# Document Control Sheet

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18. Abstract

The German-Russian project "Laptev Sea System: Process Studies on Permafrost Dynamics in the Laptev Sea" investigated the formation, distribution and aggradation/ degradation processes of permafrost in the Laptev Sea (Siberian Arctic) by way of a multidisciplinary approach. Its aim was to determine the role gashydrate and greenhouse-gas inclusions in permafrost play in the global carbon cycle and in our climate system.

For the first time a drilling campaign into the permafrost of the western Laptev Sea coastal area was carried out, temperature fields in permafrost were measured and seismic structures of submarine permafrost sequences recorded. At drill sites as well as on sediment cores microbiological, sedimentological, sediment physical, geochemical, biostratigraphical and paleontological investigations were carried out. For the period of one year the seasonal variabilities of temperature and currents in the Laptev Sea were recorded with seafloor observatories. The project works were based on three marine and four terrestrial expeditions. The data of these expeditions were processed and interpreted in cooperation with the Otto Schmidt Laboratory for Polar and Marine Research (St. Petersburg).

The joint project provided new data on the history of permafrost and recent environmental changes in the Siberian Arctic. Thus, new insights into the sedimentation processes of submarine permafrost and the stages of permafrost development could be gained.



19.Keywords

Siberian Arctic, permafrost, climate research


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