

# Eisbericht Nr. 92 Amtsblatt des BSH

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### Übersicht

In den Schären der Bottenwiek befindet sich im Norden bis 70 cm dickes Festeis und im Süden bis 40 cm dickes Festeis. Außerhalb davon befindet sich im Norden und Nordwesten ein Gebiet mit ebenem Eis. Auf See treibt ansonsten zumeist sehr dichtes, aufgeschobenes und aufgepresstes Eis mit Spalten, welches im Norden bis 60 cm dick und im Süden bis 40 cm dick ist. In Kvarken liegt bis 45 cm dickes Festeis in den Schären und Buchten und auf See kommt 5–25 cm dickes, dichtes Eis und Neueis vor. In der Bottensee kommt entlang der Küsten 5–40 cm dickes, ebenes Eis oder Festeis vor. Im Mälarsee, dem Schärenmeer und den nordwestlichen Schären des Finnischen Meerbusens liegt morsches Eis. Ansonsten kommt im Meerbusen in den östlichen Buchten und den nordöstlichen Schären bis 35 cm dickes Festeis vor und auf See treibt 5–30 cm dickes lockeres bis sehr dichtes Eis um 60°N, 27°30′O.

#### Overview

In the archipelagos of the Bay of Bothnia, there is up to 70 cm thick fast ice in the north and up to 40 cm thick fast ice in the south. Further out in the in the north and northwest there is an area of level ice. Else at sea, there is ridged and rafted, very close ice with cracks, which is up to 60 cm thick in the north and up 30 cm thick in the south. In the Quark, there is up to 45 cm thick fast ice in the archipelagos and bays and at sea there is 5–25 cm thick, very close ice or new ice. In the Sea of Bothnia 5–40 cm thick fast ice or level ice is present at the coasts. In Lake Mälaren, the Archipelago Sea and the northwestern archipelagos of the Gulf of Finland there is rotten ice. Else in the Gulf there is up to 35 cm thick fast ice in the eastern bays and northeastern archipelagos and at sea 5–30 cm thick open to very close ice drifts around 60°N 27°30'E.

## **Bay of Bothnia**

In the archipelagos of the northern Bay of Bothnia, there is 45–70 cm thick fast ice and compact ice, out to Malören, Kemi-2 and Kattilankalla. Outside the fast ice in the northeast there is 5-15nm wide area with 10-25cm thick very close ice down to outside Raahe. Along the northern and western fast ice there is an area with level ice from Kemi-2 down to the Skellefteå bay. At sea there is 30–60 cm thick, ridged, very close ice around 64°50N 23°E. East and north of this area there is 10-30cm thick, very close ice. Further south at sea, there is 20–40 cm thick very close ice down to the fast ice

in the Vaasa archipelago. The ice is locally ridged and rafted, but there are also leads and cracks in the ice field. The fast ice in the southern archipelagos is 20–40 cm thick.

The ice drift will drift slowly towards the north until Saturday and afterwards a slow drift towards the southwest/south is expected until at least Tuesday. Mostly light frost is expected, with temperatures in the south also reaching values over 0°C at some times; therefore only light ice formation is expected.

#### Herstellung und Vertrieb

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

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#### The Quark

There is 25-45 cm thick fast ice in the Vaasa archipelago out to Ensten. On the Swedish side, there is 30-50 cm thick fast ice in inner bays. At sea, there is 5-25 cm thick very close in the east and drifting in the central part around 20°20'E there is 5-20cm thick close ice. New ice is present in the west. In the north there is 10-40cm thick, very close ice east of Holmöarna.

With temperatures around 0°C and only light ice drift, not much change, except a possible slow ice retreat, is expected over the weekend.

## Sea of Bothnia

In the archipelagos along the eastern coast, there is 10-30 cm thick fast ice, outside the archipelagos there is open water in the northeast. Along the western coast, there is thin level ice or thin ice in sheltered bays in the south and up to 40 cm thick fast ice in inner bays in the north. On Ångermanälven, there is 30-50 cm thick fast ice. At sea, in the northernmost part, there is open water and very open ice.

Melting is expected over the weekend.

## Archipelago Sea and Aland Sea

At the eastern coast, there is rotten ice in the inner bays, further out open water in the archipelago. In the western and central part, thin level ice, new ice

and open water is present in inner bays. Melting is expected over the weekend.

#### **Northern Baltic**

In Lake Mälaren, there is rotten fast or level ice in the western part, thin open ice in the east and else open water.

Melting is expected over the weekend, with the ice disappearing at many places.

