

Hudson Bay and Northern Labrador

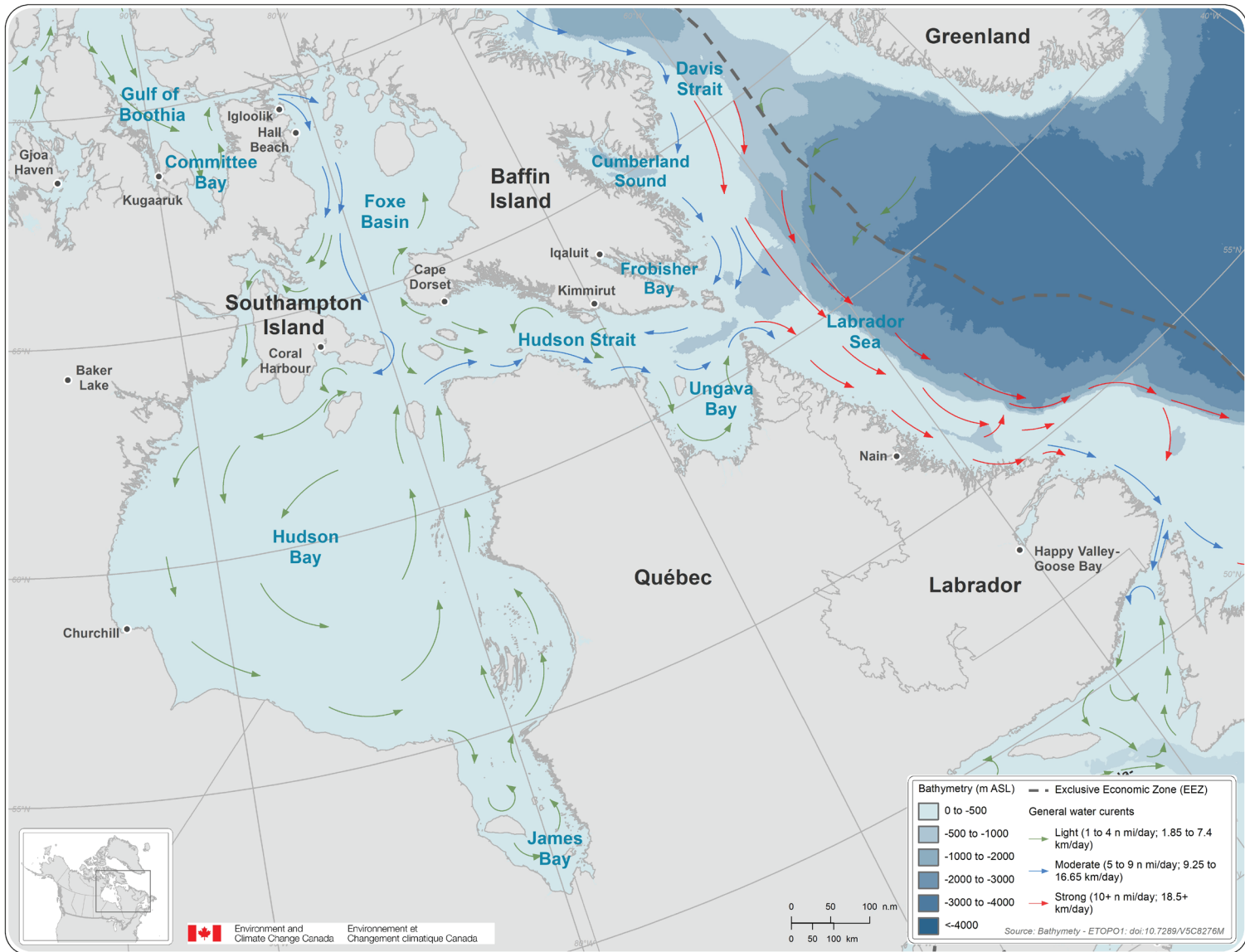
REGIONAL ICE FACTS

Factors influencing sea ice in Canadian northern waters

There are various factors influencing ice in Canadian northern waters. These factors are as follows:

- Solar energy and albedo
- Air temperature
- Water depth, water temperature, and upwelling
- Water salinity
- Currents
- Winds
- Waves and tides (vertical displacement)

To learn more about these factors visit: www.canada.ca/en/environment-climate-change/services/ice-forecasts-observations/latest-conditions/climatology/ice-climate-normals/northern-canadian-waters.html



Hudson Bay and Northern Labrador

Median shipping season: Early July to mid-November (northwest), to early December (southeast).

Old ice: Occasional low concentrations are observed in the northeast part of the Bay, drifting in from Foxe Basin.

Special ice Features: Freeze-up progresses from northwest to southeast, while melt progresses from shore to centre. During freeze-up, prevailing northwesterlies maintain a flaw lead in the northwest part of the Bay. The presence of old ice and the late clearing of sea ice around Salisbury and Nottingham Islands create a choke point along the shipping route into Hudson Bay.

Hudson Strait and Ungava Bay

Median shipping season: Start July to end November.

Old ice: Low concentration intrusions from Davis Strait and Foxe Basin starting in late winter. Icebergs mixed into Davis intrusions.

Special ice Features: Due to strong currents and frequent gales, ridging, rafting, hummocking and ice congestion often affect Ungava Bay and the south side of Hudson Strait. Conversely, a shore or flaw lead is frequently present on the north side of the Strait.

Labrador Coast south of 60°N

Median shipping season: Late June to end December.

Old ice: Low concentrations from Davis Strait January to August.

Special ice Features: Winter coastal fast ice forms locally, but most offshore pack ice drifts in from the north and this can be up to 1.5 m thick with many embedded icebergs. Strong, persistent easterly winds can compress the mobile pack against the coast resulting in very large ridges. Westerly wind events can create a flaw lead along the shore and spread the pack ice up to 500 km seaward.

Foxe Basin

Median shipping season: Late August to end October.

Old ice: Present in low concentrations, especially in the northwest part of the Basin where it drifts in from the Gulf of Boothia.

Special ice Features: Shallow water combined with large tidal ranges and strong winds keep a large amount of bottom sediments in suspension. Thus the ice is generally very rough, much of it in small floes and often muddy in appearance.

James Bay

Median shipping season: Early July to mid-November.

Old ice: Not present.

Special ice Features: James Bay ice is noted for its discoloration, caused by freezing of shallow muddy water, or by run-off concentrating sediments on the surface of the ice. Thinner ice and occasional open water areas south of Akimiski Island are often observed during winter and are caused by currents.

* "Median Shipping Season" as defined here corresponds with median ice concentrations <4/10 (i.e. very open drift, open water or ice free conditions)