



# Eisbericht Nr. 82

## Amtsblatt des BSH

Jahrgang 97

Nr. 82

Wednesday, 13.03.2024

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### Übersicht

In der Bottenwiek befindet sich in den nördlichen Schären bis 70 cm dickes, in den südlichen bis 50 cm dickes Festeis. Auf See treibt im Norden zumeist 30–70 cm dickes, sehr dichtes, örtlich aufgepresstes und übereinandergeschobenes Eis, das teilweise schwer zu passieren ist. Weiter südlich kommt im Westen offenes Wasser vor und im Osten treibt lockeres bis dichtes Eis. An den Küsten von Norra Kvarken liegt bis 50 cm dickes Festeis; auf See treibt 5-30cm dickes, dichtes Eis und im Westen kommt 15–50 cm dickes, sehr dichtes Eis vor, was bis in die nördliche Bottensee reicht. An den Küsten der Bottensee kommt im Osten bis 55 cm und im Westen bis 30 cm dickes Festeis vor. Weiter außerhalb kommt Neueis und offenes Wasser vor. Im Schärenmeer kommt ebenes Eis oder Festeis vor. Im Osten und Norden des Finnischen Meerbusens liegt bis 55 cm dickes Festeis. Auf See treibt im Norden dichtes bis sehr dichtes, 5–35 cm dickes Eis. Im Rigaischen Meerbusen kommt im Nordosten zu 40 cm dickes Festeis und an den Küsten treibt örtlich sehr dichtes Eis vor. Ansonsten kommt im Mälaren, Vänern und einigen norwegischen Fjorden örtlich dünnes Eis, teilweise aber auch bis 30 cm dickes Festeis vor.

### Overview

In the Bay of Bothnia there is fast ice in the archipelagos, up to 70 cm thick in the north and up to 50 cm thick in the south. At sea in the north, there is mostly 30–70 cm thick, very close, ridged and rafted ice that is difficult to force at places. Further south there is open water in the west and open to close ice in the east. In the Quark there is up to 50 cm thick fast ice at the coasts and at sea there is 5-20cm thick, close ice and in the west there is 15–50 cm thick, very close ice stretching into the northern Sea of Bothnia. At the coasts of the Sea of Bothnia there is fast ice, up to 55cm thick in the east and up to 30 cm thick in the west. At sea there is new ice and open water. Level ice or fast ice is present in the Archipelago Sea. There is up to 55 cm thick fast ice at the eastern and northern coast of the Gulf of Finland. At sea in the more northern part there is 3-35cm thick close to very close ice. In the northeastern Gulf of Riga there is up to 40 cm thick fast ice at the coast with very close ice in places along the coast. Else thin ice is present at places, but also up to 30cm thick fast ice, in the Mälaren, Vänern, and some Norwegian fjords.

### Bay of Bothnia

In the archipelagos of the Bay of Bothnia there is fast ice; 40–70 cm thick in the north and up to 25–65 cm thick in the south. In the northeast the fast ice stretches out to Malören, Kemi-3, Oulu-3 and Raahe lighthouse. At sea north of a line Nygrån to

Kalajoki there is mostly 40–70 cm thick, ridged and rafted ice; the field is difficult to force at places. Leads and cracks are present in places. Further south there is first a band of 10-35cm thick very close ice, then 5-20cm thick open to close ice in

#### Herstellung und Vertrieb

Bundesamt für Seeschifffahrt und Hydrographie (BSH)  
[www.bsh.de/eis](http://www.bsh.de/eis)  
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the east and open water in the west. After light frost at night the temperature will in-

### The Quark

There is 35–60 cm thick fast ice in the Vaasa archipelago out to Ensten. Farther out 10-30cm thick ice of varying concentrations as well as new ice. Along the Swedish coast there is up to 40 cm thick fast ice with adjacent consolidated ice. Off this ice, there is a narrow lead with very open ice and then

### Sea of Bothnia

Along the coasts there is mostly fast ice in the inner bays; 20–55 cm thick in the east and 5–40 cm thick in the west. On Ångermanälven, there is 15–40 cm thick fast ice. Off the coast in the east there is mostly new ice with an area of 5-25cm thick close, rafted ice at sea in the north. Just outside the northwestern coast, north of about

### Archipelago Sea and Åland Sea

In the Archipelago Sea there is 25–50 cm thick fast ice in the inner archipelago of the Finnish coast. Mostly 10–30 cm thick, fast ice or level ice with some areas of open water is present in the outer

### Northern Baltic

In Lake Mälaren there is 10–30 cm thick fast ice with some open areas. Along the outer Swedish coast there is open water or thin open ice.

