State forest vegetation in conditions of technogenic pollution in the boundaries of the impact of the tailings

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This article presents the results of research on the assessment of the state of vegetation in conditions of technogenic pollution near the tailings in the territory of the Kavalerovo district of PrimorskyKrai. The object of the study were forest ecosystems, as well as natural and man-made system of mining (mining wastes, technogenic soil) formed during the development of mineral resources.

Analysis, generalization and systematization of data obtained from the literature suggests that the problem of the impact on vegetation toxic waste tin ore raw materials in the Far Eastern Federal District has not been studied

The study was conducted by conventional methods description forest taxation, in which revealed the poor state of the woody vegetation. Intensive exposure to the toxic waste in the first place affected the poplar fragrant. At one of the sites located 300 m from the tailings, the share of poplar 95% of all the oppressed of the trees.

Also carried tab soil profiles were used modern chemical and physico-chemical methods of analysis.

After sampling and analysis has identified high concentrations of heavy metals in soil and vegetation. Revealed excess of maximum permissible concentration, the total contents in soils of anthropogenic Pb, Zn, Cu, As, Hg, and their background values. Abnormal amounts of Pb, Zn, As recorded not only in the upper layer of soil (0-10 cm), but at a depth of 10-20 cm. The actual content of mobile forms of toxic chemical elements in them can be traced back-migration of metal contaminants from waste in soil and in plants. Their concentration in almost all samples for background concentration exceeds area.

In connection with what we proposed innovative measures to reduce negative impact of waste tailings on the ecosphere, including carrying out reclamation of the surface of the tailings using bioremediation is also recommended to organize monitoring research to change components of the environment, improving the regulatory framework and others.

Keywords: *forest cenoses, industrial pollution, tailing, disturbed by mining operations ground.*