

# Eisbericht Nr. 93

## Amtsblatt des BSH

Jahrgang 97

Nr. 93

Thursday, 28.03.2024

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### Übersicht

In der Bottenwiek befindet sich in den nördlichen Schären bis 80 cm dickes, in den südlichen bis 70 cm dickes Festeis. Im Nordosten verläuft außerhalb des Festeises eine Rinne. Auf See treibt im Norden zu meist 40–70 cm dickes, sehr dichtes, örtlich aufgepresstes und übereinandergeschobenes Eis, das teilweise schwer zu passieren ist. Weiter südlich treibt auf See im Westen bis 40 cm dickes, sehr dichtes oder dichtes Eis, um im Osten kommt offenes Wasser und 5.25cmn dickes, lockeres Eis vor. An den Küsten von Norra Kvarken liegt bis 60 cm dickes Festeis; auf See treibt im Westen 10–50 cm dickes, sehr dichtes Eis und ansonsten meist lockeres, bis 40 cm dickes Eis. An den Küsten der Bottensee kommt im Osten bis 55 cm und im Westen bis 40 cm dickes Festeis vor. Im Schärenmeer kommt Festeis und offenes Wasser vor. Im Osten und Norden des Finnischen Meerbusens liegt bis 55 cm dickes Festeis; auf See treibt im Nordosten 5–35 cm dickes Eis. Im Rigaischen Meerbusen kommt im Nordosten morsches Festeis vor und an den Küsten treibt örtlich Eis. Im Mälaren und Vänern kommt örtlich morsches Festeis und offenes Wasser 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 70 cm thick in the south. Outside the fast ice in the northeast there is lead. At sea in the north, there is mostly 40–70 cm thick, very close, ridged and rafted ice that is difficult to force at places. Further south there up to 40 cm thick very close and close ice in the west and open water and 5-25cm thick open ice in the east. In the Quark there is up to 60 cm thick fast ice at the coasts and at sea there is 10–50 cm thick, very close ice in the west and else mostly up to 40 cm thick open ice. At the coasts of the Sea of Bothnia there is fast ice, up to 55 cm thick in the east and up to 40 cm thick in the west. Fast ice and open water 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 northeast there is 5–35 cm thick ice. In the northeastern Gulf of Riga there is rotten fast ice with some drifting ice outside the coast. In the Malären and Vänern there is rotten fast ice at places and open water.

### Bay of Bothnia

In the archipelagos of the Bay of Bothnia there is fast ice; 50–80 cm thick in the north and 40–70 cm thick in the south. In the northeast the fast ice stretches out to Malören, Kemi-3, Oulu-3 and Raahelighthouse and is followed by a lead with thin ice and some thicker floes. At sea north of a line Simpgrundet to Kalajokki there is 40–70 cm thick,

ridged and rafted, very close ice; the field is difficult to force at places but some new ice covered leads are present in the field. Further south there open water followed by 5-25cm thick open ice outside the Finnish coast. Outside the Swedish coast there is 10–40 cm thick very close ice to about Bjuröklubb and also stretching out further east;

### Herstellung und Vertrieb

Bundesamt für Seeschifffahrt und Hydrographie (BSH)

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

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further south there is 10-40cm thick close ice with an area of very open ice north of Holmääarna. Over eastern some ice formation may take place,

#### The Quark

There is 35–60 cm thick fast ice in the Vaasa archipelago out to Ensten. Along the Swedish coast there is up to 40 cm thick fast ice with adjacent consolidated ice. Off this ice, there is 10–50 cm thick, partly ridged, very close ice from north of

#### 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 north of

#### Archipelago Sea and Åland Sea

In the Archipelago Sea there is 10–40 cm thick fast ice in the inner archipelago of the Finnish coast. 10–30 cm thick, fast ice is present around the islands of the outer archipelagos and the Åland Is-

#### Northern Baltic

In Lake Mälaren there is broken, rotten fast ice and open water on the fairways. Along the outer Swedish coast there is open water and locally some

#### Gulf of Finland

Along the northern coast there is fast ice in the archipelago, 10–40 cm thick in the west and up to 55 cm thick in the east. In the Vyborg Bay there is 25–35 cm thick fast ice and in the Bjerkesund there is 20–30 cm thick close ice; very close ice is present in both entrances. Off the northern fast ice, there is mostly open water with smaller areas of close or very close ice, but east of about Kotka and

#### Gulf of Riga

In Väinameri there is rotten fast ice near the coasts and on the fairways there is very open to open ice. In the southern part as well as along the south coast of Saaremaa there is close drift ice. In the

#### Central Baltic

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

#### Swedish Lakes

In Lake Vänern, rotten fast ice is present in places in the northern archipelagos.

but overall formation and melt will balance out. The general ice drift will be towards the southwest..

Högbonden to Sydostbrotten. At sea, there is 20–40 cm thick, mostly open ice with some areas of new ice as well as close to very close ice near the fast ice. In the south there is open water. Some ice melt is expected over eastern.