#### **Gulf of Finland**

15-35 cm thick fast ice is present along the northern shores of the Neva bay and 10-20cm thick, compact ice is present from St. Petersburg out to Kotlin; further west there is open water. In the Bay of Vyborg, there is 15-25 cm thick fast ice and in the entrance 10-20cm thick very close ice out to the latitude of lighthouse Rondo and further out open water. In the Bjerkesund, there is 10-20 cm thick close ice and open water in the entrance. At sea there is an area of 10-25cm thick, very close

ice between Moščnyj and Gogland. South of this area there is open ice down to about 59°35'N and north of this area there is open water with smaller areas with close ice. Along the northern coast, there is 20-40 cm thick fast ice in the eastern archipelagos and rotten ice is present in the inner western archipelagos.

Over Eastern the ice at sea will drift towards the west and the ice melt will accelerate with the fast ice locally becoming rotten and possible break up.

#### Skagerrak and Kattegat

Ice remnants are present in some inner Norwegian fjords

Over Easter weekend melting is expected, with most ice disappearing over the weekend,

#### **Swedish Lakes**

Rotten ice is present in some sheltered bays in the northern part of Lake Vänern.

Over Easterweekend melting is expected and afterwards the region will be mostly ice free,

Dr. J. Holfort

Due to Easter the next Amtsblatt will be issued Tuesday, April 11.

## **Restrictions to Navigation**

	Harbour/District	At least dwt/hp/kW	Ice Class	Begin
Finland	Tornio, Kemi and Oulu	4000 dwt	IA	22.02.
	Raahe	4000 dwt	IA	08.03.
	Kalajoki, Kokkola and Pietarsaari	2000 dwt	IA	08.03.
	Vaasa	2000 dwt	IB	08.03.
	Kristiinankaupunki,	2000 dwt	II	12.03.
	Kaskinen and Mussala	2000 dwt	II	07.01.
	Loviisa and Kotka	2000 dwt	II	28.03.
	Hamina	2000 dwt		08.03.
	Lake Saimaa	2000 dwt	IB	01.04.
Sweden	Karlsborg	4000 dwt (2000 t)	IA	28.02.
	Lulea	4000 dwt	IA	28.02.
	Haraholmen and Skelleftehamn	4000 dwt	IA	04.03.
	Holmsund	2000 dwt	IC	07.02.
	Rundvik and Husum	2000 dwt	IC	04.03.
	Örnsköldsvik	2000 dwt	IC	13.02.
	Angermanälven	2000 dwt	IB	07.01.
	Söraker and Sundsvall	2000 dwt	II	06.04.
	Härnösand	2000 dwt	II	06.03.

#### Finland/Sweden

The Saimaa Canal is closed for traffic since 4th January.

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.

The traffic separation schemes in the Quark are temporarily out of use from 7 February due to ice conditions.

## Icebreakers:

POLARIS, KONTIO, OTSO, SISU, ATLE, YMER and FREJ assist in the Bay of Bothnia. ZEUS assists in the southern Bay of Bothnia and in the Quark. ALE assists in the Quark. URHO assists in the eastern Gulf of Finland.

#### Russia

There are restrictions for small crafts going to Vysotsk, Vyborg, St. Petersburg, Ust-Luga and Primorsk. No sailing of barge by tug to Vyborg and Vysotsk.

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

## **Baltic Sea Ice Code**

	First number:  B Amount and arrangements of sea ice
	Ice free
	Open water – concentration less than 1/10
	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
	Very close ice – concentration 9/10 to 9+/10
ĕ	Compact ice, including consolidated ice –
U	concentration 10/10
7	
	Fast ice with drift ice outside
	Fast ice
9	Lead in very close or compact drift ice or along the fast
	Ice edge
/	Unable to report
	Third number:

**T**<sub>B</sub> **Topography or form of ice**0 Pancake ice, ice cakes, brash ice – less than 20 m across

Small ice floes - 20 to 100 m across 2 Medium ice floes – 100 to 500 m 3 Big ice foes – 500 to 2000 m across

4 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

Second number:

S<sub>B</sub> 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 with second stage)

Ice predominantly thinner than 15 cm with some thicker

8 Ice predominantly grey-white ice (15 – 30 cm) with some thicker ice

9 Ice predominantly thicker than 30 cm with some thinner

No information or unable to report

Fourth number:

## K<sub>B</sub> Navigation conditions in ice

Navigation unobscured

Navigation difficult or dangerous for wooden vessels

without ice sheathing

Navigation difficult for unstrengthened or low-powered vessels built of iron or steel. Navigation for wooden vessels even with ice sheathing not advisable

Navigation without icebreaker assistance possible only for high-powered vessels of strong construction and suitable for navigation in ice

