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## Last stop before leaving Antarctica: Denman Glacier

14. January 2024

After more than three weeks of research work on the East Antarctic shelf, Polarstern has left Antarctica again. The time was very labour intensive in a spectacular setting. All working groups on board were able to collect plenty of material or data for their research projects. We were even able to access the area in front of the Denman Glacier. This large glacier has received recent media coverage as it may be increasingly exposed to the influence of warmer water from the north, which may result in increased melt rates and pronounced calving - meaning breaking off - of glacial ice. We also observed this warmer water mass at greater depths in the immediate vicinity of the Denman Glacier. This water is currently not in contact with the glacier ice. However, this could change quickly with global warming if the main axis of the Antarctic Circumpolar Current shifts further south.



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## Sediment in Antarctic Ice

11. January 2024

During our EASI-2 expedition, we will not only collect sediments from the Southern Ocean and ice-covered Antarctic fjords. We also extract rock debris directly from the Antarctic Ice Sheet. For this purpose, selected locations in coastal areas of East Antarctica are flown to in order to drill into glacier ice containing moraine material. This rock debris was picked up from subglacial rocks by the ice and allows us insights into the regional geology, which is otherwise hardly accessible. These rock fragments are also extremely valuable for weathering studies, which will be carried out in the laboratories at the GEOMAR Helmholtz Center for Ocean Research Kiel. Because these rock fragments have never been exposed to the atmosphere, they do not contain any industrial contaminants. Hence ideal sample material for studying the natural weathering behavior of trace metals that are susceptible to contamination, such as lead or iron.