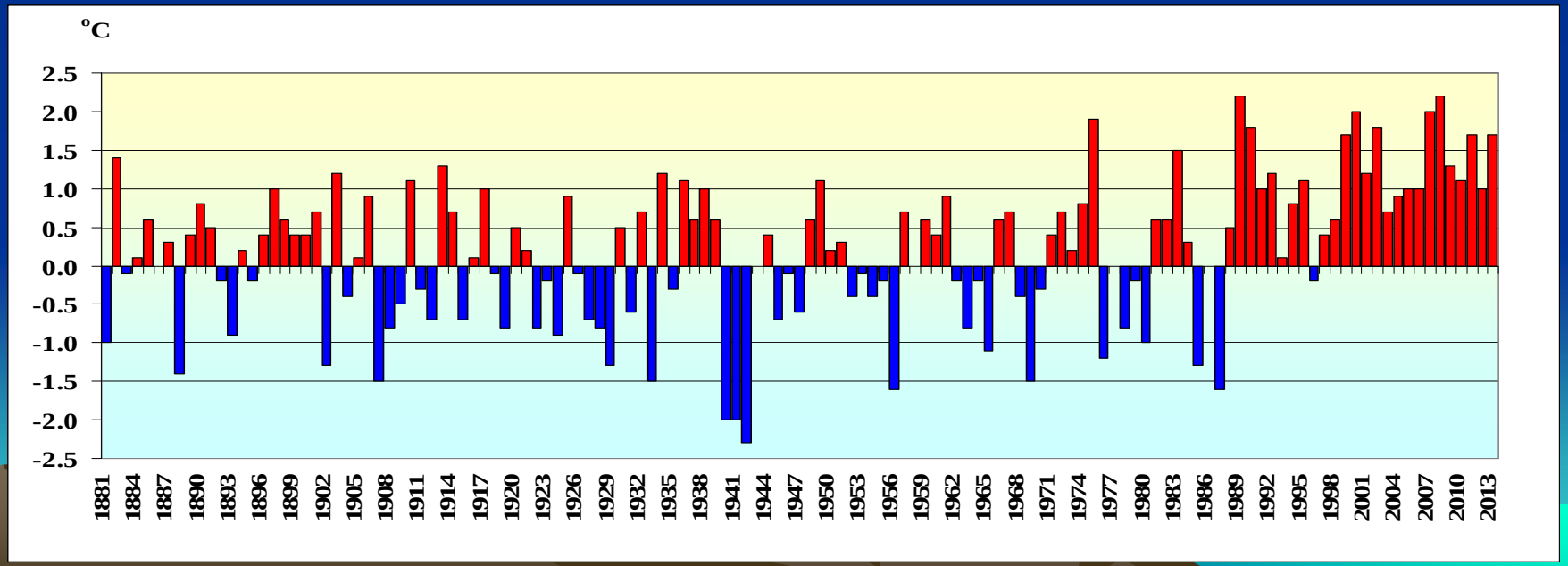
CLIMATE CHANGE AND ADAPTATION MEASURES OF AGRICULTURE TO THESE CHANGES IN BELARUS

Melnik V.I., Komarovskaya E.V.
Republic Hydrometeorological Center, Republic of Belarus

Researches conducted by the "Republican Hydrometeorological Center" demonstrate that in recent decades, trend of warming has been observed on the territory of Belarus since 1989 year and caused by general trends of climate change. The typical feature of the warming nowadays is not only its unprecedented duration, but also high temperature of air, which in average during 24 years (1989-2013) has exceeded climatic norm in 1.1ºC. If to begin with the post-war period (since 1945), all of the 20 warmest years are related to the period 1989-2013 years.

In general, the second decade of the warming period (1999-2008) has been warmer than first period (1989-1998) by 0,5 ° C, at the same time we observe shifting of warming period on summer, autumn months and on December.

Deviation of the annual air temperature from the climatic norm (+5,9 ° C) for the period 1981-2013 on the territory of Belarus.



