

# Eisbericht Nr. 106 Amtsblatt des BSH

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#### Übersicht

In der Bottenwiek befindet sich in den nördlichen Schären bis 80 cm dickes, in den südlichen bis 50 cm dickes, teilweise morsches Festeis. Auf See treibt im zentralen Teil 20–70 cm dickes, sehr dichtes, örtlich aufgepresstes Eis, welches bei 64°30' bis zur schwedischen Küste reicht. Drumherum offenes Wasser mit dickeren Schollen und Gebieten sehr dichten Eises im Norden und sehr lockerem bis dichten Eis woanders. An den Küsten von Norra Kvarken liegt bis 40 cm dickes, teilweise morsches Festeis und auf See kommt offenes Wasser vor. An den Küsten der Bottensee kommt örtlich morsches Festeis vor, im Norden bis 35cm dick. Im Finnischen Meerbusen kommt im Nordosten örtlich morsches Festeis vor.

#### **Overview**

In the Bay of Bothnia there is fast ice in the archipelagos, up to 80 cm thick in the north and up to 50 cm thick and partly rotten in the south. At sea in the central part there is 20–70 cm thick, very close, ridged ice, which extend to the Swedish coast around 64°30'N. Around this field there is open water with some thicker floes and areas of very close ice in the north and areas of very open to close ice elsewhere. In the Quark there is up to 40 cm thick, partly rotten fast ice at the coasts and at sea there is mainly open water. At the coasts of the Sea of Bothnia there is rotten ice in places, up to 35cm thick in the north. In the Gulf of Finland there is rotten ice at places in the northeastern part.

## **Bay of Bothnia**

In the archipelagos of the Bay of Bothnia there is fast or consolidated ice; 50–80 cm thick in the north and 40–50 cm thick and partly rotting in the south. In the northeast the fast ice stretches out to Malören, Kemi-3, Oulu-3 and Raahe lighthouse. At sea in the central part there is very close, 40–70 cm thick, ridged ice. North of it areas of 30-70cm thick very close ice as well as open water areas. In the west, reaching the Swedish coast, and in the south there is 20-60cm thick, ridged, very close ice

to about 64°10'N. There are cracks and leads in the ice fields. Further south at sea 10-40cm thick, very open to close ice. Outside the ice at the Finnish coast there is open water with some thicker floes as well as very open ice from Malören to the Quark. Outside the southern Swedish coast there is open water.

With mainly light, but in places also moderate frost, some ice formation is expected. The ice will drift to the southwest.

### The Quark

There is rotten ice in the Vaasa archipelago out to Storhästen. Along the Swedish coast there is up to 35 cm thick, partly rotten fast ice. At sea there is

mostly open water.

With light frost some new ice formation is possible. The ice will drift to the southwest

#### Herstellung und Vertrieb

Bundesamt für Seeschifffahrt und Hydrographie (BSH) www.bsh.de/eis www.bsh.de/ice

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#### Sea of Bothnia

In the middle and southern archipelagos there is rotten ice in places with open water further out. In the northern part, including Ångermanälven, there is up to 35 cm thick rotten fast ice. Off the northwestern coast, west of about Högbonden, there

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are areas with very open to open, up to 30 cm thick drift ice.

With some night frost ice no larger change is expected. The ice will drift to the southwest.

#### **Gulf of Finland**

In the northeastern archipelagos there is rotten ice at places. On the fairways and outside the archipelago is open water. In Lake Saimaa is 25–50 cm thick, rotting ice with open areas.

With some night frost no larger change is expected.

