canadian Nuclear Safety Commission (Canada) and Nuclear Regulatory Commission (United States)

During this side-event, the Canadian and American authorities will share their respective license application assessment process that contribute to the safe and secure export and import of radioactive sealed sources. They will demonstrate how both parties coordinate, cooperate and communicate to ensure effective and efficient approaches.

The IAEA will also share their general perspective of the Code of Conduct and related Guidance.

(BR-B/M1)

Thursday, 23 June 2022

12:45–13:45 **The Incident and Trafficking Database (ITDB): Perspectives on Materials outside of Regulatory Control (SE 13)**

Organized by IAEA Division of Nuclear Security

The ITDB is the IAEA's information system on incidents of illicit trafficking and other unauthorized activities and events involving nuclear and other radioactive material outside of regulatory control. The ITDB was established to help participating States and selected international organizations to combat illicit nuclear trafficking and strengthen nuclear security. It facilitates information exchange and provides material that can be used to analyze patterns and trends, thereby helping identify potential security threats and vulnerabilities.

(Board Room A)

12:45–13:45 **Radiological Security Response: Promoting Law Enforcement Awareness to Facilitate Effective Response for Material Containment (SE 14)**

Organized by the Radiation Protection Office and Albania State Police of the Republic of Albania

This side event will focus on approaches and methods for promoting law enforcement awareness for a well-timed, well-equipped, and trained response for material containment in the event of an attempted theft or sabotage. The immediate response of law enforcement is critical to successful material containment at a facility depends during a detected radiological theft or sabotage event. Law enforcement patrol officers are often the first armed responders to arrive to a material incident location and must be trained and equipped to respond to this unique event. However, providing awareness-level training to the thousands of front-line law enforcement officers who may be called on to respond to an attempted theft is challenging.

This side event will feature presentations by Albania, Hungary, Romania, and the United States on recent efforts to develop country-specific radiological response awareness videos for law enforcement organizations. These videos provide law enforcement organizations with a tool to rapidly deliver awareness-level information to front line officers, supervisors, and specialized units regarding agency-specific radiological response strategy, local radioactive materials of concern, and personal protective measures to keep themselves and members of the public safe. The radiological security response videos contain interviews with local first responders, law enforcement, department leadership, radioactive material experts, and site radiological security officers to provide credibility and a highly relatable training product. The radiological response awareness are generally 10 minutes in length and can be easily distributed through a variety of mobile platforms which will allow for a large audience of front-line officers to be quickly trained at minimal-to-no cost.

(M5)

12:45–13:45 **Creating and Environment for Expanded Access to Peaceful Uses: Fostering Supportive Nuclear Safety and Security Cultures (SE 15)**

Organized by Vienna Center for Disarmament and Non-Proliferation

How can we best foster nuclear safety and security cultures whilst ensuring that developing and least developed countries benefit from the full potential of peaceful uses. Human and financial resources as well as the necessary political commitment to develop and maintain an effective regulatory capability are some of the key challenges that face many developing countries. This is particularly the case in countries that do not have nuclear power. Panelists will share their experiences and consider potential pathways to expanding access of developing and least developed countries to peaceful uses of nuclear technology, while contributing to a stronger global culture of safety and security

(BR-B/M1)

