

## Joint ICTP-IAEA International School on Nuclear Security

**Trieste, Italy**

**22 April – 3 May 2024**

### Agenda

Monday, 22 April 2024		
Time (CET)	Topic	Speaker
08:30 – 09:15	Registration and administrative procedures	Ms Viktoriya Lvova, ICTP
09:15 – 09:30	Opening Remarks	Mr Ralf Kaiser, Head of Programmes, ICTP Ms Oum Keltoum Hakam, Scientific Secretary, IAEA
09:30 – 10:00	Introductions of the participants	Ms Oum Keltoum Hakam, IAEA
10:00 – 10:30	<i>Coffee break and Group Photo</i>	
10:30 – 10:45	Overview of the School Agenda	Ms Oum Keltoum Hakam, IAEA
10:45 – 11:00	Pre-test	Ms Oum Keltoum Hakam, IAEA
11:00 – 11:30	Introduction to IAEA	Ms Oum Keltoum Hakam, IAEA
11:30 – 12:30	Nuclear Security Overview et Essential Elements	Ms Oum Keltoum Hakam, IAEA
12:30 – 14:00	<i>Lunch break</i>	

14:00 – 15:00	The International Legal Framework for Nuclear Security	Mr Matthew Dorsi, OLA, IAEA
15:00 – 15:45	Developing Nuclear Legislation for Nuclear Security	Mr Matthew Dorsi, OLA, IAEA
15:45 – 16:00	Summary of the day	Ms Oum Keltoum Hakam, IAEA
19:00 – 20:30	Reception	
<b>Tuesday, 23 April 2024</b>		
09:00 – 09:45	Threat Assessment (TA) and Design Basis Threat (DBT)	Mr Anno Keizer, URENCO, Kingdom of the Netherlands
09:45 – 10:00	Exercise on TA and DBT	Mr Anno Keizer, URENCO
10:00 – 10:45	Physical Protection of Nuclear Material and Nuclear Facilities (NSS No.13 (INFCIRC/225/Revision 5))	Mr Anno Keizer, URENCO
10:45 – 11:15	<i>Coffee break and Networking</i>	
11:15 – 12:00	Nuclear Material Accounting and Control (NMAC) and the Threat Posed by the Insider	Mr Moustafa Ahmed, ENRRA, Egypt
12:00 – 12:45	Introduction to Nuclear Material Accounting and Control (NMAC)	Mr Moustafa Ahmed, ENRRA, Egypt
12:45 – 13:00	Exercise: Introduction to NMAC	Mr Moustafa Ahmed, ENRRA, Egypt
13:00 – 14:00	<i>Lunch break</i>	
14:00 – 14:45	Introduction to Physical Protection System, Design, Development and Evaluation	Mr Anno Keizer, URENCO
14:45 – 15:30	Defining the Requirements for Physical Protection: Facility Characterization and Target Identification	Mr Anno Keizer, URENCO
15:30 – 16:00	<i>Coffee break and Networking</i>	
16:00 – 16:30	Exercise: Defining the Requirements for Physical Protection	Mr Anno Keizer, URENCO

16:30 – 16:45	Summary of the day	Ms Oum Keltoum Hakam, IAEA
<b>Wednesday, 24 April 2024</b>		
09:00 – 09:45	Nuclear Material Accounting	Mr Moustafa Ahmed, ENRRA, Egypt
09:45 – 10:30	Nuclear Material Control	Mr Moustafa Ahmed, ENRRA, Egypt
10:30 – 11:00	<i>Coffee break and Networking</i>	
11:00 – 11:45	Physical Protection System Design: Detection, Delay and Response	Mr Anno Keizer, URENCO
11:45 – 12:15	Exercise: Physical Protection System (PPS) Design	Mr Anno Keizer, URENCO
12:15 – 13:00	The Incident and Trafficking Database (ITDB) Programme	Mr Janez Češarek, SNSA, Republic of Slovenia
13:00 – 14:00	<i>Lunch break</i>	
14:00 – 14:45	ITDB Global Analysis	Mr Janez Cesarek, SNSA, Republic of Slovenia
14:45 – 16:30	Exercise: Insider Threat Mitigation Measures Hypothetical Facility: Shapash Nuclear Research Institute (SNRI)	Mr Moustafa Ahmed, ENRRA, Egypt
16:30 – 16:45	Summary of the day	Ms Oum Keltoum Hakam, IAEA
<b>Thursday, 25 April 2024</b>		
09:00 – 09:45	Security of Nuclear Sensitive Information	Mr Anno Keizer, URENCO
09:45 – 10:30	Information and Computer Security	Mr Anno Keizer, URENCO
10:30 – 11:00	<i>Coffee break and Networking</i>	

