

Abstract

The thesis summarizes the knowledge of sea ice in the Arctic, its properties, conditions and the process of formation. It also describes the Arctic climate and its changes since the early 20th century. The work shows how and why Arctic sea ice is important for the climate of our entire planet and that the climate system is highly interconnected. This means that if, for example, there are fundamental changes in the sea ice cover or climate, then the impact of these changes may manifest itself in a completely different area, which is a manifestation of the so-called cascading tipping point. Therefore, this work also touches on the topic of feedback and shows that determining the amount and type of sea ice in the Arctic Ocean is essential to improve our knowledge and understanding of polar weather and long-term climate fluctuations.

Key words:

climatic change, sea ice, temperature, Arctic