

Response of permafrost ecosystem to changing moisture condition in Eastern Siberia

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Deciduous conifer larch trees covers a huge area in eastern Siberia, which is called taiga and maintained on permafrost which is the largest and deepest in the world. Climate at Yakutsk in eastern Siberia is continental and dry, and annual mean precipitation is only 210mm. Not only severe dry climate but also large year to year variation affects the ecosystem.

One of the important functions of this forest ecosystem is to provide water to the atmosphere through transpiration. Tree growth and production depend on the moisture condition of the ecosystem. Direct water stress and indirect effect of moisture condition may affect the production through a change in nutrient availability.

Ecosystem near Yakutsk in eastern Siberia experienced extreme drought during the period from 2000 to 2003, which was followed by extreme wet condition for the period from 2005 to 2007. Reponse of this ecosystem for these extreme conditions will be reported.

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