Radiation and Transport Safety

Objective

To support Member States in improving radiation safety of people and the environment through the development of safety standards and providing for their application. To support Member States in establishing the appropriate safety infrastructure through support and implementation of the Code of Conduct on the Safety and Security of Radioactive Sources, and through safety reviews and advisory services. To support Member States in capacity building through education and training, and in encouraging the exchange of information and experience.

Radiation Safety and Monitoring

Five Postgraduate Educational Courses in Radiation Protection and the Safety of Radiation Sources were conducted, in English, French and Spanish, at Agency affiliated regional training centres. The Agency held three train the trainers workshops for radiation protection officers: in Lebanon (in Arabic and English); in Peru (in Spanish); and in Estonia (in English and Russian). A regional workshop was conducted in Mexico City to share experiences on the progress made in establishing national strategies for education and training in radiation, transport and waste safety.

At a technical meeting, experts discussed recent documents by the International Commission on Radiological Protection and the United Nations Scientific Committee on the Effects of Atomic Radiation on exposure to radon, and considered whether the organizations' recommendations should be incorporated into *Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards* (IAEA Safety Standards Series No. GSR Part 3). The experts concluded that no changes were needed and suggested that a position paper be developed on the use of dose conversion factors.

Participants in a Technical Meeting on Radiation Exposure of Patients from Recurrent Radiological Imaging Procedures agreed on several steps for improving protection of patients, including the development of professional guidelines. The Agency also held a Technical Meeting on Experience and Results in Implementing the Safety in Radiation Oncology Reporting and Learning System (SAFRON).

A total of 48 regional and national training courses and workshops on radiation protection of patients, with 1450 participants, were organized. The Agency conducted ten webinars on specialized topics in radiation protection in medicine, including one in cooperation with the European Society of Radiology and five with the International Organization for Medical Physics. These webinars were delivered in English, Russian and Spanish, with 1500 participants from 100 countries.

The Agency launched Spanish versions of two e-learning courses on the Radiation Protection of Patients web site, on safety and quality in radiotherapy and on radiation dose management in computed tomography. More than 3330 certificates of completion

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for e-learning courses in English and Spanish on topics relating to radiation protection of patients were issued.

The steering group for the project on developing guidance on radioactivity in food and drinking water in non-emergency situations agreed to write a literature review on radiation doses from 'total diet' studies. The group also approved the statistical approach to managing data and proposed the development of a technical report summarizing the output from the project.

Regulatory Infrastructure

Through 75 national and 15 regional technical cooperation projects, and through the extrabudgetary Regulatory Infrastructure Development Project, the Agency supported the establishment, development, implementation and strengthening of regulatory infrastructure for radiation safety (Fig. 1).

FIG. 1. Participants search for radioactive sources in the field in Kenya, an activity organized as a part of the IAEA Regulatory Infrastructure Development Project.

The Agency promoted the Code of Conduct on the Safety and Security of Radioactive Sources and supplementary Guidance documents, and assisted Member State efforts to build capacity to implement their provisions. At the Open-ended Meeting of Technical and Legal Experts to Share Information on States' Implementation of the Code of Conduct and its Supplementary Guidance, participants discussed, inter alia, transboundary movement of radioactive material inadvertently incorporated into scrap metal and semi-finished products of the metal recycling industries. The Chair's report recommended that States that had not yet made a political commitment to the Code of Conduct and/or its supplementary Guidance should consider doing so.

Two regional training courses focused on establishing a national registry of radiation sources using the Regulatory Authority Information System (RAIS), one for the Africa region in Rabat and one for the Latin America and the Caribbean region in San Salvador.

Two Regional Schools for Drafting Regulations on Radiation Safety and Nuclear Security, one held for the African region and one for the Asia and the Pacific region, were the first drafting schools to combine the two topics.

Transport Safety

The Agency launched its modular e-learning platform on the safe transport of radioactive material. Modules 1 to 4 cover the regulatory framework, radiation protection and requirements for transport safety. Modules 5 to 9 include guidance on developing and implementing a compliance assurance programme for competent authorities for the safe transport of radioactive material (Fig. 2). Regional training courses were held in Burkina Faso and Rwanda (Fig. 3).

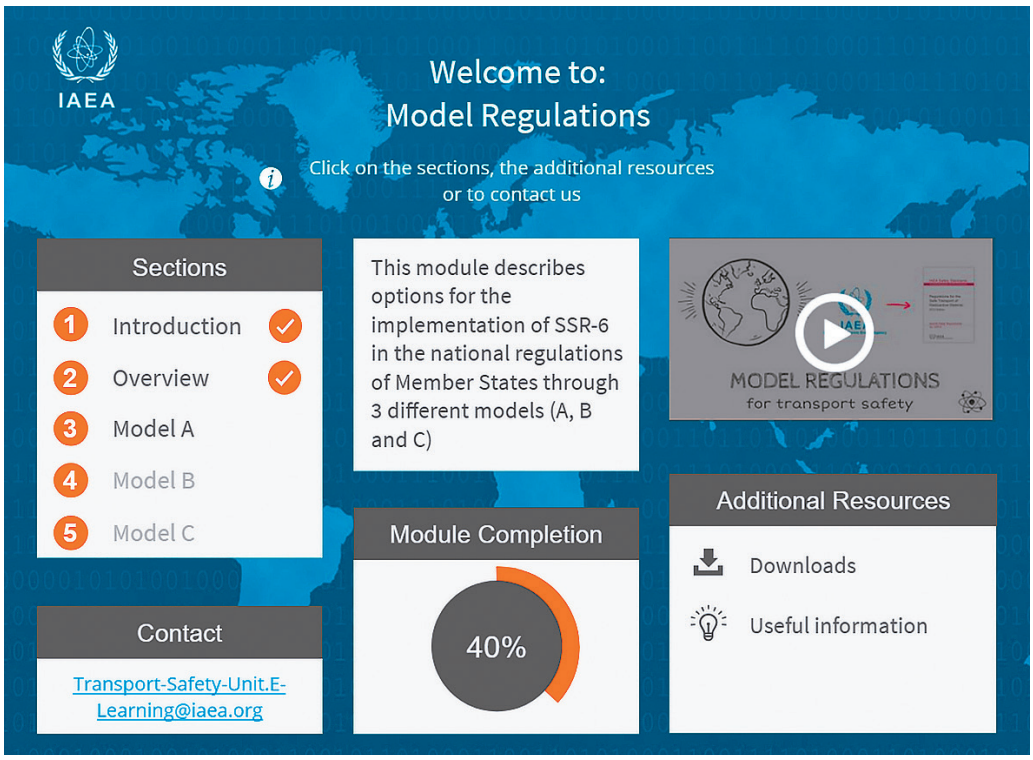

FIG. 2. Transport safety e-learning available on the new modular platform launched in 2019.

FIG. 3. Participants in a training course based on the Agency's new transport safety e-learning platform, held in Kigali.

The Agency established a group to coordinate all the Secretariat's activities on small and medium sized or modular reactors. The coordination group will also address transportable nuclear power plants, when relevant.

Radiation Safety Information Management System

The Agency held six interregional workshops in Vienna to assist Radiation Safety Information Management System (RASIMS) national coordinators in using RASIMS 2.0. By the end of 2019, 70% of RASIMS national coordinators had been trained to use the new platform.