Högbonden, there is 10–50 cm thick, very close ice. Off the coast in the east there is open water with single ice floes.

Ice melt is expected over eastern.

lands with open water in between. In the Åland Sea there is 5–20 cm thick, partly rotten fast ice in bays along the coast.

Ice melt is expected over eastern.

broken ice.

Ice melt is expected over eastern.

north of about 60°15'N, there is 10–35 cm thick, ridged, very close ice. From St. Petersburg to the longitude of Kotlin there is 35–45 cm thick fast ice with areas of close ice in the middle. Open water further out. Outside the southern coast it is mainly ice free. In Lake Saimaa is 30–55 cm thick ice with open areas.

Ice melt is expected over eastern.

Bay of Pärnu there is open water out to the island Sorgu.

Ice melt will continue over eastern.

Ice melt will continue over eastern.

Ice melt will continue over eastern.

Dr. J.Holfort

**Due to public holidays over eastern, the next issue will be on Tuesday, April 2<sup>nd</sup>.**

## Restrictions to Navigation

	Harbour/District	At least dwt/hp/kW	Ice Class	Begin
<b>Finland</b>	Tornio, Kemi and Oulu	2000/4000 dwt	IA Super (2000 t)/ IA (2000 t)	27.02.
	Raahe, Kalajoki, Kokkola and Pietarsaari	4000 dwt	IA	13.01.
	Vaasa	2000 dwt	IA	10.01.
	Pori, Rauma	2000 dwt	II	25.03.
	Kaskinen and Kristiinankaupunki	2000 dwt	II	25.03.
	Uusikaupunki	2000 dwt	II	25.03.
	Langnäs	2000 dwt	II	13.01.
	Naantali and Turku	2000 dwt	II	25.03.
	Sköldvik	2000 dwt	II	25.03.
	Koverhar, Lappohja, Inkoo, Kantvik and Helsinki	2000 dwt	II	18.03.
	Taalintehdas and Förby	2000 dwt	II	18.03.
	Mussalo, Loviisa, Kotka and Hamina	2000 dwt	I	25.03.
	Lake Saimaa	2000 dwt	IA	08.01.
	Saimaa Canal	2000 dwt	IA	08.01.
	<b>Russia</b>	Vyborg	-	Ice 1/Ice 2
Vysotsk		-	Ice 1/Ice 2	11.03.
Primorsk		-	Ice 1	25.03.
<b>Sweden</b>	Karlsborg	4000 dwt	IA (2000 t)	14.01.
	Lulea, Haraholmen and Skelleftehamn	4000 dwt	IA	14.01.
	Rundvik, Husum and Örnsköldsvik	2000 dwt	IA	19.02.
	Holmsund	2000 dwt	IA	17.02.
	Angermanälven	2000 dwt	IB	27.03.
	Stocka, Hudiksvall, Iggesund, Söderhamn	2000 dwt	IC	26.02.
	Orrskär, Norrsundet, Gävle and Skutskär	2000 dwt	II	18.03.
	Härnösand	2000 dwt	IB	26.02.
	Söråker and Sundsvall	2000 dwt	IC	22.03.
	Hargshamn, Öregrund, Hallstavik and Grisslehamn	2000 dwt	II	26.03.
	Köping, Västerås and Balsta	2000 dwt	IC	26.03.

**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, ATLE, POLARIS, KONTIO and URHO assist in the Bay of Bothnia. OTSO assists in the southern Bay of Bothnia. ZEUS and ALE assist in the Quark. NORDICA and CALYPSO assist the Gulf of Finland.

**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:  <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 foes – 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 special permission                  8 Navigation temporarily closed                  9 Navigation has ceased                  / Unknown</p>
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**Estonia, 28.03.2024**

Paernu, port and bay	1//0
Moonsund	3/11

**Finland, 28.03.2024**

Röyttä – Etukari	8546
Etukari – Ristinmatala	8546
Ajos – Ristinmatala	8546
Ristinmatala – Kemi 2	7476
Kemi 2 – Kemi 1	5676

Sea area SW of Kemi 1	5676
Kemi 2 – Ulkokrunni – Virpiniemi	7476
Oulu harbours – Kattilankalla	8546
Kattilankalla – Oulu 1	7476
Sea area SW of Oulu 1	5676
High Sea N of the latitude of Marjaniemi	5676
Raahe harbour – Heikinkari	8546
Heikinkari – Raahe lighthouse	6476
Raahe lighthouse – Nahkiainen	5476
Latitude Marjaniemi – Ulkokalla, Sea	5476

