



**INSEN**  
International  
Nuclear Security  
Education Network

**ANNUAL MEETING OF THE INTERNATIONAL NUCLEAR SECURITY  
EDUCATION NETWORK (INSEN)**

**Vienna, Vienna International Centre  
18 – 22 July 2022**

**Chair's Report**



The International Nuclear Security Education Network (INSEN) Annual Meeting was held in Vienna at Vienna International Centre on 18-22 July 2022. Attendance included 77 registered participants from 40 countries, 1 international organization and 3 non-governmental organizations. (The list of participants is available on the INSEN portal).

## **BACKGROUND**

The need for human resource development programs in nuclear security was underlined at several IAEA General Conferences and Board of Governors Meetings. Successive IAEA Nuclear Security Plans (the Plans), the most recent of which was approved by the Board of Governors in September 2021 and covers the period 2022-2025, give high priority to assisting States in establishing educational programs in nuclear security to ensure the sustainability of nuclear security regimes. Equally, the Ministerial Declaration from the 2013, 2016, and 2020 International Conferences on Nuclear Security emphasized the importance of collaborative networks in nuclear security education, particularly INSEN.

In the course of implementing the Plans, the IAEA developed — together with academics and nuclear security experts from Member States — a guide entitled Educational Programme in Nuclear Security that consists of a model of a Master of Science (M.Sc.) and a Certificate Program in Nuclear Security. This guide was published as IAEA Nuclear Security Series No.12 - Educational Programme in Nuclear Security (NSS 12) in April 2010 and aimed at assisting universities or other educational institutes in developing academic programs in nuclear security. The NSS 12 technical guidance document was revised to include practical feedback from INSEN members and align it with the other nuclear security guidance and recommendations. The revised guide was published as IAEA Nuclear Security Series No. 12-T (Rev.1) – Model Academic Curriculum in Nuclear Security<sup>1</sup> in August 2021.

In order to better address current and future requests for assistance in this area, the IAEA organized a workshop in March 2010. The objectives of the workshop were to discuss current and future nuclear security academic programs/courses of different universities worldwide, to share lessons learned in the development and implementation of nuclear security academic programs, and to establish a collaboration network among universities that are providing nuclear security education or which are interested in starting an academic program/course(s) in nuclear security.

During that workshop, the participants agreed to facilitate collaboration among universities, research institutes, and other stakeholders. They established the International Nuclear Security Education Network (INSEN), a collaboration network for higher education in nuclear security. The network counts 198 institutions from 66 countries as of 18 July 2022.

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<sup>1</sup> For download: <https://www.iaea.org/publications/13608/model-academic-curriculum-in-nuclear-security>



## **DAY 1**

### **OPENING**

The meeting was opened by Mr Jason Tierney, (Head, Programme Development and International Cooperation Section, Division of Nuclear Security, IAEA), who welcomed the participants to the meeting and expressed his sincere appreciation to all members and the Leadership for their efforts in taking INSEN further. Mr Tierney introduced the audience to the current context of nuclear security, recalling that Member States approved the 2022-2025 Nuclear Security Plan, which sets out nuclear security topics and for the term agreed by consensus with the IAEA Member States, including education activities. He added that the Nuclear Security Report 2021 underlines the importance of education and training, particularly in establishing Human Resource Development programs and INSEN is a critical aspect of this program. Mr Tierney highlighted INSEN's achievement of almost 200 institutions, with more than 80% providing nuclear security education at their home institutions. He added that nuclear security education contributes in preparing the next generation of professionals with knowledge, expertise, and understanding of the importance of nuclear security. Mr Tierney stressed the IAEA and INSEN's growing commitment to gender parity as a concern addressed by initiatives like the Women in Nuclear security and the Marie Skłodowska Curie fellowship programme. Finally, Mr Tierney thanked the outgoing leadership team for their efforts, welcomed the new leadership team, and offered his best wishes for a productive meeting.

