



Agro ecological Research Lab, Tomsk State Pedagogical University

Chromatography and Spectrophotometry Laboratory



School participants on a guided tour in the Republic of Altai.



➤ Ecology Collaborative
➤ research in the field of
➤ peat-bog systems in
Western Siberia

Since 2001, the National School "Wetlands and the Biosphere" has been held.



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Monitoring of gas conditions and the emission of greenhouse gases in the Siberian marshes

Berlin 2013

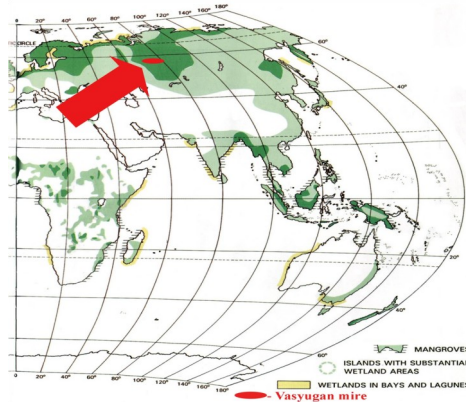
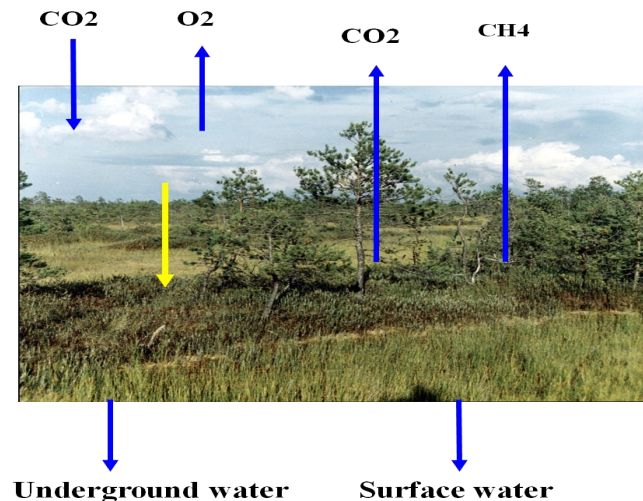
Monitoring of natural gas conditions and the emission of greenhouse gases in the Siberian marshes.

Field research station in Siberian mires.

Objectives:

1. Water balance, thermal conditions, gas composition, biochemical processes and the emission of greenhouse gases monitoring.
2. Research & Development of the Physico-chemical peat properties and products manufactured using peat.
3. Siberian peat resources and its rational application.

The share of wetlands in the earth carbon balance is about 15% of the world reserves.

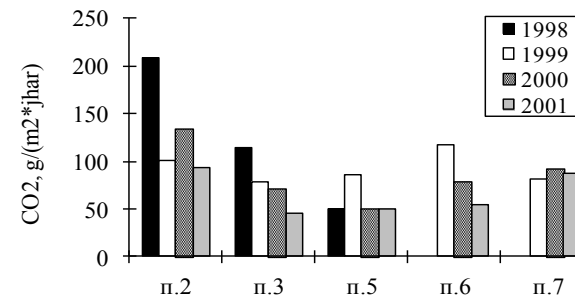


Installing the temperature and the redox potential sensors in the peat deposits.

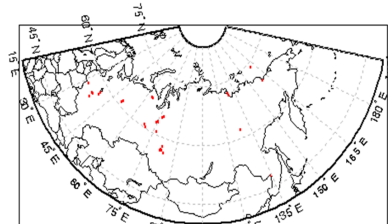
Installing a rod with measuring chambers in the peat deposit for the gas condition study (CO₂, CH₄, N₂O, «peepers» method (Switzerland)).



CO₂ Emission in different biogeocenoses.



- * New knowledge on the dynamics of the gas composition and greenhouse gases emission from the Siberian swamps was obtained.
- * Database on greenhouse gas emissions was formed.



Geographical carbon flow measurement points

Peat research work at TSPU is supported by:

- * Grant of RFBR,
- * "Universities of Russia"
- * Russian Ministry of Education,
- * Federal Program: "Integration of Russian Science and Higher Education",
- * Federal Program "Research and development of priority directions of Russian scientific-technological complex, years 2007-2013"
- * President Grant "Leading Scientific Schools of the Russian Federation";
- * Ministry of Education and Science state directives.

Fundamental scientific research

The study of structural and functional organization of wetland ecosystems in order to predict the influence of human intervention on the global changes in the biosphere.

The wetlands hydrological function

- * Water storage in the swamps of the world is about 3 thousand km³;
- * In Western Siberia it is 1 thousand km³; ie 1 km² of the wetland area has 1000 mm of swamp water deposits;
- * Important role in the formation of hydro-chemical composition of the bog water plays the water-soluble humic acids (HA) and FC.