IAEA PUBLICATIONS RELATED TO THE SUBJECT OF THE EVENT

- IAEA Nuclear Security Series No. 20 (2013) Nuclear Security Fundamentals Objective and Essential Elements of a State's Nuclear Security Regime
- IAEA Nuclear Security Series No.1 (2006) Technical Guidance on Technical and Functional Specifications for Border Monitoring Equipment
- IAEA Nuclear Security Series No. 6 (2007) Technical Guidance on Combating Illicit Trafficking in Nuclear and Other Radioactive Material
- IAEA Nuclear Security Series No. 7 (2008) Implementing Guide on Nuclear Security Culture
- IAEA Nuclear Security Series No. 9-G (Rev. 1) (2020) Implementing Guide on Security of Radioactive Material in Transport
- IAEA Nuclear Security Series No. 10-G (Rev. 1) (2021) Implementing Guide on National Nuclear Security Threat Assessment, Design Basis Threats and Representative Threat Statements
- IAEA Nuclear Security Series No. 11-G (Rev. 1) (2019) Implementing Guide on Security of Radioactive Material in Use and Storage and of Associated Facilities
- IAEA Nuclear Security Series No. 21 (2013) Implementing Guide on Nuclear Security Systems and Measures for the Detection of Nuclear and Other Radioactive Material out of Regulatory Control
- IAEA Nuclear Security Series No. 24-G (2015) Implementing Guide on Risk Informed Approach for Nuclear Security Measures for Nuclear and Other Radioactive Material out of Regulatory Control
- IAEA Nuclear Security Series No. 14 (2011) Nuclear Security Recommendations on Radioactive Material and Associated Facilities
- IAEA Nuclear Security Series No.15 (2011) Nuclear Security Recommendations on Nuclear and Other Radioactive Material out of Regulatory Control
- IAEA Safety Standards Series No. GSR Part 7 (2015) General Safety Requirements on Preparedness and Response for a Nuclear or Radiological Emergency
- IAEA Safety Standards Series No. SSG-17 (2012) Specific Safety Guide on Control of Orphan Sources and Other Radioactive Material in the Metal Recycling and Production Industries
- IAEA Safety Standards Series No. SSG-19 (2019) Specific Safety Guide on National Strategy for Regaining Control over Orphan Sources and Improving Control over Vulnerable Sources
- IAEA Safety Standards Series No. GSG-12 (2018) General Safety Guide on Organization, Management and Staffing of the Regulatory Body for Safety
- IAEA Safety Standards Series No. GSG-13 (2018) General Safety Guide on Functions and Processes of the Regulatory Body for Safety
- IAEA Safety Standards Series No. RS-G-1.9 (2005) Safety Guide on Categorization of Radioactive Sources IAEA Safety Standards Series No. RS-G-1.10 (2006) Safety Guide on Safety of Radiation Generators and Sealed Radioactive Sources
- IAEA Safety Standards Series No. SSG-44 (2018) Specific Safety Guide on Establishing the Infrastructure for Radiation Safety
- IAEA Safety Standards Series No. SSG-46 (2018) Specific Safety Guide on Radiation Protection and Safety in Medical Uses of Ionizing Radiation
- IAEA Safety Standards Series No. SSG-57 (2020) Specific Safety Guide on Radiation Safety in Well Logging
- IAEA Safety Standards Series No. SSG-58 (2020) Specific Safety Guide on Radiation Safety in the Use of Nuclear Gauges
- IAEA Safety Standards Series No. SSG-8 (2010) Specific Safety Guide on Radiation Safety of Gamma, Electron and X Ray Irradiation Facilities
- IAEA Safety Standards Series No. SSG-11 (2011) Specific Safety Guide on Radiation Safety in Industrial Radiography

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PUBLICATIONS

Proceedings

The proceedings of the Conference containing all presentations and posters delivered at the Conference, as well as the findings and recommendations, will be published by the IAEA as soon as possible after the Conference.

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FORTHCOMING SCIENTIFIC CONFERENCES SCHEDULED BY THE IAEA

2022

(Virtual Event) Artificial Intelligence (AI) for Good Global Summit 2022 (organized in cooperation with the IAEA), 1 January – 31 December, Geneva, Switzerland

Joint ICTP–IAEA School on Nuclear Energy Strategic Planning and the Application of the INPRO Methodology for Sustainability Assessment, 1 July – 30 September, Trieste, Italy

First Meeting of the Steering Committee and BR-B/M1 of the Ibero-American Forum of Radiological and Nuclear Regulatory Agencies, 17 – 22 July, Madrid, Spain

Annual Meeting of the International Nuclear Security Education Network, 18 – 22 July, Vienna, Austria

Annual Meeting of the International Network for Nuclear Security Training and Support Centres, 18 – 22 July, Vienna, Austria

Biennial Forum of the Network on Environmental Management and Remediation, 18 – 22 July, Vienna, Austria

61st Meeting of the International Fusion Research Council, 20 – 22 July, Vienna, Austria

International Symposium on Managing Land and Water for Climate-Smart Agriculture, 25 – 29 July, Vienna, Austria

Second International Conference on Applications of Radiation Science and Technology (ICARST-2022), 22 – 26 August, Vienna, Austria

International Conference on Occupational Radiation Protection: Strengthening Radiation Protection of Workers - Twenty Years of Progress and the Way Forward, 5 – 9 September, Geneva, Switzerland

(Virtual Event) Annual Meeting of the Extrabudgetary Programme of the External Events Safety Section, 4 – 7 October

IAEA School on Nuclear and Radiological Leadership for Safety, 9 – 2- October, Vienna, Austria

International Conference on Challenges Faced by Technical and Scientific Support Organizations (TSO) in Enhancing Nuclear Safety and Security: Enhancing Science and Adaptability in a Changing World and Creating Perspective for a Young Generation, 10 – 13 October, St. Petersburg, Russian Federation

Tenth Meeting of the Working Group on Radioactive Material Security, 10 – 14 October, Vienna, Austria

International Conference on Topical Issues in Nuclear Installation Safety: Strengthening Safety of Evolutionary and Innovative Reactor Designs, 18 – 21 October, Vienna, Austria

23rd Nuclear Security Information Exchange Meeting, 18 – 19 October, Vienna, Austria

Joint ICTP–IAEA Nuclear Knowledge Management School, 24 – 28 October, Trieste, Italy

IAEA International Ministerial Conference on Nuclear Power in the 21st Century, 26 – 28 October, Washington, DC, United States of America

Symposium on International Safeguards: Reflecting on the Past and Anticipating the Future, 31 October – 4 November, Vienna, Austria

Fifth International Conference on Nuclear Power Plant Life Management, 28 November – 2 December, Vienna, Austria

International Conference on Integrated Medical Imaging in Cardiovascular Diseases (IMIC-2022), 13 – 16 December, Vienna, Austria

For information on forthcoming scientific meetings, please consult the IAEA web site:
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