



# Eisbericht Nr. 25

## Amtsblatt des BSH

Jahrgang 97

Nr. 25

Tuesday, 19.12.2023

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### Übersicht

In der nördlichen Bottenwiek befindet sich in den Schären bis 35 cm dickes Festeis. Weiter außerhalb treibt im Nordosten bis zu 30 cm dickes, sehr dichtes Eis. Weiter südlich bis Norra Kvarken liegt an den Küsten Festeis und weiter außerhalb treibt bis 15cm dickes Eis. An den Küsten der Bottensee, in den nördlichen Schären und östlichen Buchten des Finnischen Meerbusens, im nördlichen Teil des Rigaischen Meerbusen und dem Mälarsee kommt Neueis und dünnes ebenes Eis sowie örtlich Festeis vor. Neueis und örtlich dickeres Eis kommt auch in einigen geschützten Fjorden im Skagerrak vor.

### Overview

In the northern Bay of Bothnia there is up to 35 cm thick fast ice in the archipelagos. Further out in the northeast there is up to 30 cm thick, very close ice. Further south to Norra Kvarken, there is fast ice along the coast and further out up to 15cm thick, drifting ice. At the coasts of the Sea of Bothnia, in the northern archipelagos and the eastern bays of the Gulf of Finland, in the northernmost part of the Gulf of Riga and lake Mälaren there is new ice and thin level ice or fast ice at places. New ice and at places thicker ice is present in sheltered fjords of the Skagerrak.

### Bay of Bothnia

In the archipelagos of the northern Bay of Bothnia there is up to 35 cm thick fast ice. Off the fast ice there is very close, 10–30 cm thick, locally ridged ice to some nm east and south of Malören to Kemi-1 and Liberta. There is a zone of shuga at the ice edge. Further out a narrow band of 3-10cm thick open ice stretches southwards all the way to south of Kalajokki. Off Raahe, 10-25 cm thick fast ice to Heikinkari. Off the fast ice in the northwest, there is

first open water or very open ice and then a region of 5-20cm thick close ice. In the south there is 5-20cm thick fast ice in the archipelagos and outside the western coast there is 3-15cm thick very open drift ice.

With temperatures dropping, ice formation will again take place and the ice drifts into southeasterly directions.

### The Quark

There is 10–25 cm thick fast ice in the Vaasa archipelago and from Vaasa to Storhästen. Farther out there is thin very close ice to southeast of Norra Globsten. Along the Swedish coast there is fast ice in inner bays and 5-10cm thick very close ice or

level ice further out to Holmöarna.

The ice drift will veer from easterly to southeasterly and with falling temperatures some ice formation is expected.

### Herstellung und Vertrieb

Bundesamt für Seeschifffahrt und Hydrographie (BSH)

[www.bsh.de/eis](http://www.bsh.de/eis)

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**Sea of Bothnia**

Thin level ice or fast ice is present in bays along the whole Finnish coast with new ice slightly further out. Along the Swedish coast, there is new ice and thin level ice or fast ice in bays along the coast. On Ångermanälven, there is 5–15 cm thick fast and

level ice on the upper part and new is present in the lower part.

Tomorrow frost is expected along the coasts, so some ice formation could take place.

**Archipelago Sea and Åland Sea**

In the inner archipelago there is thin level ice and new ice.

No larger changes are expected, although some new ice formation is possible.

**Northern Baltic**

In Lake Mälaren there is mostly 5–10 cm thick level ice in the west and new ice in the east with the central part being still ice free. New ice is present

in sheltered places at the outer coast.

With temperatures around 0 °C no larger changes are expected.

**Gulf of Finland**

From St. Petersburg to Kotlin there is 10–20 cm thick compact ice with new ice and grease ice further out to the longitude of Fort Krasnaya Gorka. In the top of Vyborg Bay there is 10–15 cm thick fast ice and new ice further out. In the Bjerkesund there is very close nilas and new ice in the entrance.

Along the northern coast there is 5-15cm thick fast ice and thin level ice in the inner archipelago. In Lake Saimaa there is fast and level ice with varying concentration.

With an eastward ice drift no larger changes are expected.

**Gulf of Riga**

In Väinameri there is up to 15 cm thick very close ice at sea and level or fast ice at the coasts. In the Bay of Pärnu there is 5–15 cm very close ice to about the line Liu-Voiste. Further out to the latitude

of Sorgu, there is open to close drift ice.

With temperatures slightly above 0°C some ice melt is possible, but else no larger changes are expected.

**Southeastern Baltic**

New ice or thin ice are present in the Curonian Lagoon and in the Vistula lagoon.

