

Report by
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International Cooperation in the Field of Safe and Secure Use of Ionizing Radiation Sources

The urgency of the issue to be discussed in the framework of the Conference is obvious.

Despite of the fact, that the history of the development and use of the radioisotope products is a little over 50 years of age, the range of its contemporary use is quite diverse. It covers industry and power production, metallurgy and geology, mining and environment, meteorology and agriculture, chemical and oil and gas industry.

I would like also to mention separately one more field of use of the isotope products, which is medicine. Wide use of radioactive substances and other ionization sources for diagnostics, medical treatment and research purposes is justified by intensive development of laboratory and instrumental research methods in medicine. Radioisotope methods are widely used in diagnostics and therapy. They are most efficient in evaluating structural and functional changes of different organs. Thus, the list of radiopharmaceuticals used in medicine is getting longer every day.

It is obvious, that the range and field of use of different radionuclide sources in contemporary life are expanding. They are: radionuclide sources of electric power (radioisotope thermoelectric generators, or RITEGs); autonomous power supply of various equipment in remote and difficult to reach areas (radio - and light beacons, meteorological stations); radiation technological units (RTU) for sterilization of medical products, processing of agricultural products and industrial and domestic waste; equipment for actinotherapy, as well as different devices for the control of technological processes (measurement of density, level and thickness); devices for non-destructive control (gamma-defect detectors) and for analyzing the substance content.

It goes without saying that the issue of safe and secure management of this kind of products throughout their life cycle, beginning from manufacturing and up to disposing, remains one of the key issues.

Russia, as one of the major manufacturers and consumers, as well as exporter and importer of ionizing radiation sources, always took great care of all the safety and security aspects of managing that kind of products. The same is true about the former USSR. It arises from developed legal base, including legal action against illegal purchase, storage, use, transfer or destruction of radioactive materials.

The licensing of activities in the field of radioactive substances' management stands in the way of uncontrolled proliferation of radioactive substances and radiation sources. Binding the license holder, among other things, to hand over and dispose of radioactive substances, which are of no further use; accountability and control, safe storage and physical protection of radiation sources, etc.

At the same time, discussing the issue of safe and secure use of isotope products in the "global" sense, we must admit the obvious: this is an issue of urgency due to a number of reasons.

One of them is the threat posed by different terrorist organizations in the world, disintegration of the former Soviet territory, that led to the loss of control over sources, and in some cases to the loss of sources as such. For example, unsanctioned opening of RITEGs by local populace in Kazakhstan and Georgia to obtain non-ferrous metals. For some, the dose that they have been exposed to turned out to be too high.

Besides, after the break away of the USSR, the new integral government control systems for the location and transportation of radioactive, nuclear materials in separate independent states had to be re-developed afresh, which caused a variety of unprecedented criminal offences, including those with radioactive sources.

Growing terrorism also led the world community to re-evaluate the threat of using biological, chemical and radiological materials by different terrorist organizations, religious extremists and criminals.

As a direct result, a trilateral initiative (Russia-USA-IAEA) to increase the level of safety and security of radioactive sources was established. Its purpose is to develop appropriate control over used sources, as well as search for, removal and conversion of orphaned sources into safe condition on the territory of the CIS countries in the first place.

The level of risk, in terms of the use of radioactive materials, can be estimated preliminary by the threats of radiological terrorist acts and thefts of such materials. However, at present there is no proof and reliable data on illegal trafficking of radioactive materials, as well as of the cases of "radioactive" blackmail. According to the IAEA information, since 1993 201 cases of radioactive sources illegal sales have been registered, including those, used in medicine and industry.

The world is concerned and wishes to protect itself. Understanding this requires consolidation of efforts in the field of international cooperation we are discussing today.

The strategy of joint counteraction of radiological terrorist attempts, obviously, needs to be based on systematic analysis of all the aspects of safe use of radioactive sources, as well as critical review of the accumulated by the world community experience in non-proliferation. All this can be and must be taken into account when setting up international and national safety systems for the use of radioactive sources and effective radiological terrorism response systems.

Illegal trafficking of ionizing radiation sources can pose a threat to national security, population health and global environment. All this requires us to expand collaboration and strengthen international cooperation with regards to transborder traffic of radioactive materials and operation of high radiation hazardous units, exchange of information between states and international organizations, up-date of antiterrorist laws.

As for national systems, those are to be based, in the first place, on the adherence to and respect for international Agreements and Conventions, as well as national legislature. Radioactive materials management must include accountability, licensing and issuing of special permits for activities involving radiation sources; control over export-import operations; involvement of law enforcement agencies, intelligence and border control. A number of states are facing an urgent issue of creating a legal basis that would regulate the use, localizing and disposal of radioactive sources. Safe use of sources and guarantee of their safety can be secured exclusively by legal and technical documentation, including International Conventions and precise instructions to the consumers on registration of the sources and their further management. The IAEA accumulated positive experience in consolidating international efforts and supporting development of legal instruments on different aspects of the use of nuclear energy in peaceful purposes. Taking it into account, the Agency's key role in assisting member-states with regards to setting up national infrastructures on the management of potentially hazardous radioactive sources is incontestable.

Appropriate attention must be focused on the development of a set of measures to eliminate consequences of possible terrorist acts with the use of devices based on radioactive sources. I believe that the response system being developed must minimize not only direct radiological consequences, but also indirect psychological, medical, social and economic consequences.

Our tragic experience of large-scale accident illustrates the fact, that the society is extremely sensitive to any radiation risks and is prone to various phobias, radiophobia in the first place.

Phobias are caused by lack of knowledge or plain ignorance. Ignorance is caused by lack of curiosity and laziness. Hardly anyone among non-professionals will go to a library to read contemporary literature on radiology. It is much easier to read a biased newspaper article. Psychology specialists believe that phobias are contagious, and that it is possible, by manipulating, to make a negative impact on the health of a lot of people. And here I would like to touch upon another important issue, directly linked to the issue of safe and secure use of ionizing radiation sources.

The attitude to radiation is characterized by vigilance due to real danger, and much depends on information supply and awareness. To cultivate the threat of radiological terrorism may also have a negative impact on the scale of irradiation sources use.

When the population gets minimal information, but plenty of rumors, and as a result, superstitions, then, on the one hand, we get radiophobia, and on the other, irresponsible behavior.

What we need, is a large-scale civilized informational system for the society on all the range of issues on safe use of ionizing irradiation sources, that precludes a possibility of their unauthorized use.

The way to do this is traditional: in the first place it is mass media, i.e. press, radio and TV, introduction of specialized educational programs in schools and colleges; "round tables" with participation of community representatives, scientists, industry people, etc.

This issue must be addressed by way of involving international organizations, such as IAEA, World Health Organization, as well as national institutions like Academy of Sciences.

Our idea of the scale and possible consequences of radiological terrorism defines the priorities and efforts that are undertaken today for the purpose of increased safety in using radionuclide sources in the Russian Federation.

The first steps in this direction are being taken in the framework of the acting Agreements between DOE USA and MinAtom of Russia.

I believe that it will be no mistake to express my confidence in this Conference, organized by the IAEA, US and Russian Governments and a number of international organizations. I am sure that it is just a beginning of a fruitful international cooperation in this field as well as a strong impulse for everyone.