

IMPACT OF OIL SHALE MINING AND MINE CLOSURES ON HYDROLOGICAL CONDITIONS OF NORTH-EAST ESTONIAN RIVERS

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The attention is focused on the formation of hydrological and hydrogeological interconnections between the catchment areas of Purtse, Rannapungerja, Pühajõgi and Vasavere rivers after closing (in 1997–2002) and flooding the Ahtme, Tammiku, Sompä and Kohtla oil shale underground mines. The multivariate relationship between the changes in mine water amounts directed into the rivers, annual runoff due to mine water inlets, groundwater underground flow, outflow module and other factors (as variables) were studied. A complex of linear regression formulas was derived to calculate the amounts of mine water outputs into the rivers and water distribution in order to regulate the hydrological regime of investigated rivers.

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