Dr. J. Holfort

#### **Restrictions to Navigation**

	Harbour/District	At least dwt/hp/kW	Ice Class	Begin
Finland	Tornio, Kemi and Oulu	4000 dwt	IA	02.04.
	Raahe, Kalajoki, Kokkola and Pietarsaari	4000 dwt	IA	13.01.
	Vaasa	2000 dwt	I	15.04.
	Lake Saimaa	2000 dwt	IA	08.01.
	Saimaa Canal	2000 dwt	IA	08.01.
Russia	Vyborg	-	Ice 1	28.03.
	Vysotsk	-	Ice 1	28.03.
	Primorsk	-	Ice 1	25.03.
Sweden	Karlsborg	4000 dwt	IA (2000 t)	14.01.
	Lulea, Haraholmen and Skelleftehamn	4000 dwt	IA	14.01.
	Rundvik, Husum and Örnsköldsvik	2000 dwt	IC	15.04.
	Holmsund	2000 dwt	IB	12.04.
	Angermanälven	2000 dwt	IB	27.03.
	Härnösand	2000 dwt	IC	15.04.
	Söråker and Sundsvall	2000 dwt	II	09.04.

#### Finland/Sweden

The traffic separation schemes in the Quark are temporarily out of use from 20 December due to ice conditions.

Vessels bound for Gulf of Bothnia ports in which assistance restrictions apply, shall when passing latitude 60° 00' N report their nationality, name, destination, ETA and speed to ICE INFO on VHF channel 82. This report can also be given directly by telephone to +46 10 492 7600.

Vessels bound for Finnish or Swedish ports with assistance restrictions in the Quark or the Bay of Bothnia shall, 20 nautical miles before Nordvalen Lighthouse (63° 32.15' N 20° 46.60' E), report in accordance with the instructions for winter navigation to Bothnia VTS on VHF channel 67.

**Icebreakers:** YMER, ODEN, FREJ, ATLE, POLARIS, SISU and URHO assist in the Bay of Bothnia. OTSO and KONTIO assist in the southern Bay of Bothnia. ZEUS and ALE assist in the Quark. **TYRSKY** assists in the Lake Saimaa.

#### Russia

There are restrictions for small crafts going to St. Petersburg, Vyborg, Vysotsk and Primorsk. Barge towed by tug not allowed to navigate in ice. Vessels without ice class to Vyborg, Vysotsk and Primorsk are only allowed with icebreaker assistance, with ice class Ice 1 or higher according to instructions.

**Icebreakers:** Several icebreakers assist vessels to the port of St. Petersburg, Vyborg, Vysotsk and Primorsk.

# **Baltic Sea Ice Code**

First number:  AB Amount and arrangements of sea ice  0 Ice free  1 Open water – concentration less than 1/10  2 Very open ice - concentration 1/10 to 3/10  3 Open ice – concentration 4/10 to 6/10  4 Close ice – concentration 7/10 to 8/10  5 Very close ice – concentration 9/10 to 9+/10  6 Compact ice, including consolidated ice – concentration 10/10  7 Fast ice with drift ice outside  8 Fast ice  9 Lead in very close or compact drift ice or along the fast Ice edge  / Unable to report	Second number:  SB Stage of ice development  New ice or dark nilas (less than 5 cm thick)  Light nilas (5 - 10 cm thick) or ice rind  Grey ice (10 - 15 cm thick)  Grey-white ice (15 - 30 cm thick)  White ice, first stage (30 - 50 cm thick)  White ice, second stage (50 - 70 cm thick)  Medium first year ice (70 - 120 cm thick)  Ice predominantly thinner than 15 cm with some thicker ice  Ice predominantly grey-white ice (15 - 30 cm) with some thicker ice  Ice predominantly thicker than 30 cm with some thinner ice  No information or unable to report
Third number:  TB Topography or form of ice  Pancake ice, ice cakes, brash ice – less than 20 m across  Small ice floes – 20 to 100 m across  Medium ice floes – 100 to 500 m  Big ice foes – 500 to 2000 m across  Vast or giant ice floes – more than 2000 m across – or level ice  Rafted ice  Compact slush or shuga, or compacted brash ice  Hummocked or ridged ice  Thaw holes or many puddles on the ice  Rotten ice  No information or unable to report	<ul> <li>K<sub>B</sub> Navigation conditions in ice</li> <li>0 Navigation unobscured</li> <li>1 Navigation difficult or dangerous for wooden vessels without ice sheathing</li> <li>2 Navigation difficult for unstrengthened or low-powered vessels built of iron or steel. Navigation for wooden vessels even with ice sheathing not advisable</li> <li>3 Navigation without icebreaker assistance possible only for high-powered vessels of strong construction and suitable for navigation in ice</li> <li>4 Navigation proceeds in lead or broken ice-channel without the assistance of an icebreaker</li> <li>5 Icebreaker assistance can only be given to vessels suitable for navigation in ice and of special size</li> <li>6 Icebreaker assistance can only be given to vessels of special ice class and of special size</li> <li>7 Icebreaker assistance can only be given to vessels after after special permission</li> <li>8 Navigation temporarily closed</li> <li>9 Navigation has ceased</li> <li>7 Inknown</li> </ul>

