

Project acronym: PEATSURE-I

Project title: Global Peatlands Under Pressure

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Discipline: Earth Sciences & Environment

Station(s): Mukhrino Field Station (Russia), Kajbasovo Research Station (Russia)

Most global ecosystems are now affected by climate change but some are disproportionately important because they have the potential to ameliorate or exacerbate greenhouse warming. One such ecosystem is peatlands. Peatlands cover a relatively small proportion of global land area (2-3%) but store the equivalent of half all the carbon that is in the atmosphere as CO<sub>2</sub>. The future fate of this peatland carbon store is currently unknown with some studies suggesting rapid carbon release, exacerbating greenhouse warming.

Global peatlands have now been exposed to anthropogenic warming for more than 150 years. How have they responded to this change so-far? Monitoring data is only available for the recent past and is often scattered and unreliable.

The aim of this project is to use palaeoecological methods to understand how global peatlands are responding to climate change over the last 150-200 years. Funding was requested from INTERACT for fieldwork support for a global study of recent change in peatlands. In phase 1 we requested funding for travel to two field stations in Western Siberia to survey peatland sites and collect cores for laboratory analyses.

We intend to analyse a range of proxy methods to understand the changes these peatlands have experienced over the last two centuries and how the ecosystem has responded. In a subsequent phase we intend to extend this work to North America.