With temperatures above 0°C some ice melt is expected.

**Skagerrak and Kattegat**

New ice is present in sheltered places of inner Norwegian Fjords. At places thicker ice is possible in inner bays. Along the Swedish coast, there is

new ice in few sheltered areas.

No major changes are expected.

**Swedish Lakes**

Thin level ice and new ice is present in sheltered areas of Lake Vänern.

No major changes are expected, although some melting is still possible.

## Restrictions to Navigation

	Harbour/District	At least dwt/hp/kW	Ice Class	Begin
<b>Finland</b>	Tornio, Kemi and Oulu	2000 dwt	IB	17.12.
	Raahe, Kalajoki, Kokkola, Pietarsaari	2000 dwt	II	06.12.
	<b>Raahe, Kalajoki, Kokkola, Pietarsaari</b>	<b>2000 dwt</b>	<b>I</b>	<b>20.12</b>
	Vaasa	2000 dwt	I	17.12.
	Kaskinen and Uusikaupunki	2000 dwt	II	17.12.
	Taalintehdas, Förby, Koverhar, Lappohja, Inkoo, Kantvik, Helsinki, Sköldvik, Loviisa, Mussalo, Kotka and Hamina	2000 dwt	II	09.12.
	Lake Saimaa	2000 dwt	IB	13.12.
	Saimaa Canal	2000 dwt	IB	13.12.
<b>Sweden</b>	Karlsborg and Lulea	2000 dwt	IB	18.12.
	Haraholmen and Skelleftehamn	2000 dwt	IC	05.12.
	<b>Haraholmen and Skelleftehamn</b>	<b>2000 dwt</b>	<b>IB</b>	<b>20.12.</b>
	Rundvik, Husum	2000 dwt	II	12.12.
	Holmsund and Örnköldsvik	2000 dwt	IC	18.12.
	Angermanälven	2000 dwt	IB	18.12.
	Härnösand, Söråker, Sundsvall, Stocka, Hudiksvall, Iggesund, Söderhamn, Orrskär, Norrsundet, Gävle, Skutskär	2000 dwt	II	18.12.
	Köping and Västerås	2000 dwt	IC	18.12.
	Trollhätte Canal and Göta Älv	1300/2000 dwt	IC/II	05.12.
	Vänern	1300/2000 dwt	IC/II	05.12.

**Estonia**

**Icebreaker: EVA-316** assists to the port of Pärnu.

**Finland/Sweden**

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:** ATLE, KONTIO, ALE, OTSO and YMER assist in the northern Bay of Bothnia. VOIMA assists in the Quark.

**Russia**

There are restrictions for small crafts going to St. Petersburg, Vyborg, Vysotsk, Primorsk and Ust-Luga.

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

## Baltic Sea Ice Code

<p>First number:  <b>A<sub>B</sub> Amount and arrangements of sea ice</b>            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</p> <p>Third number:  <b>T<sub>B</sub> Topography or form of ice</b>            0 Pancake ice, ice cakes, brash ice – less than 20 m across            1 Small ice floes – 20 to 100 m across            2 Medium ice floes – 100 to 500 m            3 Big ice floes – 500 to 2000 m across            4 Vast or giant ice floes – more than 2000 m across – or level ice            5 Rafted ice            6 Compact slush or shuga, or compacted brash ice            7 Hummocked or ridged ice            8 Thaw holes or many puddles on the ice            9 Rotten ice            / No information or unable to report</p>	<p>Second number:  <b>S<sub>B</sub> Stage of ice development</b>            0 New ice or dark nilas (less than 5 cm thick)            1 Light nilas (5 - 10 cm thick) or ice rind            2 Grey ice (10 - 15 cm thick)            3 Grey-white ice (15 - 30 cm thick)            4 White ice, first stage (30 - 50 cm thick)            5 White ice, second stage (50 - 70 cm thick)            6 Medium first year ice (70 - 120 cm thick)            7 Ice predominantly thinner than 15 cm with some thicker ice            8 Ice predominantly grey-white ice (15 – 30 cm) with some thicker ice            9 Ice predominantly thicker than 30 cm with some thinner ice            / No information or unable to report</p> <p>Fourth number:  <b>K<sub>B</sub> Navigation conditions in ice</b>            0 Navigation unobscured            1 Navigation difficult or dangerous for wooden vessels without ice sheathing            2 Navigation difficult for unstrengthened or low-powered vessels built of iron or steel. Navigation for wooden vessels even with ice sheathing not advisable            3 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            5 Icebreaker assistance can only be given to vessels suitable for navigation in ice and of special size            6 Icebreaker assistance can only be given to vessels of special ice class and of special size            7 Icebreaker assistance can only be given to vessels after after special permission            8 Navigation temporarily closed            9 Navigation has ceased            / Unknown</p>
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**Estonia, 18.12.2023**

