

About ice types

New Ice: New ice encompasses various types of recently formed ice, including frazil ice, grease ice, slush, and shuga. These types of ice are composed of ice crystals weakly frozen together and have a definite form only while afloat. New ice is characterized by its thinness, typically measuring less than 5 cm in thickness. It can occur in concentrations ranging from 7-10/10, indicating a significant coverage of the sea surface by this type of ice.

Nilas and Grey Ice: Nilas refers to a thin, elastic crust of ice that bends easily on waves and swell. Under pressure, it grows in a pattern of interlocking "fingers" (finger rafting). Nilas can be subdivided into dark nilas and light nilas based on thickness and appearance, with thicknesses reaching up to 10 cm. Grey ice, on the other hand, is young ice that is 10-15 cm thick, less elastic than nilas, and breaks on swell, often rafting under pressure. Both nilas and grey ice typically occur in concentrations of 9-10/10

Fast Ice: Fast ice is sea ice anchored to the coastline, sea floor along shoals, or grounded iceridges . Unlike pack ice, fast ice remains relatively stationary. It typically forms during the winter months and can extend from the coast into the sea, sometimes for several kilometers.

Rotten Fast Ice: Rotten fast ice refers to sea ice that has undergone significant melting and degradation, resulting in weakened and less stable ice. It exhibits physical changes distinguishing it from solid, intact ice. Rotten fast ice poses safety hazards and challenges for navigation and human activities due to its fragile and unstable nature.

Very Open Ice, Open Ice, Close Ice, Very Close Ice: These terms describe various concentrations of sea ice in a given area, ranging from significant amounts of open water interspersed with ice floes to densely packed ice floes with minimal open water. Very open ice typically occurs in concentrations of 1-3/10, open ice in concentrations of 4-6/10, close ice in concentrations of 7-8/10, and very close ice in concentrations of 9-10/10.

Consolidated Ice: Consolidated ice refers to sea ice that has become a single, coherent mass through processes like freezing together or compression. It is characterized by its thickness, stability, and resistance to movement. Consolidated ice typically occurs in concentrations of 10/10, usually as solid ice field.