
ECOLOGY

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THE CHEMICAL COMPOSITION AND DEGREE OF GROUNDWATER CONTAMINATION IN COAL-MINING AREAS OF THE EASTERN DONBASS

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Intensive coal mining in the Eastern Donbass led to a sharp deterioration of the ecological environment, in particular pollution of natural waters manmade mine waters. The features of the chemical composition and patterns of influence of technogenic mine water on natural groundwater are identified. The zoning of groundwater contamination degree was produced in Eastern Donbass. Found that most are contaminated groundwater located in Shachty and Novoshakhtinsk coal-mining areas, due to the concentration of coal mining industry.

Keywords: coal-mine areas, underground water, degree of contamination, zoning.

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MODELS FOR AIR AND WATER POLLUTION

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Atmospheric pollution with harmful substances bear the greatest risk to humans, so many industrialized countries are paying close attention to the protection of the atmospheric air. Objective of given article are research and construct a mathematical model of environmental pollution by means of which the analysis of process of air pollution is made. The subject of a study are total emissions of pollutants into the atmosphere from vehicles, recorded in Rostov-on-Don and Rostov Region for the period 1999–2008. The given model is necessary for further use at research of process of pollution, forecasting of its progress and the design of water treatment constructions.

Keywords: air pollution from motor vehicles, mathematical models in ecology, logistic model, least square method, approximation error.

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