Institute of Monitoring of Climatic and Ecological Systems SB RAS Institute of Petroleum Chemistry SB RAS

Holocene climate change signals in the peat deposit of floodplain terrace swamp, south of Western Siberia, using multi-proxy approach

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# Mires is a source of paleoecological information



#### Image is taken from the Internet site gis-lab.info

## Aim of our research:

 to reveal the Holocene climate change signals in the peat deposit of floodplain terrace swamp.

## Study area

### Southern taiga of Western Siberia (56°55' N, 82°30' E)





Image is taken from the program Google Earth

### Methods

- 14C dating
- Macrofossil analysis
- Ash content, %
- Rhizopod analysis
- Humification index
- Water table depth reconstruction
- Spectral characteristics of humic acids

### Object of the research - swamp "Samara"



# Testate amoebae and water table depth reconstruction (WTD)



## Hydrological conditions of the swamp development



### Spectral characteristics of humic acids (HA)



# Results. 1 stage of the swamp development (8500-4600 cal yr BP)



# Results. 2 stage of the swamp development (4600-3500 cal yr BP)



# Results. 3 stage of the swamp development (3500-0 cal yr BP)



## Conclusions:

 Climatic variations have been recorded in the swamp deposit

 Climate has a strong influence on swamp development

## Thank for your attention!

### **Questions**???