

Sea Ice in the Earth System

We carry out fundamental research to improve our understanding of the interaction of sea ice and the changing climate of our planet. As part of our large-scale modeling work, we examine for example the sensitivity of sea ice to changes in the external forcing; the feedback between a changing sea-ice cover, the atmosphere and the ocean in the high latitudes of both hemispheres; new approaches to modeling sea-ice thermodynamics and sea-ice dynamics at higher and higher grid resolution; the interaction of sea ice with the surrounding land masses and its cryosphere; the impact of sea ice on biogeochemical cycles; and the regional predictability of sea-ice evolution.