The incoming INSEN chair, Mr Matteo Gerlini (University of Siena, Italy), joined the meeting remotely due to COVID and provided some remarks highlighting the back-to-normal meeting mode after two years of the pandemic. INSEN kept the experience of the past years in the hybrid event format as a way to continue to work despite the constraints caused by the pandemic. This hybrid approach allowed higher education institutions to partially overcome the disruption caused by the pandemic on academic activities. Nevertheless, the shift to virtual management of educational activities during these years has shown once again the problem of the digital divide among the various areas of the world. Given the value of this restarting meeting, Mr Gerlini reminded the participants of the motive of the inception of INSEN, in a different environment, amid the rising risk of nuclear terrorism when the international community had varied opinions and how IAEA promoted the partnership for the nuclear security education.

INSEN members met twice yearly during the initial years; then, we moved toward a more sustainable solution of a single annual meeting comprehending the working group meetings. Mr Gerlini concluded by aiming at the need for INSEN with a new vision of nuclear security adapted to the present nuclear security plan 2022-2025, and marked by the energy supply chain turmoil and by the situation in Ukraine.



Mr Gerlini outlined the meeting agenda and its objectives. The meeting aimed in particular at:

- Discussing programmatic activities carried out by INSEN members;
- Reviewing the progress of the action plans set out in 2021-2022;
- Discussing research activities in nuclear security;
- Discussing computer security in the nuclear world;
- Discussing nuclear security policy and international cooperation;
- Discussing the role of NGOs, regional networks, and R&D associations in strengthening nuclear security;
- Discussing experiences and initiatives of women in nuclear security;
- Discussing the implementation of the Memorandum for Cooperation between NSSC and INSEN
- Updating INSEN members on the IAEA nuclear security fellowship programme;
- Reporting on the outcomes of the 2022 Conference of the Parties to the A/CPPNM
- Developing action plans for 2022-2023;
- Planning for the 2023 INSEN Leadership and Annual meetings.

The agenda was adopted as presented and is attached to this report (Attachment 1).

Mr Gerlini gave the floor to the outgoing Chairs to provide their reports. The outgoing INSEN Chair, Ms Akila Frahi-Amroun (University of Science and Technology Houari Boumediene), Algeria then presented the report on the 2022 INSEN Leadership Meeting, which was held virtually in March 2022. Ms Frahi-Amroun congratulated Mr Gerlini on assuming the Network's chairmanship and wishing the new leadership success. This was followed by progress reports delivered by the outgoing WG Chairs on the status of the implementation of the WG action plans for 2021-2022, which were agreed upon during the previous INSEN Annual Meeting. All the reports are available for download on the INSEN portal.

Then Mr Gerlini thanked the outgoing Chairs for their work and proceeded to introduce the new Vice-Chairs of the Network and the Working Groups (WG). Ms Alpana Goel (Amity University, Indonesia) was nominated as the new INSEN Vice-Chair. Mr Walid Metwally (Khalifa University, UAE) was nominated as the new Vice Chair of WG I. Ms Alexandra Ioannidou, (Aristotle University of Thessaloniki, Greece) was nominated as the new Vice Chair of WG II. Mr Mohammed Sallah (Mansoura University, Egypt) was nominated as the new Vice Chair of WG III. All the nominees were approved by the annual meeting.

The sessions before the break ended with a presentation by Ms Oum Keltoum Hakam (Education Officer, Division of Nuclear Security, IAEA), who updated the participants on the nuclear security education activities carried out by the IAEA, including the release of the IAEA Nuclear Security Series No. 12-T (Rev. 1), the schools on nuclear security including the school for the students of the IAEA Marie Skłodowska-Curie Fellowship Programme (NSCFP), and continued support to Master's programs in nuclear security. Ms Hakam also presented the results of the annual INSEN survey that members filled out in the weeks before the Annual Meeting.

The after-break sessions were dedicated to presentations by INSEN members from Brazil, Egypt, India, Morocco, the Russian Federation, Sudan, and the USA on programmatic activities in the field of nuclear



security education. This included an IAEA's Division of Nuclear Security presentation on the nuclear security fellowship programme. All presentations are available for download on the INSEN portal.

The first day ended with a reception that allowed participants to network and socialize.

## **DAY 2**

The second day featured five panel discussions and a plenary discussion on the ways to implement the Memorandum for Cooperation between INSEN and NSSC Network (MfC).