Influence of climate change on the ice regime of the Belorussian lakes

Alena Kvach, Ryhor Chekan

Republic Hydrometeorological Center of Belarus

Over the territory of Belarus, there are about 12 thousand lakes. The largest of them are located in the basins of the Zapadnaya Dvina and Neman Rivers.

For the analysis of climate change influence on the ice regime of the lakes of Belarus, we used representative subset of observations at 3 lake posts (Drivyata Lake, Naroch Lake, and Myastro Lake) .

Due to later formation of the ice phenomena and their earlier termination, duration of the period with the ice phenomena decreased. Respectively, duration of the period with open ice-free water on considered lakes has increased during the past 25 years .

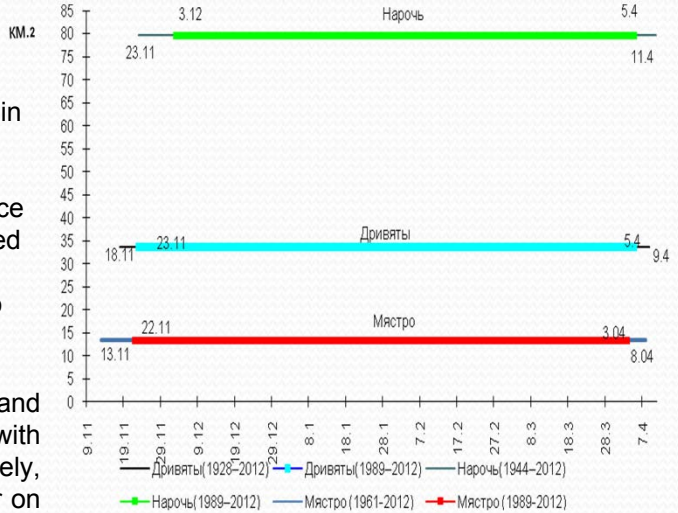


Fig. Onset and termination dates of the ice phenomena during the last warm decades and the entire period of observations

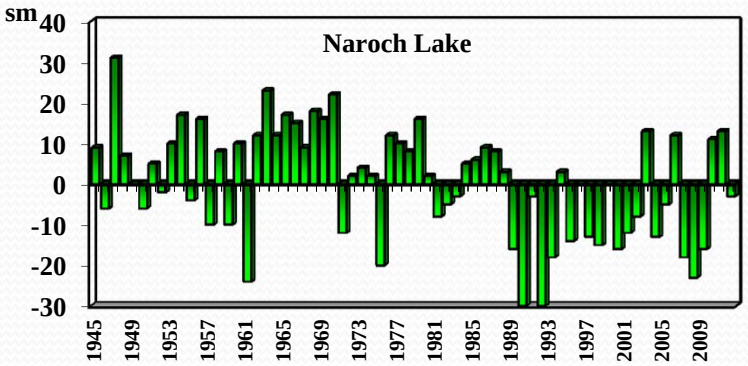


Fig. The deviations of the maximal thickness of ice from average long-term values.

