INSEN 2023 Yearly Updates

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International Nuclear Security Education Network 2023 Yearly Updates

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Abstract
The International Nuclear Security Education Network (INSEN) is the primary international network for nuclear security educational initiatives. INSEN plays a central role in fostering collaboration and knowledge-sharing among nuclear security education experts worldwide. In the wake of the global pandemic, INSEN remained committed to strengthening nuclear security education and resumed in-person activities. The International Atomic Energy Agency (IAEA) confirmed its continued dedication and support to the network’s mission and presented new activities aimed at elevating global nuclear security efforts.

Throughout the year and during the annual and leadership meetings, working groups showcased their vibrant work and presented innovative ideas, invigorating the attendees’ dedication to their crucial work. Comprehensive presentations by the IAEA during the INSEN annual and leadership meetings highlighted the importance of the network and its continued commitment to promoting nuclear security on a global scale. One notable and encouraging trend was the increase in network membership, signifying a growing commitment to nuclear security worldwide and the continued interest in nuclear security from member states and international organizations. The value of initiatives such as the Women in Nuclear Security Initiative was emphasized at the annual meeting, accenting the need for diverse perspectives and expertise to ensure a secure nuclear landscape.
Keywords: International Nuclear Security Education Network (INSEN), educational material

1. Introduction
The International Nuclear Security Education Network (INSEN) was established in 2010 with the main objective to support, sustain, and promote nuclear security education. INSEN is a partnership between the International Atomic Energy Agency (IAEA), educational and research institutions, and other stakeholders [1]. The motive behind the network is to educate the next generation of nuclear security professionals.

INSEN currently comprises 204 member institutions from 72 IAEA member states and 13 observers. INSEN has established three working groups (WGs) to facilitate the achievement of its objectives [2]:

- WG I—develop and maintain educational materials, tools, and methodologies
- WG II—develop programs, curriculum, and faculty
- WG III—assemble knowledge management and promote nuclear security education and INSEN

The objective to strengthen education is a cornerstone of nuclear security enforcement that shaped the network’s agenda in 2023. The breadth of educational materials offered by the network widened, reflecting the commitment to sharing knowledge and expertise. The INSEN portal on the Nuclear Security Information Portal (NUSEC) platform [2] serves as the backbone for this collaborative endeavor and is invaluable in efficiently disseminating information and resources.

A significant advancement was seen in the completion of members' pages on the network portal, resulting in a more interconnected, personalized experience. The inherent networking aspect of the membership spurred numerous initiatives among different institutions and countries, fostering a powerful collective effort to bolster global nuclear security education.

Discussions during the year revolved around two crucial themes: flexibility and sustainability. Members acknowledged that adaptability was essential in navigating the uncertainties and challenges posed by an ever-changing world. Furthermore, sustainable educational programs were seen as fundamental to ensuring a lasting impact and continued progress in the realm of nuclear security education.

2. Updates on INSEN Members
INSEN members hail from different regions and contribute in different ways to promote nuclear security education. The following figures show recent INSEN membership statistics. Figure 1 shows the distribution of INSEN members over different regions, and Figure 2 shows the distribution of members in the different WGs. Figure 3 shows the degrees offered by INSEN educational institutions under undergraduate, graduate, postgraduate, and higher study programs.
Figure 1. Regional distribution of INSEN members.

Figure 2. Engagement in WGs.
3. Updates on Working Group Activities

a. Working Group I: Development and Maintenance of Educational Materials, Tools, and Methodologies

WG I focuses on developing and reviewing teaching materials and tools, academic programs, and curricula consistent with IAEA-defined terminology and guidance [3, 4]. WG I membership consists of experts from universities, academic institutions, and government agencies from IAEA member states around the world.

From July 2022 through July 2023, WG I made significant progress in developing teaching materials for core and elective courses identified in IAEA Nuclear Security Series 12-T [3]. Materials for four educational modules are available on the IAEA NUSEC Portal [2], eight are under review at the IAEA, and an additional three courses are in development. During the 2023 Annual Meeting, participants volunteered to support the curriculum and teaching materials for another 10 courses. The WG I Leadership Team will seek subject matter experts to develop materials for eight courses in early development.

Additionally, the WG I membership supported the INSEN secretariat to develop the nonserial publication (TECDOC) titled “Ensuring Sustainability and Assessing Impact of Nuclear Security Education Programmes.” This document will help current and future INSEN members draw on the experience of others to build and strengthen their nuclear security programs. The annual meeting included a specific session to discuss progress on this TECDOC.
b. Working Group II: Program, Curriculum, and Faculty Development

WG II assists in different areas of nuclear security education through faculty professional development and exchanges, infrastructure, promoting good practices, and sharing expertise and information.

From July 2022 through July 2023, WG II assisted INSEN members in elaborating personalized curricula, sharing academic experiences about nuclear security, and sharing scientific publications by members through a newly created section in the INSEN Portal. A virtual meeting was held to guide and encourage greater collaboration and cooperation among WG II members. Finally, a survey of nuclear security education needs was prepared and distributed to INSEN members. Although the survey showed that most INSEN members are engaged in delivering or preparing educational material on nuclear security, it also signified the need for additional educational material and the importance of implementing professional development courses. Over 80% of survey respondents indicated plans to develop nuclear security educational material in the form of lectures, seminars, case studies, courses, or complete programs. Survey results also show that over 65% of the survey respondents collaborate with other INSEN members. Therefore, more effort can be spent to increase collaboration among INSEN members.

c. Working Group III: Knowledge Management and Promotion of Nuclear Security Education and INSEN

WG III focuses on promoting nuclear security education among INSEN members and other interested institutions and stakeholders.

WG III linked the INSEN website to the World Institute for Nuclear Security website and other related websites to increase INSEN visibility, and the group plans to organize a student essay competition on nuclear security. It has been suggested that the competition winner present their work at the annual INSEN meeting.

WG III is also expanding the existing definition of nuclear security to cover all elements of nuclear security and its broader understanding of information generation and dissemination. WG III effectively promoted INSEN in regional networks, and the group updated and distributed INSEN posters and flyers.

From July 2022 through July 2023, WG III tracked the engagement of INSEN members in over 40 virtual and in-person events of regional networks and activities organized by INSEN members.

4. Conclusions

Significant progress was made throughout the year to strengthen nuclear security education. However, much work remains to develop educational material and implement professional development courses. Additionally, cooperation among INSEN members and with the Nuclear Security Support Centres network continues to be a
crucial area for development to foster global cooperation and to address nuclear security challenges more comprehensively.

The gathering of the network for nuclear security education marked a significant milestone in advancing global efforts for security against nuclear threats. The resumption of in-person activities following the pandemic signified the unwavering commitment of members and their organizations to work collaboratively in the pursuit of nuclear security.

As a network strongly invested in developing the next generation of nuclear security specialists around the world, INSEN has several recommendations for including students and young professionals in the upcoming 2024 International Conference on Nuclear Security: Shaping the Future.

With the support of the IAEA, INSEN continues to thrive as the primary network for educational initiatives in this strategic field.

5. Acknowledgment
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6. Works Cited