Rahja harbour – Välimatala	7476	<b>Russian Federation, 28.03.2024</b>	
Vaelimatala to line Ulkokalla – Ykskivi	5476	Port of St. Petersburg	53//
Sea betw. lat. of Ulkokalla – Pietarsaari	5476	St. Petersburg – E-point island Kotlin	53//
Ykspihlaja – Repskär	7476	E-point Kotlin – long. lighth. Tolbuhkin	42//
Repskär – Kokkola lighthouse	5476	Lighth. Tolbuhkin – lighth. –Šepelevskij	32//
Sea area off Kokkola lighthouse	3736	Lighthouse Šepelevskij – island Sescar	53//
Pietarsaari – Kallan	8446	Island Sescar – Island Sommers	32//
Sea area off Kallan	1706	Vyborg, port and bay	89//
Sea lat. Pietarsaari – NE Nordvalen	4356	Island Vichrevoj – Island Sommers	53//
Sea area ENE of Nordvalen	4356	Strait Bjerkesund	42//
Sea area Nordvalen to W of Norrskär	5376	E-point Bol'šoj Ber'ozovyj – Šepelevskij	42//
Vaskiluoto – Ensten	7356		
Ensten – Vaasa lighthouse	5356	<b>Sweden, 28.03.2024</b>	
Vaasa lighthouse – Norrskär	3856	Karlsborg – Malören	8646
Sea area SW of Norrskär	5376	Sea area off Malören	5676
Kaskinen – Sälgrund	8445	Luleå – Björnklack	8646
Sea area off Sälgrund	8445	Björnklack – Farstugrunden	5576
High sea from N to latitude Yttergrund	5375	E and SE of Farstugrunden	5576
Pori harb. to line Pori lighth. – Säppi	1705	Sandgrönn fairway	8646
Sea W of line Pori lighthouse – Säppi	1705	Rödkaullen – Norströmsgrund	5576
Rauma, Harbour – Kylmäpihlaja	1705	Haraholmen – Nygrån	8646
Kylmäpihlaja – Rauma lighthouse	1705	Sea area off Nygrån	5456
Uusikaupunki harbour – Kirsta	8845	Skelleftehamn – Gåsören	8446
Kirsta – Isokari	8845	Sea area off Gåsören	5456
Isokari – Sandbäck	1705	Sea area off Bjuröklubb	5456
Sea area N of Sälskär	1702	NE of Nordvalen	4456
Naantali and Turku – Rajakari	8345	SW of Nordvalen	4456
Rajakari – Lövskär	7345	Western Quark (W of Holmöarna)	6456
Lövskär – Korra	8345	Umeå – Väktaren	6456
Korra – Isokari	1705	SE of Väktaren	4436
Lövskär – Berghamn	8345	NE and SE of Sydostbrotten	5476
Berghamn – Stora Sottunga	1705	Fairway to Husum	5476
Stora Sottunga – Ledskär	8745	Örnsköldsvik – Hörnskatan	8446
Lövskär – Grisselborg	8345	Hörnskatan – Skagsudde	8446
Grisselborg – Norparskär	1705	Sea area off Skagsudde	5476
Sea area at Vidskär	0//5	Fairway W of Ulvöarna	8446
Hanko – Vitgrund	1702	Sea area E of Ulvöarna	5476
Vitgrund – Utö	1702	Ångermanälven north Sandö Bridge	8444
Koverhar – Hästö Busö	3335	Ångermanälven south Sandö Bridge	8444
Hästö Busö – Ajax	1705	Härnösand – Härnön	8444
Inkoo a. Kantvik – sea area Porkkala	8345	Sundsvall – Draghällan	2326
Helsinki harbours – Harmaja	1705	Draghällan – Åstholmsudde	2326
Harmaja – Helsinki lighthouse	1705	Off Åstholmsudde and Brämön	1306
Fairway Helsinki – Porkkala – Rönnskär	1705	Hudiksvallfjärden	8346
Vuosaari harbour – Eestiluoto	4745	Iggesund – Agö	8346
Eestiluoto – Helsinki lighthouse	1705	Sandarne – Hällgrund	8346
Porvoo harbours – Varlax	4845	Ljusnefjärden – Storingfrun	8346
Varlax – Porvoo lighthouse	4845	Gävle – Eggegrund	8346
Porvoo lighthouse – Kalbådagrund	0//5	Hallstavik – Svartklubben	8396
Valko Harbour – Täktarn	8446	Trälhavet – Furusund – Kapellskär	1000
Archipelago fairway Boistö – Glosholm	3336	Stockholm – Trälhavet – Klövholmen	1000
Archipelago fairway Glosholm–Helsinki	4845	Köping – Kviksund	8394
Kotka – Viikari	2316	Västerås – Grönsö	8394
Viikari – Orregrund	5346	Grönsö – Södertälje	1204
Orregrund – Tiiskeri	1706	Stockholm – Södertälje	1204
Tiiskeri – Kalbådagrund	1706	Södertälje – Fifong	1104
Hamina – Suurmusta	8446	Västervik – Marsholmen – Idö	1101
Suurmusta – Merikari	7346	Fairway to Gruvön	1201
Merikari – Kaunissaari	4346	Fairway to Karlstad	8392
		Fairway to Kristinehamn	1201