
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 the Security of Radioactive Material

The Agency organized the International Conference on the Security of Radioactive Material: The Way Forward for Prevention and Detection, held in Vienna in December (Fig. 1). The conference, attended by some 550 participants from over 100 Member States and co-chaired by Italy and Senegal, featured six main panel sessions and 28 specialized technical sessions. Topics addressed included international cooperation, communication, sustainability of national nuclear security regimes, State experiences in prevention and detection, the roles and initiatives of international organizations, securing nuclear material during its full life cycle, and the detection of radioactive material involved in criminal and unauthorized acts.

International Conference on Nuclear Security

The Agency organized two programme committee meetings, chaired by Bulgaria and Egypt, to develop the announcement, themes and high level and technical discussion topics for the third International Conference on Nuclear Security: Sustaining and Strengthening Efforts, to be held in February 2020.

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

The Agency continued to promote universal adherence to the Amendment to the CPPNM (A/CPPNM), including through three regional workshops held for Southeast Asia, for French-speaking Africa and for Russian-speaking States.

The fourth Technical Meeting of the Representatives of States Parties to the Convention on the Physical Protection of Nuclear Material (CPPNM) and the CPPNM Amendment was



FIG. 1. Participants in the International Conference on the Security of Radioactive Material held in Vienna in December.

held in December in Vienna and attended by around 60 participants. The representatives discussed, inter alia, the information on laws and regulations giving effect to the CPPNM and A/CPPNM, as well as the role of designated Points of Contact. Immediately following this meeting, the Secretariat also facilitated an informal meeting of the Parties to the A/CPPNM, which initiated preparations for the 2021 Conference of the Parties to the A/CPPNM to review the implementation of the amended Convention and its adequacy, as foreseen in Article 16.1 of the amended Convention. Around 50 Parties to the A/CPPNM attended the meeting.

Nuclear Security Guidance

The Agency continued to develop comprehensive guidance on nuclear security. The Nuclear Security Guidance Committee, comprising representatives of 57 Member States, met twice during 2018. The June meeting marked the beginning of the committee's third three-year term. Five new publications were issued in 2018. At the end of the year, the IAEA Nuclear Security Series comprised 32 publications, with a further 10 approved for publication and 14 more under development. The road map for the IAEA Nuclear Security Series publications was updated to identify further priorities for development of guidance during the third term.

Needs Assessment

The Agency continued to develop and implement Integrated Nuclear Security Support Plans (INSSPs) to assist States, upon request, in systematically and comprehensively enhancing their national nuclear security regimes. Three Member States approved their INSSPs in 2018, bringing the total number of approved INSSPs to 81.



FIG. 2. Participants in an Agency training course on transport security of nuclear material at Kerntechnische Hilfsdienst GmbH in Karlsruhe, Germany.

Capacity Building for Nuclear Security

The Agency conducted 105 security related training activities in 2018 — 42 at the national level and 63 at the international or regional level — with more than 2200 participants from 139 States (Fig. 2). In addition, 879 trainees from 123 States completed 3760 e-learning modules. In addition, a Technical Meeting on Security of Nuclear and other Radioactive Material in Transport was held in July, where transport security regulators, international organizations, operators and other experts shared information and discussed challenges faced by Member States.

The Agency continued to respond to State requests for assistance with the development of national Nuclear Security Training and Support Centres, both on a bilateral basis and through the International Network for Nuclear Security Training and Support Centres. The International Nuclear Security Education Network grew in 2018 with the addition of five institutions. The network, which assists States in establishing and enhancing educational programmes in nuclear security, now comprises 177 institutions in 63 Member States.

Risk Reduction

The Agency continued to support efforts by States to protect radioactive material during and after use. In 2018, 27 Category 1 and 2 disused sealed sources were removed from five countries in Latin America. Physical protection upgrades were also initiated to facilities using high activity radioactive sources in Egypt, Libya and Pakistan, and upgrades to such facilities were completed in Malaysia.

Coordinated Research Projects

The Agency completed the coordinated research project entitled ‘Development of Nuclear Security Assessment Methodologies for Regulated Facilities’, involving 34 participants from 16 Member States and 1 organization. The three year project developed and validated

a methodological framework for nuclear security assessment, and identified the data needed for such an assessment as well as the ways to collect and use such data to assess security effectiveness at a range of facilities and activities. The Agency also initiated a coordinated research project entitled ‘Applying Nuclear Forensic Science to Respond to a Nuclear Security Event’. This project will seek to promote consistent and scientifically defensible implementation of nuclear forensic examination, in line with national laws and international legal instruments, and in particular to link nuclear science with investigative requirements.

Advisory Services

The Agency conducted International Physical Protection Advisory Service (IPPAS) missions to Ecuador, France, Japan and Switzerland, bringing the total number of IPPAS missions conducted to 85. The Agency also established new guidelines for INSServ missions.

Major Public Events

The Agency provided assistance in implementing nuclear security systems and measures for major public events to seven States — Argentina, Belarus, Indonesia, the Niger, Panama, Uganda and the United Republic of Tanzania. This included four coordination meetings and ten training events. As part of these activities, the Agency lent 391 radiation detection instruments and, upon request, provided three major public event analysis reports.

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Incident and Trafficking Database

In 2018, Benin and the Congo joined the Incident and Trafficking Database (ITDB) programme. States reported 253 national incidents to the ITDB during the year; 243 involved radioactive sources and radioactively contaminated material and 14 involved nuclear material. Seven reported incidents involved acts of trafficking or malicious use. The Triennial Technical Meeting of States’ Points of Contact for the Incident and Trafficking Database was held in Vienna in May.

Nuclear Security Fund

In 2018, the Agency accepted financial pledges to the Nuclear Security Fund amounting to €22.2 million. These pledges included financial contributions from 16 Member States and non-traditional donors.