Finland, 18.04.2024		Sea area off Kallan	1306
Röyttä – Etukari	8546	Sea lat. Pietarsaari – NE Nordvalen	2336
Etukari – Ristinmatala	8546	Sea area ENE of Nordvalen	1706
Ajos – Ristinmatala	8546	Sea area Nordvalen to W of Norrskär	1706
, Ristinmatala – Kemi 2	7476	Vaskiluoto – Ensten	3416
Kemi 2 – Kemi 1	5676	Ensten – Vaasa lighthouse	1706
Sea area SW of Kemi 1	5676	Vaasa lighthouse – Norrskär	1706
Kemi 2 – Ulkokrunni – Virpiniemi	8546	Sea area SW of Norrskär	1706
Oulu harbours – Kattilankalla	8546	Kaskinen – Sälgrund	1702
Kattilankalla – Oulu 1	6576	High sea from N to latitude Yttergrund	1702
Sea area SW of Oulu 1	5676	Kotka – Viikari	0//2
High Sea N of the latitude of Marjaniemi	5576	Hamina – Suurmusta	0//2
Raahe harbour – Heikinkari	8546		
Heikinkari – Raahe lighthouse	6476	Sweden, 18.04.2024	
Raahe lighthouse – Nahkiainen	1406	Karlsborg – Malören	8646
Latitude Marjaniemi – Ulkokalla, Sea	5476	Sea area off Malören	5676
Rahja harbour – Välimatala	5476	Luleå – Björnklack	8646
Vaelimatala to line Ulkokalla – Ykskivi	2436	Björnklack – Farstugrunden	5576
Sea betw. lat. of Ulkokalla -Pietarsaari	5476	E and SE of Farstugrunden	5576
Ykspihlaja – Repskär	8446	Sandgrönn fairway	6556
Repskär – Kokkola lighthouse	2316	Rödkallen – Norströmsgrund	5576
Sea area off Kokkola lighthouse	2316	Haraholmen – Nygrån	6556
Pietarsaari – Kallan	2316	Sea area off Nygrån	5556
		Skelleftehamn – Gåsören	8446

Sea area off Gåsören	5576
Sea area off Bjuröklubb	5576
NE of Nordvalen	1406
SW of Nordvalen	1406
Western Quark (W of Holmöarna)	1406
Umeå – Väktaren	1406
SE of Väktaren	1406
NE and SE of Sydostbrotten	1406
Fairway to Husum	1406
Örnsköldsvik – Hörnskaten	8496
Hörnskaten – Skagsudde	5356
Sea area off Skagsudde	1406
Fairway W of Ulvöarna	2356
Sea area E of Ulvöarna	1406
Ångermanälven north Sandö Bridge	8494
Ångermanälven south Sandö Bridge	8494
Härnösand – Härnön	1404
Sea area off Härnö	1404
Sundsvall – Draghällan	1406
Hudiksvallfjärden	8392
Iggesund – Agö	8392
Sandarne – Hällgrund	1302
Ljusnefjärden – Storjungfrun	1302

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