

DOI: <https://doi.org/10.37162/2618-9631-2024-4-128-145>

Assessment of changes in the hydrological regime of a raised bog under conditions of expected climate change during the period until 2060: A case study for the Lammin-Suo bog / Zhuravleva A.D., Kurochkina L.S., Skorospekhova T.V. // Hydrometeorological Research and Forecasting, 2024, no. 4 (394), pp. 128-145.

The paper assesses expected changes in the hydrological regime of a typical raised bog in Northwestern Russia, taking into account various climatic scenarios. The object of the study is the Lammin-Suo raised bog (the Leningrad region), where routine meteorological and hydrological observations have been carried out since 1950. The HBV conceptual hydrological model was used in studying the process of formation of runoff from the bog. For taking into account expected climate change in the region, an analysis based on the results of the CMIP6 climate modeling project was carried out. Calculations are presented for two scenarios of socioeconomic development: SSP2-4.5 and SSP5-8.5. Based on simulated data on the volume of runoff from the raised bog, its level regime was assessed until 2060, and a forecast of related changes in bog microlandscapes was given.

Keywords: raised bog, runoff modeling, climate forecast, climate change, bog microlandscapes
Tab. 3. Fig. 4. Ref. 26.