The first panel discussion gathered experts from Bangladesh, Greece, and the UK, who discussed opportunities and challenges in developing and implementing research activities in nuclear security. The second panel gathered experts from Germany, the IAEA, and Jordan, who discussed the importance and evolution of computer security in the nuclear world. In this regard, Mr Christophe Pilleux (Nuclear Information Technology Security Officer, Division of Nuclear Security, IAEA) informed the participants about the upcoming IAEA International Conference on Computer Security in the Nuclear World: Security for Safety to be held in Vienna on 19-23 June 2023 and invited them to submit abstracts and to participate in this event. The third panel gathered experts from Brazil, Ghana, and Singapore who discussed the importance and role of nuclear security policy and international cooperation in nuclear security, underlining the central role of the IAEA in strengthening the nuclear security framework globally and in coordinating international activities in the field of nuclear security. The fourth panel gathered experts from Belgium, South Africa, and the USA who discussed the role of NGOs, regional networks, and R&D associations in promoting and strengthening nuclear security worldwide. And the fifth panel gathered experts from the IAEA, South Africa, Ukraine, and the USA who discussed gender equality and diversity aspects in nuclear security recognizing and supporting the IAEA's Women in Nuclear Security Initiative (WINSI) activities. This topic of discussion has become a regular item on the agenda since it was first organized in 2016, aiming to promote and explore ways to strengthen opportunities for women and young girls to advance professionally and pursue studies in the nuclear security field.

Before closing the second day, Ms Hakam and Ms Goel facilitated a plenary discussion on how to implement the Memorandum for Cooperation (MfC) between INSEN and NSSC Network, recalling this MfC aims to enhance the effectiveness of both networks and strengthen the capabilities of their respective members, thus supporting the sustainability of further contributing to capacity building, sustainability, and human resource development (HRD) for nuclear security worldwide. The discussion resulted in several ideas and proposals that will be shared with the NSSC Network. All presentations of day 2 are available for download on the INSEN portal.

The second day ended with a working dinner gathering INSEN and NSSC Network leadership.

## **DAY 3**

In the morning, Ms Silye, on behalf of Ms Scotto De Cesar (Office of Legal Affairs, IAEA), gave a presentation on



the legal framework for nuclear security. She clarified the main assumptions of the International legal framework for nuclear security, the core of the state-level legislation assisted by international cooperation, and highlighted that there is no single international legal instrument, such as NPT, for the safeguards, but several binding and not binding instrument for nuclear security. This was followed by a presentation by Ms Sarah Case-Lackner (Division of Nuclear Security, IAEA) who provided a report on the outcomes of the 2022 conference of the parties to the A/CPPNM held at the VIC on 28 March – 1 April 2022. First, she recalled to the audience that the A/CPPNM was adopted in 2005, entered into force on 8 May 2016, and then discussed the outcome document available on the IAEA website. Noting the Conference concluded that, in the light of the prevailing situation, the Convention, as amended, is adequate as this concerns the preamble, the whole of the operative part, and the annexes. Both the presentations are available on INSEN portal.

The three working groups took the rest of the day discussing nuclear security education activities for 2022-2023.

#### **DAY 4**

Mr Craig Marianno (Texas A&M University, USA) and Mr Edward Waller (Ontario University, Canada) conducted two mini-Professional Development Courses on, respectively, Development of Remote Laboratories and the nuclear security in medical facilities. Both presentations are available for download on the INSEN portal.

Afterwards, meeting participants broke out in four regional groups to explore opportunities for regional collaboration. All the regional groups produced a report on their discussion, which is available for download on NUSEC.

#### **DAY 5**

The last day of the meeting opened with a presentation by Mr Charles Massey (Division of Nuclear Security, IAEA) on Emerging Technologies and Threats in Nuclear Security: Opportunities for INSEN Members to Support Policy, Science, and Technology Issues.

Participants then considered possible dates for the 2023 INSEN Annual Meeting and agreed that the next meeting would be held on 17 - 21 July 2023.

This was followed by the reports of WG Chairs on the 2022-2023 Action Plans and by the reports of regional groups on opportunities for cooperation. Mr Gerlini thanked Ms Goel for her support, the INSEN leadership, and INSEN members for the productive week and their valuable contributions to the network. He also thanked the Secretariat for their ongoing support and help behind the scenes. The participants agreed that the meeting had accomplished its tasks, discussing all the proposed points. Finally, Mr Gerlini asked INSEN members to stay in touch with their respective WG Chairs by email and keep their member pages on the NUSEC portal up-to-date.