### Gulf of Finland

Along the northern coast there is fast ice in the archipelago, 10–40 cm thick in the west and up to 60 cm thick in the east. In the Vyborg Bay there is 35-45cm thick fast ice and in the Bjerkesund there is 20–45 cm thick fast ice; very close ice is present in both entrances. From St. Petersburg to the longitude of lighthouse Tolbuchin there is 40–50 cm thick fast ice. Off the northern fast ice and the adjacent small band of very close ice there is thin close ice (from outside Helsinki to the Newa Bay),

### Gulf of Riga

In Väinameri there is 20–35 cm thick fast ice near the coasts and very close, 10–30 cm thick ice at sea with some areas of very open ice or open water. Off the south coast of Saaremaa there is a band with very close, 5–20 cm thick ice. In the Bay of Pärnu, there is 20–40 cm thick fast ice to about

### Central Baltic

In sheltered areas along the Swedish coast there is mostly open water.

### Skagerrak and Kattegat

In some sheltered Norwegian fjords and bays is thin level ice or fast ice notably near Tønsberg, Kragerø, Svinesund, and Drammensfjord.

crease to values around 0°C and with only minor ice melt the ice will drift towards the northeast.

a region with 15–50 cm thick, ridged, very close ice. Else at sea there is mostly 5-30cm thick close ice.

With temperatures around 0°C the ice will drift northeastwards and melt slowly.

Härnösand, there is very close, 10–50 cm thick ridged ice. In the central part open water north of Finngrundet.

With temperatures mostly above 0°C and southwesterly winds the ice will drift northeastwards and melt.

archipelagos to the Åland Islands. In the Åland Sea there is 5–20 cm thick fast or level ice in bays along the coast.

With temperatures above 0°C ice melt is expected.

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

Further out at sea there is ridged, very close ice, 5-30cm thick in the west 5-35cm thick in the east. Outside the southern coast there is open water in the Narva and Luga bay and very close ice in Koporye Bay. In Lake Saimaa there is 30–50 cm thick ice.

With southwesterly winds and temperatures above 0°C the ice will drift towards the northeast and melt.

the line Lindi – Uulu and further out, up to the line southern point of Kihnu – Rannametsa, there is very close ice in the northwest and else very open ice or open water.

With temperatures above 0°C ice melt is expected and the ice drifts towards the northeast.

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

With temperatures above 0 °C ice melt is expected.

**Swedish Lakes**

In Lake Vänern 5–20 cm thick rotten fast ice is present in places at the coasts. In the Dalbosjön there is 5–20 cm thick, very close drift ice along

the northwestern coast. At sea mostly ice free. With temperatures well above 0 °C ice melt is expected.

Dr. J. Holfort

**Restrictions to Navigation**

	<b>Harbour/District</b>	<b>At least dwt/hp/kW</b>	<b>Ice Class</b>	<b>Begin</b>
<b>Estonia</b>	Pärnu	1800 kW	1B (Lloyd's)	27.01.
	Kunda and Sillamäe	1200 kW	II (Lloyd's)	04.02.
<b>Finland</b>	Tornio, Kemi and Oulu	2000/4000 dwt	IA Super (2000 t)/ IA (2000 t)	27.02.
	Vaasa	2000 dwt	IA	10.01.
	Raahe, Kalajoki, Kokkola and Pietarsaari	4000 dwt	IA	13.01.
	Pori, Rauma	2000 dwt	I	06.03.
	Kaskinen and Kristiinankaupunki	2000 dwt	IB	06.03.
	Uusikaupunki	2000 dwt	IB	06.03.
	Eckerö, Maarianhamina and Langnäs	2000 dwt	II	13.01.
	Naantali and Turku	2000 dwt	I	23.01.
	Mussalo	2000 dwt	IB	29.01.
	Helsinki and Sköldvik	2000 dwt	I	29.01.
	Koverhar, Lappohja, Inkoo and Kantvik	2000 dwt	I	13.01.
	<b>Taalintehdas and Förby</b>	<b>2000 dwt</b>	<b>I</b>	<b>12.03.</b>
	Hanko	2000 dwt	II	13.01.
	Loviisa, Kotka and Hamina	2000 dwt	IB	29.01.
	Lake Saimaa	2000 dwt	IA	08.01.
Saimaa Canal	2000 dwt	IA	08.01.	
<b>Russia</b>	Vyborg	-	Ice 1/Ice 2	11.03.
	Vysotsk	-	Ice 1/Ice 2	11.03.
	Primorsk	-	Ice 1/Ice 2	11.03.
	<b>St. Petersburg, Ust-Luga</b>		<b>Ice 1/Ice 2</b>	<b>15.3.</b>
	Ust-Luga	-	Ice 1	29.12.
<b>Sweden</b>	Karlsborg	4000 dwt	IA (2000 t)	14.01.
	Lulea, Haraholmen and Skelleftehamn	4000 dwt	IA	14.01.
	Rundvik, Husum and Örnköldsvik	2000 dwt	IA	19.02.
	Holmsund	2000 dwt	IA	17.02.
	Angermanälven	2000 dwt	IA	17.02.
	Stocka, Hudiksvall, Iggesund, Söderhamn, Orrskär, Norrsundet, Gävle, Skutskär and Öregrund	2000 dwt	IC	26.02.
	Härnösand, Söråker and Sundsvall	2000 dwt	IB	26.02.
	Hargshamn	2000 dwt	IC	04.01.
	Hallstavik and Grisslehamn	2000 dwt	IC	04.01.