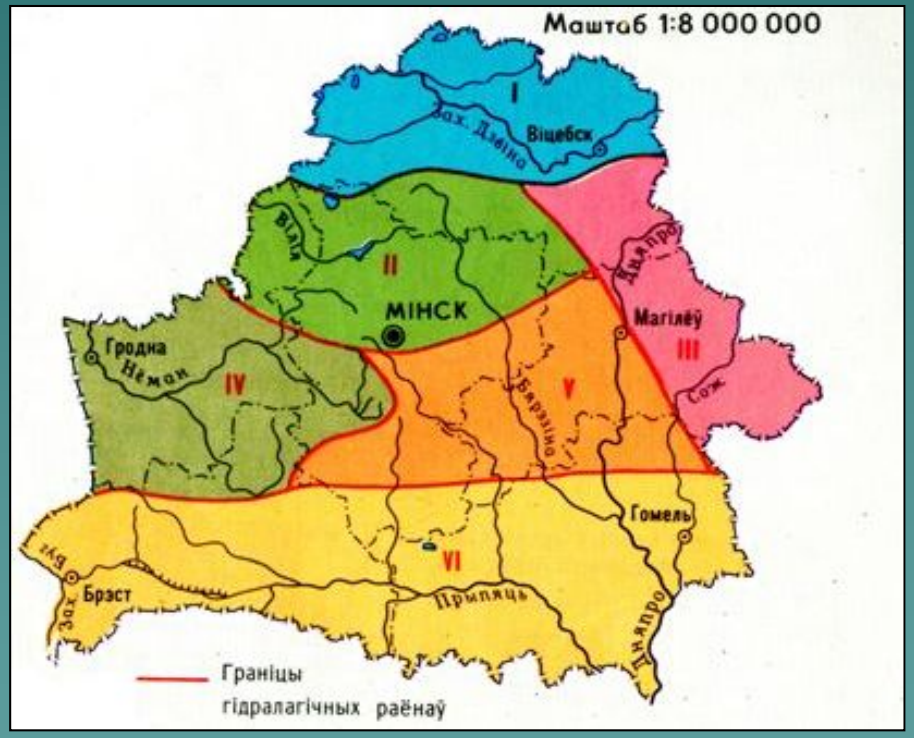
Furthermore, the thickness of the lake ice has reduced. Mean values of the maximum lake ice thickness became below mean regional long-term value of 14 cm (in the Drivyata Lake these value is 15 cm, in the Naroch Lake – 18 cm, and in the Myastro Lake – 9 cm).

2nd International Conference on Climate Change - The environmental and socio-economic response in the southern Baltic region

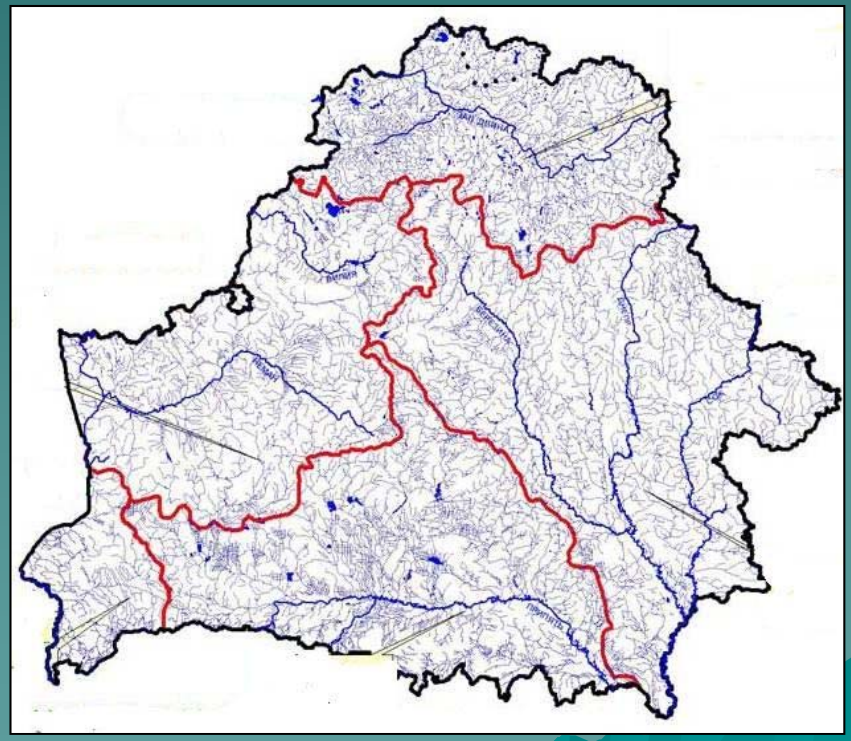
Local climate changes and problems of hydrological division into districts of the territory of Belarus

Petr Lopuch

Belarus State University



Modern scheme of hydrological zoning



Scheme of river basins