

BUNDESAMT FÜR SEESCHIFFFAHRT UND HYDROGRAPHIE

# Eisbericht Nr. 77 Amtsblatt des BSH

Jahrgang 95 Nr. 77

Wednesday, 16.03.2022

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## Übersicht

In den Schären der Bottenwiek liegt im Norden 30–70 cm dickes Festeis und im Süden 20–55 cm dickes Festeis. Auf See treibt im Norden und Osten 30–60 cm dickes, sehr dichtes, aufgeschobenes und aufgepresstes Eis. Im Süden treibt sehr lockeres bis dichtes, 10–30 cm dickes Eis. In Norra Kvarken liegt in den Schären bis zu 55 cm dickes Festeis und auf See kommt sehr lockeres Eis und offenes Wasser vor. Entlang der Küsten und in den Schären der Bottensee, dem Schärenmeer und der Ålandsee liegt Festeis oder dünnes, ebenes Eis. Im Finnischen Meerbusen liegt entlang der Nordküste und im Osten bis 45 cm dickes Festeis. Östlich von 27°30' E treibt auf See sehr dichtes, 15–30 cm dickes Eis und weiter westlich bildet sich Neueis. Im Rigaischen Meerbusen kommt an der Küste bis zu 25 cm dickes Eis im Moonsund und in der Pärnubucht vor. Dünnes Eis kommt örtlich in der nördlichen Ostsee und dem Vänern vor. In einigen wenigen inneren Fjorden des Skagerraks liegt Festeis oder dünnes Eis.

#### **Overview**

In the archipelagos of the Bay of Bothnia, there is 40–70 cm thick fast ice in the north and 20–55 cm thick fast ice in the south. At sea in the north and east, there is mostly 30–60 cm thick, very close, ridged and rafted ice. In the southern part, there is 10–30 cm thick very open to close ice. In Norra Kvarken, there is up to 55 cm thick fast ice in the archipelagos and mostly open water or very open ice at sea. Along the coasts and archipelagos of the Sea of Bothnia, the Archipelago Sea and Åland Sea, there is fast ice or thin level ice. In the Gulf of Finland, there is up to 45 cm thick fast ice along the northern and eastern coast. At sea east of about 27°30' E, there is very close 15–30 cm thick ice and new ice formation further west. In the Gulf of Riga, there is up to 25 cm thick ice at the coasts of Moonsund and in Pärnu Bay. Thin ice occurs at places in the northern Baltic and Lake Vänern. Fast ice or thin ice is present in a few inner fjords of the Skagerrak.

# **Bay of Bothnia**

In and outside the northeastern archipelagos, there is 50–70 cm thick fast ice, reaching out to Kemi-3, Oulu-2 and Jaakko. In the northwestern archipelagos the fast ice is 30–60 cm thick. Off the fast ice in the north and east, there is 40–60 cm thick consolidated ice, in the east to Kemi-2 and Oulu-1. Off the fast ice in the west, there is very close or consolidated, 20–40 cm thick ice. At sea, there is an area with very close, ridged, 40–60 cm thick ice

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around 65°15' N 23°30' E. Else at sea, there is very close, 30–60 cm thick, ridged and rafted ice, in the east reaching south to about 64°00' N. The ice field is difficult to force in places and a brash ice barrier is present along the western ice edge. In Skellefteå bight, there is rafted thin level ice. In the southern Bay of Bothnia, there is 20–45 cm thick fast ice along the Swedish coast; on the eastern coast there is 30–55 cm thick fast ice followed by a

**Eisauskünfte / Ice Information** Telefon: +49 (0) 381 4563 -780 Telefax: +49 (0) 381 4563 -949 E-Mail: ice@bsh.de

© BSH - All rights reserved Reproduction in whole or in part prohibited fringe of consolidated ice. At sea, there is 10–30 cm thick, close ice off the ice edge and in the east. Else, there is mostly very open ice or open water.

