

## Influence of global climatic processes on environment The Arctic seas

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One of the most actual problems of the present is changes of environment of Arctic regions under the influence of global climatic processes.

Authors as a result of the works executed by them in different areas of the Russian Arctic regions, have received the materials characterising intensity of these processes.

Complex researches are carried out on water area and in a coastal zone the White, the Barents, the Kara and the East-Siberian seas, on lake water areas of subarctic region since 1972 on the present. Into structure of researches enter: hydrophysical, cryological observations, direct measurements of temperatures, the analysis of the drill data, electrometric definitions of the parameters of a frozen zone, lithodynamic and geochemical definitions, geophysical investigations of boreholes, studying of glaciers on the basis of visual observations and the analysis of photographs. The obtained data allows to estimate change of temperature of a water layer, deposits and benthonic horizon of atmosphere for last 25 years. On the average they make  $0,38^0$  for sea waters,  $0,23^0$  for friable deposits and  $0,72^0$  for atmosphere.

Under the influence of temperature changes in hydrosphere and lithosphere of a shelf cryolithic zone changes the characteristics.

It is possible to note depth increase of roof position of the cryolithic zone on the most part of the studied water area.

Modern fast rise in temperature high-ice rocks composing coast, has led to avalanche process thermo - denudation and to receipt in the sea of quantity of a material of 1978 three times exceeding level

Rise in temperature involves appreciable deviation borders of the Arctic glacial covers.

On our monitoring measurements change of the maintenance of oxygen in benthonic area towards increase that is connected with reduction of the general salinity of waters at the expense of fresh water arriving at ice thawing is noticed. It, in turn, leads to change of a biogene part of ecosystem.

The executed researches allow to draw following conclusions:

- The warming tendency in all media of the Arctic environment is observed;
- ice - formation on the studied water areas begins now later for a week in comparison with the data of fifteen-year prescription;
- Reduction of the area of the Arctic glaciers and their capacity is observed;
- Depth of occurrence of sub - aquatory a frozen zone roof increases;
- Speed thermo - denudation and thermo-abrasion grows.