

Project acronym: TREEPEAT

Project title: Climate induced change in the forested-to-open bog ecotone over time

Project leader: Joshua Ratcliffe, University of Waikato, Hamilton, NZ

Discipline: Earth Sciences & Environment

Station(s): Mukhrino Field Station

The research will look at tree cover in the peatlands of Western Siberia and how this alters the plant community as well as peat physical and chemical properties. We aim to expand on a past project, PEATEDGE, and revisit a previously surveyed site, Mukhrino, after an exceptionally warm summer in 2016, followed by warm conditions in 2017. We aim to check for a movement in the open-to-forested peat ecotone as well as test for stronger associations between tree cover and environmental variables, which have been found to occur under controlled conditions.

We also propose to (later) visit an INTERACT station where the climate is on average 1.7 degrees warmer, Kajbasovo, and to test to see if there is a stronger association between tree cover and peatland vegetation, physical and chemical properties at that site. We intend to record tree species, number and stem diameter across the existing five transects spanning the ecotone at Mukhrino as well as five new ones at Kajbasovo. We will also record vegetation, water table depth, stratigraphy to one meter, Von-Post humification, pH, electrical conductivity, dissolved organic and inorganic carbon all at five meter intervals.