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“IT WAS VERY EXCITING IN THOSE DAYS.  
WE WERE EXPLORERS.”

Marie-Tharp [1920-2006], Oceanographer

Tuesday, 14<sup>th</sup> November 2017, 01:30 p.m. (13:30h)  
**GEOMAR Lecture Hall West (R.54)** | Düsternbrooker Weg 20, 24105 Kiel

## Climate Change in the Polar Regions



**Not so long ago the Arctic Ocean was a widely inaccessible place, but for the first time in history climate change has opened up a whole region of Earth for human use. As the Arctic warms twice as fast as the global average and its summer sea ice is disappearing rapidly, people are looking towards the Arctic with commercial interest, but also with great concern. In contrast, the Antarctic has remained fairly unaffected so far by warming. Scientists are seeking for an answer to this puzzling fact which seems to have occurred also in the geological past.**

Long-term observations from satellites show the patterns of retreat of sea ice and loss of ice mass from glaciers. These processes are not yet fully understood so that the prediction of future ice losses is very difficult. In addition, the ongoing changes in the polar regions are not regionally restricted but have an impact on the whole Earth system and will cause problems to people living far away from the poles. A large international effort is now underway to close a gap in the observation of the Arctic Ocean and to improve polar prediction. A major concern is the rapidly developing commercial interest in Arctic resources which proceed faster than science-based knowledge for advice on sustainable development. The only way forward is in improved international collaboration regardless of national interests.