4 Navigation proceeds in lead or broken ice-channel without

the assistance of an icebreaker Icebreaker assistance can only be given to vessels

suitable for navigation in ice and of special size

leebreaker assistance can only be given to vessels of special ice class and of special size

leebreaker assistance can only be given to vessels after offer special permissions.

after special permission Navigation temporarily closed Navigation has ceased

Unknown

Finland 00 04 2022		Vege lighthouse Negroles	F7F0
Finland, 06.04.2023	8546	Vaasa lighthouse – Norrskär Sea area SW of Norrskär	5756
Röyttä – Etukari			5756
Etukari – Ristinmatala	6456	Kaskinen – Sälgrund	1105
Ajos – Ristinmatala	6456	Sea area off Sälgrund	1105
Ristinmatala – Kemi 2	5476	High sea from N to latitude Yttergrund	2752
Kemi 2 – Kemi 1	5476	Pori harb. to line Pori lighth. – Säppi	1102
Sea area SW of Kemi 1	5746	Sea W of line Pori lighthouse – Säppi	1102
Kemi 2 – Ulkokrunni – Virpiniemi	6456	High sea betw. lat. Yttergrund a. Rauma	1102
Oulu harbours – Kattilankalla	6456	Rauma, Harbour – Kylmäpihlaja	1102
Kattilankalla – Oulu 1	6456	Uusikaupunki harbour – Kirsta	8792
Sea area SW of Oulu 1	5476	Kirsta – Isokari	1001
High Sea N of the latitude of Marjaniemi	5476	Naantali and Turku – Rajakari	1001
Raahe harbour – Heikinkari	8446	Rajakari – Lövskär	1001
Heikinkari – Raahe lighthouse	7356	Lövskär – Korra	1001
Raahe lighthouse – Nahkiainen	5476	Lövskär – Berghamn	1001
Latitude Marjaniemi – Ulkokalla, Sea	5476	Lövskär – Grisselborg	1001
Rahja harbour – Välimatala	7856	Hanko – Vitgrund	1001
Vaelimatala to line Ulkokalla – Ykskivi	5856	Valko Harbour – Täktarn	1705
Sea betw. lat. of Ulkokalla –Pietarsaari	7856	Archipelago fairway Boistö – Glosholm	1705
Ykspihlaja – Repskär	8846	Kotka – Viikari	1705
Repskär – Kokkola lighthouse	7856	Viikari – Orrengrund	1705
Sea area off Kokkola lighthouse	5856	Orrengrund – Tiiskeri	1705
Pietarsaari – Kallan	7856	Hamina – Suurmusta	1706
Sea area off Kallan	5856	Suurmusta – Merikari	4756
Sea lat. Pietarsaari – NE Nordvalen	5856	Merikari – Kaunissaari	1706
Sea area ENE of Nordvalen	5856		
Sea area Nordvalen to W of Norrskär	5856	Russian Federation, 06.04.2023	
Vaskiluoto – Ensten	7756	Port of St. Petersburg	83/2
Ensten – Vaasa lighthouse	5756	St. Petersburg – E-point island Kotlin	53/2

Lighth. Tolbuhkin – lighth. –Šepelevskij Lighthouse Šepelevskij – island Sescar Island Sescar – Island Sommers Island Sommers – S-point island Gogland S-point isl. Gogland – long. p. Kunda Vyborg, port and bay Island Vichrevoj – Island Sommers Strait Bjerkesund	1302 12/0 13/0 53/2 52/1 42/1 83/3 53/1 43/2 12/1
Sea area off Malören Luleå – Björnklack Björnklack – Farstugrunden E and SE of Farstugrunden Sandgrönn fairway Rödkallen – Norströmsgrund Haraholmen – Nygrån Sea area off Nygrån Skelleftehamn – Gåsören Sea area off Gåsören Sea area off Bjuröklubb NE of Nordvalen SW of Nordvalen Western Quark (W of Holmöarna) Umeå – Väktaren SE of Väktaren NE and SE of Sydostbrotten Fairway to Husum Örnsköldsvik – Hörnskaten Hörnskaten – Skagsudde Sea area off Skagsudde Sea area e of Ulvöarna Sea area E of Ulvöarna Sea area F of Ulvöarna Angermanälven north Sandö Bridge Ångermanälven south Sandö Bridge Härnösand – Härnön Sea area off Härnö Sundsvall – Draghällan Draghällan – Åstholmsudde Hudiksvallfjärden Iggesund – Agö Ljusnefjärden – Storjungfrun Öregrundsgrepen Hallstavik – Svartklubben Köping – Kvicksund Västerås – Grönsö Grönsö – Södertälje	6456 6456 6356 6356 6356 6356 6356 6356