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An overview of research on wind waves in the arctic seas at various spatial and temporal scales is given. It is found that in recent decades, the conditions for the formation of waves in the Arctic have changed due to a significant decrease in the area of ice cover, which in the period from 1985 to 2015 decreased by an average of 10 % per decade. area has increased, which contributed to an increase in the length of fetch – an important characteristic for the development of waves. In the Laptev sea, the Chukchi sea and the Beaufort sea, there is a statistically significant trend of increasing wave height at a rate of 0.1–0.3 m over 10 years, but in the Greenland and Barents seas, the trend is weak and not statistically significant. The results of the diagnosis and forecast of waves in the Arctic based on discrete-spectral (WAVEWATCH, SWAN, WAM, RAVM) and spectral-parametric (AARI-PD2) models are presented. The field experiments on the interaction of waves with the ice cover are described.

Keywords: arctic seas, wind waves, ice cover, modelling, field experiments

Tab. 2. Fig. 9. Ref. 40.