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Ms Hakam thanked the participants for their engagement in INSEN and other IAEA-related activities. She added that the expertise of INSEN members is needed at the national level to develop human resources in nuclear security, to strengthen the national nuclear security regime, and also at the international level to share lessons learned and good practices in nuclear security. Ms Hakam wished all the participants safe travels and closed the meeting at 12:15h Vienna Time.



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## **Attachment 1**

### **2022 INSEN Annual Meeting**

#### **Agenda**

**18 - 22 July 2022**

*18-22 July 2022, Vienna International Centre (VIC), Board Room A (M-Building)  
Breakout rooms: M05 & M07*

#### **Day 1, Monday, 18 July 2022**

- |               |  |
|---------------|--|
| 09:00 – 10:00 | <b>Registration in front of Board Room A</b><br><br><i>Y. Habtemariam, IAEA<br/>B. Njinembo, IAEA</i>  |
| 10:00 – 10:15 | <b>Opening remarks</b><br><br><i>J. Tierney, IAEA</i>  |
| 10:15 – 10:45 | <b>Adoption of the agenda, objectives of the meeting, the introduction of new Vice Chairs, introduction of new members</b><br><br><i>M. Gerlini, INSEN Chair, University of Siena, Italy</i> |
| 10:45 – 11:00 | <b>Report of the 2022 INSEN Leadership Meeting</b><br><br><i>A. Frahi-Amroun, outgoing INSEN Chair, USTHB, Algeria</i>   |
| 11:00 – 11:30 | <b>Progress reports from outgoing Working Group Chairs</b><br><br><i>WG I: M. Schouwenburg, DUT, Netherlands<br/>WG II: J. Trajano, NTU, Singapore<br/>WG III: H. Foy, AFRICSIS, Ghana</i>   |





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11:30 – 12:00

**IAEA Nuclear Security Education Activities**

*O. Hakam, IAEA*

12:00 – 13:30

*Group picture and lunch break*

13:30 – 15:00

**Presentations from INSEN members**

**“The growth of nuclear security graduate education in the US”,**

*C. Williamson, South Carolina Universities Research and Education Foundation, USA*

**“University-Industry Cooperation to Develop Practically-Oriented Educational Programs in the Field of Nuclear Security”**

