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Analysis of ultra-long-term forecasts of meteorological characteristics of Russian river basins using the INM-CM5 climate model outputs / Gritsun A.S., Semenova N.K., Simonov Yu.A., Khan V.M., Khristoforov A.V. // Hydrometeorological research and forecasts, 2024, no. 4 (394), pp. 39-57.

The analysis of the quality of ultra-long-term forecasts with 1-5 year lead time of the monthly and annual precipitation sums, the average monthly and average annual surface air temperature obtained using the INM-CM5 climate model's outputs is performed. Series of verification forecasts for the period from 1991 to 2023 were used. Forecasts were checked for 12 river basins located in different parts of Russia.

To eliminate systematic forecast errors used a method for correcting, which reduces the error of ultra-long-term precipitation forecasts by almost two times, and air temperatures by almost three times. Forecasts of intra-annual precipitation distribution were satisfactory for 8 out of 12 river basins. Forecasts of the intra-annual distribution of air temperature were good for all 12 river basins.

Demonstrated, that the INM-CM5 climate model outputs can be used for ultra-long-term forecasting of monthly and annual precipitation, average monthly and average annual air temperature.

Keywords: climate model, ultra-long-term forecast, precipitation, mean temperature, intraannual distribution, verification forecasts, correction

Tab. 6. Fig. 5. Ref. 24.