Kappelskär and Nynäshamn	2000 dwt	II	04.01.
Köping and Västerås	2000 dwt	IC	26.02.
Balsta	2000 dwt	IC	26.02.
Stockholm and Södertälje	2000 dwt	II	04.01.
Trollhätte Canal and Göta Älv	2000 dwt	II	23.02.
Vänern	2000 dwt	IC	26.02.

### Estonia

**Icebreaker:** EVA-316 assists to the port of Pärnu. BOTNICA assists to the ports of Kunda and Sillamäe.

### Finland/Sweden

The traffic separation schemes in the Lake Vänern are temporarily out of use from 12 January due to ice conditions.

The transit traffic west of Holmöarna is temporarily prohibited.

Öregrundsgrepen: Transit traffic for low powered vessels is not recommended.

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, POLARIS, SISU, KONTIO and URHO assist in the Bay of Bothnia. OTSO assist in the southern Bay of Bothnia. ATLE and FENNICA assist in the Quark. ZEUS and CALYPSO assist in the eastern Bothnian Sea. VOIMA and NORDICA assist the Gulf of Finland. ALE assists in the Vänern.

### Norway

Hellefjorden (Kragerø): Icebreaker assistance can only be given to vessels suitable for navigation in ice and of special size. (08.01.24)

### Russia

There are restrictions for small crafts going to St. Petersburg, Vyborg, Vysotsk, Primorsk and Ust-Luga. Barge towed by tug not allowed to navigate in ice.