Paernu, port and bay	5144
Moonsund	5243

**Sweden, 18.12.2023**

Karlsborg – Malören	8346
Sea area off Malören	5366
Luleå – Björnklack	8346
Björnklack – Farstugrunden	2226
E and SE of Farstugrunden	2226
Sandgrönn fairway	8346
Rödkallen – Norströmsgrund	4356
Haraholmen – Nygrån	6362
Sea area off Nygrån	1206
Skelleftehamn – Gåsören	5236
Sea area off Gåsören	5236
Sea area off Bjuröklubb	1206
Western Quark (W of Holmöarna)	8146
Umeå – Väktaren	3226
SE of Väktaren	3226
Fairway to Husum	5146
Örnsköldsvik – Hörnskatan	5146
Hörnskatan – Skagsudde	4046
Fairway W of Ulvöarna	4046
Ångermanälven north Sandö Bridge	8244
Ångermanälven south Sandö Bridge	5144
Härnösand – Härnön	4044

Sea area off Härnön	2024
Sundsvall – Draghällan	5146
Draghällan – Åstholmsudde	1006
Off Åstholmsudde and Brämön	1006
Hudiksvallfjärden	5246
Iggesund – Agö	5246
Sandarne – Hällgrund	5146
Ljusnefjärden – Storjungfrun	5146
Gävle – Eggegrund	5146
Hallstavik – Svartklubben	4041
Stockholm – Trälhavet – Klövholmen	1000
Trollharan – Langgarn	1000
Köping – Kvicksund	5144
Västerås – Grönsö	5144
Stockholm – Södertälje	4041
Södertälje – Fifong	1000
Norrköping – Hargökalv	5142
Järnverket-Lillhammaren – N Kränkan	1000
Uddevalla – Stenungsund	1000
Brofjorden – Dynabrott	4041
Vänernborgsviken	5146
Fairway to Karlstad	5146
Fairway to Kristinehamn	5146

**Finland, 19.12.2023**

Röyttä – Etukari	8346
Etukari – Ristinmatala	7356

Ajos – Ristinmatala	5356
Ristinmatala – Kemi 2	5356
Kemi 2 – Kemi 1	5366
Sea area SW of Kemi 1	5366
Kemi 2 – Ulkokrunni – Virpiniemi	7356
Oulu harbours – Kattilankalla	7356
Kattilankalla – Oulu 1	5366
Sea area SW of Oulu 1	2136
High Sea N of the latitude of Marjaniemi	5366
Raahe harbour – Heikinkari	8745
Heikinkari – Raahe lighthouse	3135
Raahe lighthouse – Nahkiainen	3135
Rahja harbour – Välimatala	8745
Vaelimatala to line Ulkokalla – Ykskivi	0//5
Sea betw. lat. of Ulkokalla –Pietarsaari	2015
Ykspihlaja – Repskär	8745
Repskär – Kokkola lighthouse	2015
Pietarsaari – Kallan	5145
Sea lat. Pietarsaari – NE Nordvalen	0//5
Sea area ENE of Nordvalen	2015
Sea area Nordvalen to W of Norrskär	2015
Vaskiluoto – Ensten	8746
Ensten – Vaasa lighthouse	5146
Vaasa lighthouse – Norrskär	0//6
Kaskinen – Sälgrund	8145
Rauma, Harbour – Kylmäpihlaja	4141
Uusikaupunki harbour – Kirsta	8145
Kirsta – Isokari	0//5
Koverhar – Hästö Busö	5145
Inkoo a. Kantvik – sea area Porkkala	5145
Helsinki harbours – Harmaja	1005
Vuosaari harbour – Eestiluoto	0//5
Valko Harbour – Täktarn	5145
Archipelago fairway Glosholm–Helsinki	0//5
Kotka – Viikari	5145
Viikari – Orrengrund	2025
Hamina – Suurmusta	5145
Suurmusta – Merikari	2025
Merikari – Kaunissaari	0//5

**Russian Federation, 19.12.2023**

Port of St. Petersburg	62//
St. Petersburg – E-point island Kotlin	63//
E-point Kotlin – long. lighth. Tolbukin	30//
Lighth. Tolbukin – lighth. –Šepelevskij	30//
Vyborg, port and bay	82//
Strait Bjerkesund	51//
E-point Bol'šoj Ber'ozovyj – Šepelevskij	50//
Luga bay	20//