

Abstract

Climatic changes are nowadays frequently discussed subject in the scientific, political and public sphere. For better understanding of their causes, development and possible impacts is one of the basic prerequisites for investigating such anomalies, that have taken place in the past. In natural archives, it is possible to find records not only about their parameters but also about the mentioned impacts – ecosystem changes, earth surface's geomorphological transformations or the impact on human society. The most studied period of geological time is Holocene. It is about the most recent period and we currently live in its third stage. Thankfully, due to relatively sufficient knowledge of its climatic anomalies we are able to study the climate's contribution with enough complexity to valorize the currently much observed global warming, which is often connected to human activity. The Arctic is probably the most sensitive place to climate changes on the planet. The warming, that is currently observed around the globe, is there noticeably higher – by the end of the 20th century, the average annual temperature increased twice as fast.

The aim of this thesis is, in the form of literary research, to describe and examine the climate development in high Arctic areas, potentially the most sensitive localities, from approximately 11 700 cal yr BP to the present. It is apparent that depending on the natural archive's type used and the accuracy of its dating, the time period of recorded events may slightly vary. Also regional differences are of no less importance for the magnitude of such occurrences. From available sources is noticeable, in general, that the high Arctic climate is a good representative of the main trends of Earth's climatic progression.

Key words: High Arctic, Holocene, climate changes, natural archives, paleoecology