



RADIOACTIVE SITUATION IN KYRGYZSTAN: PROBLEMS AND PERSPECTIVES

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One of the major problems of the environmental contamination in Kyrgyzstan is the development of radioactive and toxic pollution caused by nuclear tests, technogenic accidents which took place in neighboring countries, and breach of safe storage and destruction of uranium and hazardous waste tailings.

Long-term nuclear tests in various areas of the world and the accidents at the NPS have caused the origin of stratospheric deposit of artificial radionuclides, the fallouts of which have led to radioactive pollution of the biosphere. Maximum fallouts have been observed in the latitudinal zone of 40-60 degrees and in the mountainous regions.

As a result of many years of research the main sources of radioactive contamination have been established. It is shown that stratospheric or tropospheric and local fallouts have permanently exposed the territory of Kyrgyzstan to the pollution by radionuclides.

A brief description of radioactive contamination of the environment in Kyrgyzstan from remote external sources and atmospheric mechanisms of its transfer delineated on the basis of long-term observations of geophysical and atmospheric parameters and regular radiation monitoring have been presented. The investigated mechanisms can be used to interpret the sharp increase of the radioactive background and to estimate the risk to the environment and human health.

Some methodological questions about the influence of geophysical conditions on the territorial distribution of contaminations have been considered. The tropospheric mechanism of contamination transfer for different seasons of the year has been suggested.

The uranium tailings located in mountain regions near densely populated areas and groundwater basins are the internal sources of radioactive contamination in Kyrgyzstan. Waste products of uranium production present a real threat for the environment and public health.

The problem of environmental security in connection with destruction of uranium tailings has been discussed. Till now there has not been conducted the assessment of radioactive contamination consequences to the environment and human health in this regions. The impact of ionization radiation on people health has been presented.