

Geo-Environmental Problems of Uzbekistan

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Geo-environmental problems of Uzbekistan are caused both natural and industry-related factors. Shortage water resources in the West Uzbekistan, high seismicity and landslide activity are the natural factors. Areas of irrigation, mining and processing industries are the regions with high industry-related pollution.

Heavy environmental situation is in Aral-side regions: intense soil salinization and contamination: 15% of the area are intense salinized soils (more than 8 g/kg). The reason of the salinization is water table lifting and arid climate. A new powerful source of salinization is dried part of Aral Sea. 43% of soil is contaminated with chemical fertilizers, pesticides and phenols here.

Nitrates and pesticides pollution of soil and water (4-6 permission concentration limits) was found in central part of the republic along Zarafshan valley. Local soil contamination connected with uranium and gold mining operations was identified northward from Zarafshan river. Stockpiles of radioactive ore and tailings are the source of contamination around uranium mining operations. In gold operations the environmental contamination is larger and connected with pollution with As, Ni, Mo, Cr, V.

Extensive halos of soil and waters contamination with Zn, Pb, Cu, Cd, petroleum products and radionuclides are observed in the south-east part of the republic in vicinity with Angren-, Almalyk-, Chirchic- and Tashkent-cities.

Radioactive waste are stored here in 23 tailings and 13 stockpiles in trans-boundary region in Kirgiziya.

Radioactive tailings (about 20 Mm³) in Tadzhikistan create serious danger for Syrdarya river pollution.