

ENVIRONMENTAL PROBLEMS IN REPUBLIC OF UZBEKISTAN

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It is known that mineral raw materials are the principal motive forces of scientific and technical progress as well as the basis of economic stability of the State. According to the mineral wealth Uzbekistan is one of the ten countries with advanced mining-extractive industry. Among the mineral resources of Uzbekistan there are deposits of coal, oil, gas, uranium, gold, silver, base metals, rare elements, salts, sulfur, gem-stones, building stones, mineral waters etc. On the base of ore actual reserves many mining and metallurgical plants work to-day. Among them there are such gigantic plants as Almalyk and Navoi mining and metallurgical plants, National Oil and Gas Corporation, etc. The metallurgical industry of Uzbekistan is the largest among the Central Asian countries. Foreign companies also take part in industrial exploitation of deposits. Mining and metallurgical plants impact negatively upon the environment. They have caused large scale pollution of the atmosphere, soils and waters. Enormous accumulations of more than 1,5 billions cubic meters of waste and near 2 billions ton of tailings, produced by the mining and processing industries, represent potential danger. Their effects are due to pollution of air, soil, surficial flows, ground waters with heavy and toxic elements (lead, zinc, arsenic, cadmium oxides of sulfur and nitrogen etc.). It is necessary to take into account the volume of wastes and tailings which deposited in area of 7400 hectares of soil. Soils in the neighborhood of the mines and metallurgical plants are contaminated with metals and their concentrations exceed background levels of metals up to 100-1000 times. Vegetation is oppressed in this area. Now in the Republic of Uzbekistan has been given consideration to environmental problems. There are some programs for protection of the environment which include the follows: creation of database on wastes and tails, study and mapping risk areas with increased contents with heavy metals in soils, air, flows and groundwater, study of negative impacts of wastes and tails upon the population, vegetation, animals, soils etc., working-out of technologies on all round utilization of mineral row materials, working-out technologies of extraction of valuable components from tails of gold, copper and base metals plants, working-out of technologies for waste treatment, working-out of economic grounds with priority for development of one or another technology. The environment of the Uzbekistan Republic is far from being satisfactory. The distinct regularity is to be observed in distribution of contamination halos in soils, surface and underground waters, air. The mining and metallurgical industry has caused the increase of heavy metals contamination (lead, zinc, arsenic, nickel, copper, bismuth, etc.) and oil-products. In agricultural regions pesticides, nitrates, phosphorous compounds, strontium, etc. are predominated. It is established, that soils in Uzbekistan are intensive salinized. At the bottom of salinization is increase of ground-waters level within irrigated lands and arid climate as well. The other unfavorable factor is bad qualitative composition of surface and ground waters. The surface waters of Karakalpakstan and Aralian zone have been polluted with phenols, manganese, lead, vanadium, cadmium, selenium and other toxicants.