11:00 – 11:45	Exercise on Information and Computer Security	Mr Anno Keizer, URENCO
11:45 – 12:30	Nuclear Security Culture: Concept and Definition	Ms Alpana Goel, Amity University, India
12:30 – 13:30	<i>Lunch break</i>	
13:30 – 18:00	Technical Visit to Slovenia Port	Mr Nevijo Lakoseljac & Matjaž Andrijašič, Port of Koper, Republic of Slovenia Mr Janez Češarek, SNSA Ms Oum Keltoum Hakam, IAEA
<b>Friday, 26 April 2024</b>		
09:00 – 09:45	Introduction to the Security of Radioactive Material and Associated Facilities	Ms Kelsae Adame, NSNS, IAEA
09:45 – 10:30	Nuclear Security Regime for Radioactive Material and Associated Facilities	Ms Kelsae Adame, NSNS, IAEA
10:30 – 11:00	<i>Coffee break and Networking</i>	
11:00 – 12:30	Exercise: To Identify Nuclear Security Culture Characteristics and Indicators	Ms Alpana Goel, Amity University
12:30 – 13:30	<i>Lunch break</i>	
13:30 – 14:15	Security Measures for Radioactive Material in Use and Storage	Ms Kelsae Adame, NSNS, IAEA
14:15 – 15:00	Exercise: Categorization of Radioactive Sources	Ms Kelsae Adame, NSNS, IAEA
15:00 – 15:30	<i>Coffee break and Networking</i>	
15:30 – 16:15	Nuclear Security Culture: Self-Assessment	Ms Alpana Goel, Amity University
16:15 – 17:00	Nuclear Security Culture: Enhancement	Ms Alpana Goel, Amity University
17:00 – 17:15	Summary of the day	Ms Oum Keltoum Hakam, IAEA

<b>Monday, 29 April 2024</b>		
09:00 – 10:00	Overview of Nuclear Security for Nuclear and other Radioactive Material out of Regulatory Control	Mr Salaheddin Malkawi, JUST, Jordan
10:00 – 10:45	Threat Assessment and Risk Informed Approach for Nuclear and other Radioactive Material out of Regulatory Control	Mr Salaheddin Malkawi, JUST
10:45 – 11:15	<i>Coffee break and Networking</i>	
11:15 – 12:30	Nuclear Security Detection Architecture for Nuclear and Other Radioactive Materials out of Regulatory Control	Mr Salaheddin Malkawi, JUST
12:30 – 13:30	<i>Lunch break</i>	
13:30 – 14:30	Overview of Detection Equipment	Mr Paolo Peerani, JRC/EC, Italy
14:30 – 15:15	Radiation Portal Monitors (RPMs): Border Detection and the IAEA S&T Activities	Mr Paolo Peerani, JRC/EC
15:15 – 15:45	<i>Coffee break and Networking</i>	
15:45 – 16:30	Front Line Officer Actions Following Detection	Mr Paolo Peerani, JRC/EC
16:30 – 17:15	Analysis of Real Cases	Mr Paolo Peerani, JRC/EC
17:15 – 17:30	Summary of the day	Ms Oum Keltoum Hakam, IAEA
<b>Tuesday, 30 April 2024</b>		
09:00 – 10:30	Practical Exercise: Hands-on Use of Various Detectors	Mr Paolo Peerani & Mr Giovanni Magrotti, JRC/EC
10:30 – 11:00	<i>Coffee break and Networking</i>	
11:00 – 12:30	Practical Exercise: Hands-on Use of Various Detectors (continued)	Mr Paolo Peerani & Mr Giovanni Magrotti, JRC/EC