*V. Verkhoturova, TPU, Russian Federation*

**"Transportation of Natural Radioactive Samples via Airports and Airplane: Nuclear Security Measures"**

*M. Sallah, Mansoura University, Egypt*

**“Role of INSEN in mobilizing the nuclear security activity: Challenges faced among common and technical people”**

*N. Kumar Puri, Delhi Technological University, India*

15:00 – 15:30

*Coffee break*

15:30 – 16:00

**Invited IAEA Speaker: The Nuclear Security Fellowship Programme**

*G. Eppich, NSNS, IAEA*

16:00 – 17:15

**Presentations from INSEN members**

**“Nuclear Security Education Activities at Hacettepe University”**

*S. Udum, Hacettepe University, Turkey*



**“National School on Nuclear Security in Brazil: Report and Lessons Learned”**

*J. Sarkis & D. Andrade, IPEN, Brazil*

**“The application of the IAEA Code of Conduct to protect Radioactive Sources in the Universities and Hospitals”**

*A. Chetaine, Med V University, Morocco*

**“Nuclear Security Education Activities in Sudan”,**

*M. Abuuznien, SNRRA, Sudan*

17:0 – 17:15

**Summary of day 1**

17:30 – 19:00

**Reception in front of Board Room A**

**Day 2, Tuesday, 19 July 2022**

09:00 – 10:15

**Panel Discussion #1: Research Activities in Nuclear Security**

*Z. Homan, KCL, UK*

*A. Ioannidou, Aristotle University of Thessaloniki, Greece*

*S. Islam, University of Dhaka, Bangladesh*

10:15 – 10:45

Coffee break

10:45 – 11:45

**Panel Discussion #2: Computer Security in the Nuclear World**

*C. Pilleux, IAEA*

*S. Westpfahl, UNISS, Germany*

*S. Malkawi, JUST, Jordan*

11:45 – 12:45

**Panel Discussion #3: Nuclear Security Policy & International Cooperation**

*M. Anthony & J. Trajano, NTU, Singapore*

*H. Foy, AFRISCIS, Ghana*

*C. Fiel, IEM, Brazil*



- 12:45 – 13:45      *Lunch break*
- 13:45 – 14:45      **Panel discussion #4: Role of NGOs, Regional Networks and R&D Associations in Strengthening Nuclear Security**  
*C. Crawford, INMM & ORNL, USA*  
*I. Kirsten, VCDNP, South Africa*  
*W. Janssens, ESARDA, JRC, Belgium*  
*R. Cupitt, INSF, USA*
- 14:45 – 15:45      **Panel Discussion #5: Women in Nuclear Security**  
*O. Hakam, IAEA*  
*J. Larkin, WITS, South Africa*  
*M. Rayets & A. Nechytailo, WIN Ukraine*  
*M. Kalinina-Pohl, CNS, USA*
- 15:45 – 16:15      *Coffee break*
- 16:15 – 17:00      **Plenary discussion: Ways to implement the Memorandum for Cooperation between INSEN and NSSC Network**  
  
*Led by INSEN Chair*
- 17:00 – 17:15      **Summary of day 2**
- 19:00 – 21:00      **Working Dinner: INSEN & NSSC Network Leadership**

**Day 3, Wednesday, 20 July 2022**

- 09:00 – 10:00      **Invited IAEA speakers:**  
  
**Legal Framework for Nuclear Security**  
*C. Scotto De Cesar, IAEA*



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## **Outcomes of the 2022 Conference of the Parties to the A/CPPNM**

*S. Case-Lackner, IAEA*

- 10:00 – 10:30      Coffee break
- 10:30 – 12:30      **Working Groups Breakout Session: Implementation and Planning 2022-2023**  
*led by WG Chairs*
- C. Ford, WG I Chair, NNSA-DoE, USA – BR A*  
*C. Fiel, WGII Chair, IME, Brazil – M5*  
*M. Dabetic, WG III Chair, University of Belgrade, Serbia – M7*
- 12:30 – 13:30      *Lunch break*
- 13:30 – 17:00      **Continuation of Working Groups Breakout Sessions: Implementation and Planning 2022-2023**  
*Led by WG Chairs*
- C. Ford, WG I Chair, NNSA-DoE, USA – BR A*  
*C. Fiel, WGII Chair, IME, Brazil – M5*  
*M. Dabetic, WG III Chair, University of Belgrade, Serbia – M7*
- 17:00 – 17:15      **Summary of day 3**

### **Day 4, Thursday, 21 July 2021**

- 09:00 – 10:30      **Mini-PDC: Development of Remote Laboratories**
- C. Marianno, Texas A&M University, USA
- 10:30 – 11:00      *Coffee break*



11:00 – 12:30                    **Mini-PDC: Nuclear Security in Medical Facilities**  
*E. Waller, Ontario University, Canada*

12:30 – 13:30                    *Lunch break*

13:30 – 15:00                    **Regional breakout Session**  
*Board Room A*  
*M05*  
*M07*

15:00 – 15:30                    *Coffee break*

15:30 – 17:00                    **Regional breakout Session**  
*Board Room A*  
*M05*  
*M07*

17:00 – 17:15                    **Summary of day 4**

**Day 5, Friday, 22 July 2022**

09:00 – 10:00                    **Emerging Technologies and Threats in Nuclear Security: Opportunities  
for INSEN Members to Support Policy, Science, and Technology Issues**  
*C. Massey, IAEA*

10:00 – 10:30                    **Preparation for the 2023 INSEN Leadership and Annual Meetings**



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*M. Gerlini, INSEN Chair*

10:30 – 11:00

*Coffee break*

11:00 – 11:45

**Reports of Working Group Chairs on 2022-2023 Action Plans**

*C. Ford, WG I Chair*

*C. Fiel, WG II Chair*

*M. Dabetic, WG III Chair*

11:45 – 12:15

**Reports of Regional Group Representatives**

Africa

Americas

Asia & Pacific

Europe

12:15 – 12:30

**Final remarks, Q&A, and Closing of the meeting**

O. Hakam, IAEA

*M. Gerlini, INSEN Chair*