It is generally agreed that peat sediments are very well suited to the reconstruction of hydrological conditions and fire activity. Thereby, they can be used to reconstruct the humidity and dryness of the climate. In particular, the large ombrotrophic bogs (exclusively fed by precipitation) in European part of Russia are a unique repository of high-quality information about regional environmental changes; therefore, they are the best suited for climate reconstruction. Unfortunately, little is known about the peatland respond to fires caused by high temperatures and drought in Eastern Europe. Dry conditions and high temperatures favor the development of mass fires, as was the case in the European part of Russia in the summer of 2010. Increased fire activity may be associated with prolonged droughts that can be recorded by changes in peat bog hydrology. Moreover, little is known about fire activity and the hydrology of peatland affected by mostly continental climate in Eastern Europe over the last millennia. Therefore, the main objective of the project is to investigate the relationship between droughts and fire dynamic in the context of the impact of climate change in the last 4200 years based on a peat core from Gorodetsky Moch peat bog (European Russia). For this purpose, long-term hydrological dynamic, fire activity, human impact and regional and local vegetation with detailed chronology will be investigated using palaoecological methods (testate amoebae, pollen, macrofossils and charcoal analysis with morphotypes). In addition, the project aims to explore the relationship between individual testate amoebae species, functional traits of testate amoebae, pollen, plant macrofossils and macroscopic charcoal. These studies may be the next step to a better understanding of the long-term and regional dynamics of fire and climate changes as well as the palaeohydrology of large peat bogs (over 500 ha) affected by the continental air mass of western Russia. In addition, the results will provide new long-term palaoecological data, rare for this part of the Europe and will help determine the region's vulnerability to the past effects of drought and fires.