Nuclear Security

Objective

To contribute to global efforts to achieve effective nuclear security, by establishing comprehensive nuclear security guidance and promoting its use through peer reviews and advisory services and capacity building, including education and training. To assist in adherence to, and implementation of, relevant international legal instruments, and in strengthening the international cooperation and coordination of assistance in a manner that underpins the use of nuclear energy and applications. To play the central role and enhance international cooperation in nuclear security, in response to General Conference resolutions and Board of Governors directions.

International Conference on Nuclear Security: Sustaining and Strengthening Efforts (ICONS 2020)

In February, the Agency successfully organized the International Conference on Nuclear Security: Sustaining and Strengthening Efforts (ICONS 2020). The conference, held in Vienna, brought together more than 1900 participants, including a record number of 53 ministers, from 141 Member States, 4 non-Member States and 25 international organizations, to share experiences and achievements, and to formulate and exchange views on current approaches, future directions and priorities for nuclear security, including cybersecurity. Member States adopted a Ministerial Declaration by consensus reaffirming their support for nuclear security and delivered 109 national statements.

The Convention on the Physical Protection of Nuclear Material (CPPNM) and Its Amendment

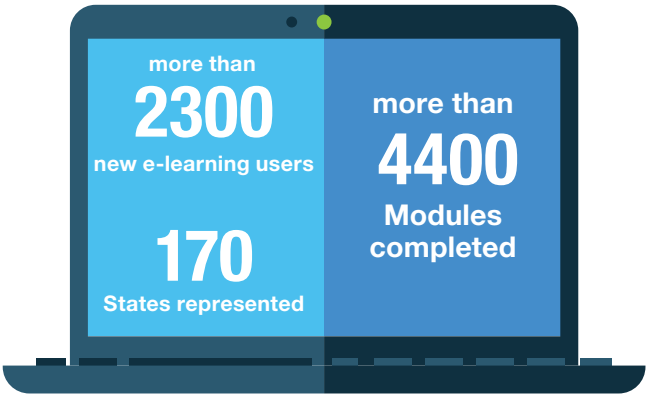
In line with Article 16.1 of the Convention on the Physical Protection of Nuclear Material (CPPNM), as amended in 2005, the Secretariat continued to facilitate preparations for the Conference of the Parties to the Amendment to the CPPNM. A meeting of the Preparatory

Committee, tasked with undertaking formal preparations for the Conference, took place virtually during the week of 7–11 December.

The Agency continued to encourage universal adherence to and effective implementation of the CPPNM and its Amendment and provided technical and legislative assistance, upon request. The Director General wrote to States not party to the CPPNM, as well as to those party to the CPPNM but not its Amendment, to encourage further adherence to the Amendment. In February, a ministerial side event and a technical session on the universalization of the CPPNM and its Amendment were organized on the margins of ICONS 2020. The Agency organized two webinars on the CPPNM and its Amendment, attended by more than 300 participants from 81 States. It also organized the sixth Technical Meeting of the Representatives of Parties to the Convention on the Physical Protection of Nuclear Material and its Amendment in December.

Nuclear Security Guidance

One new IAEA Nuclear Security Series guidance publication and two revisions of existing publications were issued. The new publication addresses exercising nuclear security systems and measures for nuclear and other radioactive material out of regulatory control. At the end of 2020, the IAEA Nuclear Security Series comprised 39 publications.



Needs Assessment and Capacity Building

Four Member States approved Integrated Nuclear Security Support Plans, bringing the total number of approved plans to 90. The Agency conducted 42 training events, most virtually, for 576 participants. The Agency continued to provide related e-learning opportunities for nearly 9000 users representing 170 Member States, including 2353 new users, and delivered a new computer security incident response course.

Risk Reduction

The Agency continued to support Member States in protecting nuclear and other radioactive material during and after use. It assisted in the consolidation of nine high activity disused radioactive sources in one Member State and continued its support for the removal of 53 disused sources from various countries. The Agency completed physical protection upgrades in two Member States at two research reactors, a nuclear power plant and 13 hospitals. It also provided assistance in drafting nuclear security regulations to 18 Member States.

Incident and Trafficking Database

In 2020, States reported 125 incidents to the Incident and Trafficking Database: 112 involved radioactive sources and radioactively contaminated material and 17 involved nuclear material, with 4 incidents involving both nuclear material and radioactive sources. One reported incident involved acts of trafficking or malicious use.

Nuclear Security Fund

The Agency accepted extrabudgetary pledges and other contributions to the Nuclear Security Fund amounting to €50 million from 15 Member States as well as from one international organization and other contributors in 2020.

CASE STUDY

Colombia Enhances Safety and Security of Disused Sealed Radioactive Sources

Despite restrictions in place owing to the global pandemic, several disused sealed radioactive sources (DSRSs) were successfully brought to a safe and secure storage facility in Colombia at the end of 2020, with support from the Agency. The sources had been used in cancer treatment but had reached the end of their useful life. Their transfer represents a major milestone in ongoing efforts to increase the safety and security of disused sources in the country.

Sealed radioactive sources are used worldwide in areas such as health care, industry, research and agriculture. Although these sources are usually managed safely and securely while in use, it is equally important to manage them safely and securely once they become disused. This is essential to reduce radiation hazards to the public and the environment.

"Disused sealed radioactive sources can remain radioactive for a long time and present both security and safety challenges," said Muhammad Khaliq, Head of the Nuclear Security of Materials and Facilities Section of the Agency's Division of Nuclear Security. "Appropriate management of these sources helps protect against accidental radiation exposure and intentional use for malicious purposes."

As part of the implementation of Colombia's national action plan to secure all radioactive material in use and storage, within the framework of its Integrated Nuclear Security

Experts dismantle a teletherapy head used for cancer care in Colombia in preparation for its safe and secure storage.

Support Plan, the Agency supported the dismantling and consolidation of all high activity DSRSs from various facilities within the country and their transportation to a safe and secure storage facility for further management.

Performing complex field operations such as the transfer of radioactive sources at the end of their life cycle — when they are especially vulnerable — to a safe and secure storage facility requires highly specialized expertise and poses technical challenges. This was further complicated by health and safety measures in place during the ongoing COVID-19 pandemic. To ensure adherence to the national pandemic restrictions, plans had to be adjusted, including the development of a biosafety protocol regulating sanitary cleaning and disinfection and the introduction of physical distancing protocols.

"Operations were performed with the highest standards of radiological safety and security, but also with unprecedented biosecurity measures due to the current COVID-19 health emergency," said Miguel Lotero Robledo, Colombia's Vice Minister of Energy. "The dedication of all national stakeholders, such as our ministry, the National Police of Colombia and the Colombian Geological Service, demonstrates our country's undeniable commitment towards enhancing nuclear safety and security."

The Agency is supporting more than 20 countries, on their request, to improve the security and safety of national inventories of DSRSs through large scale field operations and complementary capacity building for enhanced sustainability.