

tion safety and quality assurance in medical radiology. The course was developed on the base of the one, carried out by SSM, and adopted to the needs of the Ukrainian specialists.

In 2011–2013 27 courses in 26 cities of Ukraine, which was heard about 490 listeners from various medical institutions were carried. After each course listeners filled a questionnaire in which nearly 85% of them noted out that they learned for themselves new information on problems of radiation safety ensuring of staff and patients. As the most actual topics for listeners, were chosen next ones: “Requirements to quality assurance system of carrying out medical procedures with use of ionizing radiation sources”, “Radiation safety of patients and the staff”, “Practical questions of radiation safety organization in medical institution” that testifies about need of carrying out similar seminars, both for young specialists, and for more skilled ones. Most of listeners (95%) estimated the contents of the course on five points on a five-point scale, and on the question “Whether you will recommend to your colleagues to take a course” answered positively.

Every year use of ionizing radiation sources in the medical purposes is increasing extremely. Respectively number of staff who works with radiation sources is increasing too. That is why carrying out of such courses is critical for increasing radiation safety and functioning of quality assurance system of exposure's procedures.

Bondaruk R., Luchina V.

*International Sakharov Environmental Institute of Belarusian State University,
Minsk, Republic of Belarus*

TRYING OF ANALYZING TERRITORIES OF PRESERVES AS AN OBJECT OF ECOLOGICAL LAW

Preserves are the territories (water area), that has particular importance for the preservation or restoration of natural systems and their components and to maintain the ecological balance. State nature reserves may have a different profile, also it could be:

- complex (landscape), for the preservation and restoration of natural complexes (landscapes);
- biological (botanical and zoological), for the preservation and restoration of rare and endangered plant and animal species, including valuable species in the economic, scientific and cultural relations;
- paleontological, intended to preserve the fossil; et. cet.

In 2014, the total area of nature reserves of the Republic of Belarus amounted to 1.107,3 thousand hectares, or about 5.3% of the country's area and 70% of the total area of specially protected areas (Ministry of Nature and Environment, 2010). Most environmental violations carried out in the reserve. The main offenses in relation to reserves as a specially protected natural territory are a violation of the regime of protection and use of specially protected natural territories, violation of environ-

mental safety regulations, illegal destruction, removal or damage to trees and shrubs, or other vegetation, as well as some others. In Environmental Protection Act of Republic of Belarus October 20, 1994 № 3335-XII and in the "Law on Protected Areas," Forest Code, there is no direct evidence to limit a particular type of forest management activities in the reserve. Such restrictions must be prescribed by the Regulations on Protected Areas, for each particular area separately. However, in practice these limitations are not always specified and not for all territories. For example, of the 37 Republican reserves created / converted by the Council of Ministers Decree of the Republic of Belarus of December 27, 2007 № 1833 "About the republican nature reserves", only 21 (of noted there) has any limits on different types of forest management activities. A 16 do not have any restrictions, except for the following wording "... prohibits the damage and destruction of trees and shrubs, a violation of natural soil, except for agricultural land contours, performing forestry work, as well as work on the conservation and protection of forest resources."

The solution to this problem starts with tighter control and the separation of reserves from the outside world. It's necessary: 1) develop ecological trails. 2) enter special staff into these areas, rangers and ecologists who will observe and carry out regular monitoring of the territory. Tours conducted in reserves, will enhance environmental awareness among the population, in the excursion program we can also include a material liability for environmental offenses.

Borodaeva E., Len E.

*International Sakharov Environmental Institute of Belarusian State University,
Minsk, Republic of Belarus*

THE STUDY OF WATER CONSUMPTION BY INDUSTRIAL ENTERPRISES.

THE INTRODUCTION OF WATER RECYCLING SYSTEMS

Recycling of water to address the environmental and economic objectives: substantially (to 85–95%) to reduce the water consumption of industrial enterprises to reduce losses of valuable components from industrial sewage of enterprises, to avoid paying for the disposal and penalties for exceeding established standards.

Industrial enterprises, especially machine-building and metalworking, consume a lot of fresh water. As a result of technological process the water is polluted with heavy metals, organic and inorganic compounds. Currently used physical-chemical methods for industrial wastewater treatment at the enterprises with the aim of water reuse.

Water recycling may be a single system for the entire industrial enterprise or individual cycles of circulation of water for a single workshop or group of workshops.

When full recycling is a fully closed system, which allows reuse of waste water after she will complete a full cleaning cycle. Complete recycling can not only elim-