12:30 – 13:30	<i>Lunch break</i>	
13:30 – 14:15	Transport Safety and Interface with Security	Ms Tunde Katona, Hungarian Atomic Energy Authority, Hungary
14:15 – 15:15	Transport Security of Nuclear and other Radioactive Material	Ms Tunde Katona, Hungarian Atomic Energy Authority, Hungary
15:15 – 15:45	<i>Coffee break and Networking</i>	
15:45 – 16:45	Exercise: Transport Security	Ms Tunde Katona, Hungarian Atomic Energy Authority, Hungary
16:45 – 17:00	Summary of the day	Ms Oum Keltoum Hakam, IAEA
<b>Wednesday, 1 May 2024</b>		
09:00 – 10:00	Nuclear Security Systems and Measures for Major Public Events	Mr Salaheddin Malkawi, JUST
10:00 – 11:00	Response to Nuclear Security Events: National Response Frameworks and National Response Plans	Mr Salaheddin Malkawi, JUST
11:00 – 11:30	<i>Coffee break and Networking</i>	
11:30 – 12:15	Response to Emergencies Triggered by Nuclear Security Events	Mr Salaheddin Malkawi, JUST
12:15 – 13:15	<i>Lunch break</i>	
13:15 – 15:15	Nuclear Security Group Exercises (Discussion)	Mr Salaheddin Malkawi, JUST
15:15 – 15:45	<i>Coffee break and Networking</i>	
15:45 – 17:00	Nuclear Security Group Exercises (reporting)	Mr Salaheddin Malkawi, JUST
17:00 – 17:15	Summary of the day	Ms Oum Keltoum Hakam, IAEA
<b>Thursday, 02 May 2024</b>		
09:00 – 09:45	Nuclear Forensics: Scope and	Mr Salaheddin Malkawi, JUST

	Application	
09:45 – 10:30	Nuclear Forensics: Model Action Plan	Mr Salaheddin Malkawi, JUST
10:30 – 11:00	<i>Coffee break and Networking</i>	
11:00 – 12:00	Nuclear Forensics as an Element of a National Nuclear Security Infrastructure	Mr Salaheddin Malkawi, JUST
12:00 – 12:30	Questions & Answers	
12:30 – 13:30	<i>Lunch break</i>	
13:30 – 15:00	Case Study: An Investigation of Highly-Enriched Uranium out of Regulatory Control	Mr Salaheddin Malkawi, JUST
15:00 – 15:30	<i>Coffee break and Networking</i>	
15:30 – 17:00	Case Study: An Investigation of Highly-Enriched Uranium out of Regulatory Control (continued)	Mr Salaheddin Malkawi, JUST
17:00 – 17:15	Summary of the day	Ms Oum Keltoum Hakam, IAEA
<b>Friday, 03 May 2024</b>		
09:00 – 09:45	IAEA Programme and Assistance for Human Resource Development in Nuclear Security	Ms Oum Keltoum Hakam, IAEA
09:45 – 10:30	Gender Equality and Diversity in Nuclear Security	Ms Oum Keltoum Hakam, IAEA
10:30 – 11:00	<i>Coffee break and Networking</i>	
11:00 – 11:15	Post-Test	Ms Oum Keltoum Hakam, IAEA
11:15 – 11:45	Participants Feedback Survey	Ms Oum Keltoum Hakam, IAEA
11:45 – 12:15	Closing Remarks and Certificates Award	Ms Oum Keltoum Hakam, IAEA Mr Sandro Scandolo, Local Director, ICTP

## Abbreviations

**IAEA:** International Atomic Energy Agency, Austria

**NSNS:** Division of Nuclear Security, IAEA

**OLA:** Office of Legal Affairs, IAEA

**ICTP:** International Centre for Theoretical Physics, Italy

**JRC-EC:** Joint Research Centre – European Commission, Italy

**JUST:** Jordan University of Science & Technology, Jordan

**ENRRA:** Egyptian Nuclear & Radiological Regulatory Authority, Egypt

**SNSA:** Slovenian Nuclear Safety Administration, Slovenia