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

## Baltic Sea Ice Code

<p>First number:</p> <p><b>A<sub>B</sub> Amount and arrangements of sea ice</b></p> <p>0 Ice free</p> <p>1 Open water – concentration less than 1/10</p> <p>2 Very open ice - concentration 1/10 to 3/10</p> <p>3 Open ice – concentration 4/10 to 6/10</p> <p>4 Close ice – concentration 7/10 to 8/10</p> <p>5 Very close ice – concentration 9/10 to 9+/10</p> <p>6 Compact ice, including consolidated ice – concentration 10/10</p> <p>7 Fast ice with drift ice outside</p> <p>8 Fast ice</p> <p>9 Lead in very close or compact drift ice or along the fast ice edge</p> <p>/ Unable to report</p> <p>Third number:</p> <p><b>T<sub>B</sub> Topography or form of ice</b></p> <p>0 Pancake ice, ice cakes, brash ice – less than 20 m across</p> <p>1 Small ice floes – 20 to 100 m across</p> <p>2 Medium ice floes – 100 to 500 m</p> <p>3 Big ice floes – 500 to 2000 m across</p> <p>4 Vast or giant ice floes – more than 2000 m across – or level ice</p> <p>5 Rafted ice</p> <p>6 Compact slush or shuga, or compacted brash ice</p> <p>7 Hummocked or ridged ice</p> <p>8 Thaw holes or many puddles on the ice</p> <p>9 Rotten ice</p> <p>/ No information or unable to report</p>	<p>Second number:</p> <p><b>S<sub>B</sub> Stage of ice development</b></p> <p>0 New ice or dark nilas (less than 5 cm thick)</p> <p>1 Light nilas (5 - 10 cm thick) or ice rind</p> <p>2 Grey ice (10 - 15 cm thick)</p> <p>3 Grey-white ice (15 - 30 cm thick)</p> <p>4 White ice, first stage (30 - 50 cm thick)</p> <p>5 White ice, second stage (50 - 70 cm thick)</p> <p>6 Medium first year ice (70 - 120 cm thick)</p> <p>7 Ice predominantly thinner than 15 cm with some thicker ice</p> <p>8 Ice predominantly grey-white ice (15 – 30 cm) with some thicker ice</p> <p>9 Ice predominantly thicker than 30 cm with some thinner ice</p> <p>/ No information or unable to report</p> <p>Fourth number:</p> <p><b>K<sub>B</sub> Navigation conditions in ice</b></p> <p>0 Navigation unobscured</p> <p>1 Navigation difficult or dangerous for wooden vessels without ice sheathing</p> <p>2 Navigation difficult for unstrengthened or low-powered vessels built of iron or steel. Navigation for wooden vessels even with ice sheathing not advisable</p> <p>3 Navigation without icebreaker assistance possible only for high-powered vessels of strong construction and suitable for navigation in ice</p> <p>4 Navigation proceeds in lead or broken ice-channel without the assistance of an icebreaker</p> <p>5 Icebreaker assistance can only be given to vessels suitable for navigation in ice and of special size</p> <p>6 Icebreaker assistance can only be given to vessels of special ice class and of special size</p> <p>7 Icebreaker assistance can only be given to vessels after special permission</p> <p>8 Navigation temporarily closed</p> <p>9 Navigation has ceased</p> <p>/ Unknown</p>
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**Estonia, 13.03.2024**

Shipping route Kunda meridian to Tallinn	1///
Paernu, port and bay	7475
Shipp. route from Paernu to Irben Strait	2///
Moonsund	7343

**Finland, 13.03.2024**

Röyttä – Etukari	8546
Etukari – Ristinmatala	8546
Ajos – Ristinmatala	8546
Ristinmatala – Kemi 2	7476
Kemi 2 – Kemi 1	5476
Sea area SW of Kemi 1	5476
Kemi 2 – Ulkokrunni – Virpiniemi	7476
Oulu harbours – Kattilankalla	8546
Kattilankalla – Oulu 1	7476
Sea area SW of Oulu 1	5476
High Sea N of the latitude of Marjaniemi	5476
Raahe harbour – Heikinkari	8546
Heikinkari – Raahe lighthouse	6856
Raahe lighthouse – Nahkiainen	5476
Latitude Marjaniemi – Ulkokalla, Sea	5476
Rahja harbour – Välimatala	8446
Vaelimatala to line Ulkokalla – Ykskivi	5356
Sea betw. lat. of Ulkokalla –Pietarsaari	5376
Ykspihlaja – Repskär	7476
Repskär – Kokkola lighthouse	5476
Sea area off Kokkola lighthouse	4746

Pietarsaari – Kallan	8446
Sea area off Kallan	4746
Sea lat. Pietarsaari – NE Nordvalen	5356
Sea area ENE of Nordvalen	5876
Sea area Nordvalen to W of Norrskär	5876
Vaskiluoto – Ensten	7356
Ensten – Vaasa lighthouse	5356
Vaasa lighthouse – Norrskär	4746
Sea area SW of Norrskär	5746
Kaskinen – Sälgrund	8446
Sea area off Sälgrund	8446
High sea from N to latitude Yttergrund	3736
Pori harb. to line Pori lighth. – Säppi	4046
Sea W of line Pori lighthouse – Säppi	4046
High sea betw. lat. Yttergrund a. Rauma	4756
Rauma, Harbour – Kylmäpihlaja	8846
Kylmäpihlaja – Rauma lighthouse	1706
Sea area W of Rauma lighthouse	1706
The high sea S of the latitude of Rauma	1006
Uusikaupunki harbour – Kirsta	8846
Kirsta – Isokari	7756
Isokari – Sandbäck	1706
Sea area off Sandbäck	1006
Naantali and Turku – Rajakari	8846
Rajakari – Lövskär	8846
Lövskär – Korra	8846
Korra – Isokari	1706
Lövskär – Berghamn	8346

