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Influence of modern climatic processes on a geosystem condition of the barents-kara shelf

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The complex researches executed by us since 1972 on the present allow to estimate influence of global climatic processes on a condition of geosystem of a shelf and a coastal zone White, Barents and Kara seas.
Into structure of researches enter: hydrophysical, geocryology supervisions; direct measurements of temperatures; the analysis of the drilling data; precision measurements of a sea level; structure and dynamics studying of a cryolithozone ; lithodynamic and geochemical definitions; geophysical researches of wells; studying of glaciers on the basis of visual supervision and the analysis of aerophotographs.
The obtained data allows to estimate change of temperature of a water layer and deposits for last 30 years. On the average they make 0,38 0 for sea waters and 0,23 0C for loose deposits. Rise in temperature of benthonic horizon of atmosphere make for this period 0,72.
Under the influence of temperature change in hydro- and a shelf cryolithozone changes the characteristics.
For the above-stated period depth occurrence roofs of a frozen zone in the Bajdaratsky and Gydansky gulfs has increased on 2 - 5 m.
At a certain stable temperature mode, characteristic for Holocene (last 12000 y), the thermal processes which are passing in a coastal zone of the specified seas, it is possible to consider as quasiconstants. Rates termal-denudation and thermal- abrasion provided constant volume of a material taken out in the sea. Modern fast rise in temperature has led to avalanche process termal-denudation and to annual receipt in the sea of quantity of a material 1973 three times exceeding level.
Rise in temperature involves appreciable borders of the Arctic glacial covers. For glaciers the Novaya Zemlya archipelago it makes 3-5 m./year
Thus we will note the following.
• a warming tendency in all environments of geosystem of the specified seas is observed
• ice formation on the studied water areas 25 summer prescription begin later for a week in comparison with the data;
• reduction of the area of the Arctic glaciers and their capacity is observed;
• depth occurrence roofs subaqueous a frozen zone increases;
• speed (intensity) termal-denudation and thermal- abrasion and processes of destruction of coast accompanying them and a bottom grows.