



Circumpolar Biodiversity Monitoring Program (CBMP)  
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**Title** Sea ice biota: Excerpts from the State of the Arctic Marine Biodiversity Report by the Sea Ice Biota Expert Network/CBMP

**Themes** Biodiversity in a Changing Arctic: Circumpolar Biodiversity Monitoring Program

**Short description** Pan-Arctic distribution of sea-ice biota. Status and trends related to declining sea ice, with advice for monitoring

**Presentation Format** Oral presentation

**Abstract** Sea ice is an important Arctic habitat that supports a high diversity of species—with over 1276 protist taxa alone. Multi-year sea ice is being replaced by first-year ice and open water, which will cause shifts in ice algal communities with cascading effects on the ice-associated ecosystem. Documentation of ice biota composition, abundance and natural variability is critical for evaluating responses to the decline in Arctic sea ice. The Sea-ice Biota Expert Network, therefore, aggregated and reviewed data on status and trends of ice-associated Bacteria, Archaea, microalgae, meiofauna, and under-ice macrofauna Focal Ecosystem Components (FECs) across eight Arctic Marine Areas as well as current monitoring. Sea ice biota monitoring has occurred most frequently in the central Arctic, Svalbard area, Barrow (Alaska) and the Canadian Arctic, with recent sites in northern Greenland. Sea ice algal community structure has possibly changed in the central Arctic between the 1980s and 2010s, and ice-amphipod abundance and biomass have declined in the Svalbard area since the 1980s. Consistent monitoring protocols, equipment and methodology should be implemented. The presentation also evaluates dominant drivers of observed trends, and knowledge and monitoring gaps.

**Key words** CBMP, biodiversity, status, monitoring

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