Berghamn – Stora Sottunga	3136	Luleå – Björnklack	8546
Stora Sottunga – Ledskär	2116	Björnklack – Farstugrunden	5576
Lövskär – Grisselborg	7346	E and SE of Farstugrunden	5576
Grisselborg – Norparskär	4346	Sandgrönn fairway	8546
Hanko harbours – Hanko 1	1705	Rödkallen – Norströmsgrund	5456
Sea area S of Hanko 1	0//5	Haraholmen – Nygrån	8546
Hanko – Vitgrund	5145	Sea area off Nygrån	5456
Vitgrund – Utö	4145	Skelleftehamn – Gåsören	8446
Koverhar – Hästö Busö	8346	Sea area off Gåsören	5456
Hästö Busö – Ajax	5756	Sea area off Bjuröklubb	1306
Sea area S of Ajax	0//6	NE of Nordvalen	3326
Inkoo a. Kantvik – sea area Porkkala	7756	SW of Nordvalen	3326
Sea area at Porkkala	5756	Western Quark (W of Holmöarna)	6456
Sea area S of Porkkala lighthouse	5756	Umeå – Väktaren	6456
Helsinki harbours – Harmaja	7356	SE of Väktaren	3326
Harmaja – Helsinki lighthouse	5356	NE and SE of Sydostbrotten	5476
Helsinki lighth. – sea S of Porkkala lh.	5756	Fairway to Husum	6476
Fairway Helsinki – Porkkala – Rönnskär	5356	Örnköldsvik – Hörnskatan	8446
Vuosaari harbour – Eestiluoto	5356	Hörnskatan – Skagsudde	6476
Eestiluoto – Helsinki lighthouse	5756	Sea area off Skagsudde	6476
Porvoo harbours – Varlax	7356	Fairway W of Ulvöarna	6476
Varlax – Porvoo lighthouse	5356	Sea area E of Ulvöarna	5476
Porvoo lighthouse – Kalbådagrund	5756	Ångermanälven north Sandö Bridge	8444
Sea Kalbådagrund – Helsinki lighthouse	5756	Ångermanälven south Sandö Bridge	8444
Valko Harbour – Täktarn	7346	Härnösand – Härnön	8444
Archipelago fairway Boistö – Glosholm	5356	Sundsvall – Draghällan	4436
Archipelago fairway Glosholm–Helsinki	7356	Hudiksvallfjärden	8346
Kotka – Viikari	8346	Iggesund – Agö	8346
Viikari – Orregrund	5356	Sandarne – Hällgrund	8346
Orregrund – Tiiskeri	5356	Ljusnefjärden – Storjungfrun	8346
Tiiskeri – Kalbådagrund	5756	Gävle – Eggegrund	8346
Hamina – Suurmusta	8446	Öregrundsgrepen	8346
Suurmusta – Merikari	7346	Hallstavig – Svartklubben	8346
Merikari – Kaunissaari	5346	Trälhavet – Furusund – Kapellskär	1006
		Stockholm – Trälhavet – Klövholmen	3026
<b>Norway, 11.03.2024</b>		Klövholmen – Sandhamn	1006
Svinesund – Halden	33//	Trollharan – Langgarn	1006
Drammensfjord	2201	Köping – Kvicksund	8344
Tønsberg, inner harbour	82/3	Västerås – Grönsö	8344
Vestfjord (Tønsberg)	6963	Grönsö – Södertälje	8344
Larviksfjorden (Stavern – Larvik)	121/	Stockholm – Södertälje	8344
		Södertälje – Fifong	1104
<b>Russian Federation, 13.03.2024</b>		Norrköping – Hargökalv	1000
Port of St. Petersburg	89//	Västervik – Marshalmen – Idö	1101
St. Petersburg – E-point island Kotlin	89//	Fairway to Gruvön	8396
E-point Kotlin – long. lighth. Tolbukhin	53//	Fairway to Karlstad	5376
Lighth. Tolbukhin – lighth. –Šepelevskij	10//	Fairway to Kristinehamn	8396
Lighthouse Šepelevskij – island Sescar	52//		
Island Sescar – Island Sommers	23//		
Island Sommers– S-point island Gogland	32//		
S-point isl. Gogland – long. p. Kunda	32//		
Vyborg, port and bay	89//		
Island Vichrevoj – Island Sommers	53//		
Strait Bjerkesund	89//		
E-point Bol'šoj Ber'ozovyj – Šepelevskij	53//		
Appr. Luga bay – line Moš.-Šepel.	21//		
<b>Sweden, 13.03.2024</b>			
Karlsborg – Malören	8546		
Sea area off Malören	5576		