#### Norra Kvarken

In the archipelagoes off Vaasa, there is 30–55 cm thick fast ice to Ensten and then 10–35 cm thick, very close drift ice to Grynge. Along the Swedish coast, there is 20–40 cm thick fast ice in the archipelagos and 10–30 cm thick, very close ice inside

#### Sea of Bothnia

On Ångermanälven, there is 20–50 cm thick very close ice in the upper part and 15–35 cm open or very close ice in the lower part. In the bays along the western coast, there is 10–40 cm thick fast ice, further out there is open water in places. Along the

## Archipelago and Åland Sea

10–30 cm thick fast ice and level ice is present in the inner archipelagos and bays of both coasts. At the eastern coast, there is very open ice on the

#### **Gulf of Finland**

From St. Petersburg up to the easternmost tip of Kotlin, there is 35–45 cm thick fast ice. In the Bay of Vyborg and the Bjerkesund, there is mostly 25–45 cm thick compact or fast ice and very close ice in the entrance to Vyborg Bay. Outside a lead with level ice. At sea, east of a line from Haapasaari to Narva there is mostly very close, 15–30 cm thick ice and new ice formation further west to 26° E. In

# **Gulf of Riga**

In Moonsund, there is 10–20 cm thick fast ice at the eastern coast, followed by very close ice. Further out and on the fairways mostly open water. In Pärnu Bay, there is 15–30 cm thick fast ice near

#### **Northern Baltic**

In Lake Mälaren, there is 10–30 cm thick fast ice or level ice in the western part, and further east, there is mostly thin level ice. In the central part, there are areas with open water or new ice. Along the Swe-

#### **Skagerrak and Kattegat**

Near Tønsberg there is thin fast ice and in Hellefjorden near Kragerø there is 15–30 cm thick fast ice. Else it is mostly ice free.

#### Swedish Lakes

In Lake Vänern, there is rotten ice in bays of the northern coast.

Dr. W. Aldenhoff

Some ice formation is possible in the north, but overall no larger changes are expected. The ice will drift to the north/northeast.

Holmöarna. At sea, there is open water or 10–30 cm thick, very open ice. South of Nordvalen it is mostly ice free with open water along the coasts. No larger changes are expected with an ice drift to the north/northeast.

eastern coast, there is 10–40 cm fast ice in the inner archipelagos, followed by a narrow belt of 10–35 cm thick, very close ice with brash ice barriers in the north.

No larger changes are expected.

fairways and open water in the outer archipelagos. Around the Åland Islands, there is thin level ice. No larger changes are expected.

Luga Bay there is 10–20 cm thick, very close ice. In the archipelagos of the northern coast, there is fast ice, 10–35 cm thick in the west and 30–55 cm thick in the east. Off the fast ice east of Loviisa, there is close to open ice and new ice further out to Helsinki in the west.

Some new ice may form in the east, but overall no larger changes are expected.

the coast and very close, ridged ice is present out to the line Manilaid –Häädemeeste.

Overall no larger changes are expected with some night frost and plus degrees during daytime.

dish coast, there is partly broken, thin level ice at a few sheltered places.

No larger changes are expected, but some ice melt is possible.

Some ice melt is expected, but else no larger changes.

No larger changes are expected but ice melt will slowly continue.

Restrictions	to Navigation
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	Harbour/District	At least	Ice Class	Begin
		dwt/hp/kW		
Estonia	Pärnu	1600 kW	1C	17.12.
Finland	Tornio, Kemi and Oulu	2000/4000 dwt	IA Super(5000kW)/IA	09.02.
	Raahe	4000 dwt	IA	08.03.
	Kokkola, Pietarsaari and Vaasa	2000 dwt	IA	01.02.
	Kalajoki	4000 dwt	IA	08.03.
	Kristiinankaupunki, Pori, Rauma,	2000 dwt	II	01.01.
	Uusikaupunki, Naantali, Turku, Koverhar,			
	Lappohja, Helsinki and Sköldvik			
	Kaskinen, Taalintehdas and Förby	2000 dwt	I	16.01.
	Inkoo and Kantvik	2000 dwt	II	15.03.
	Loviisa and Kotka	2000 dwt	I	04.01.
	Hamina	2000 dwt	I	01.01.
	Mussalo	2000 dwt	II	25.12.
Russia	Vyborg	-	Ice 1	30.12.
	Vysotsk	-	Ice 2	14.01.
	Primorsk	-	Ice 2	27.01.
	Ust-Luga	-	Ice 1	04.01.
	St. Petersburg	-	required	31.12.
Sweden	Karlsborg and Luleå	4000 dwt	IA	19.02.
	Haraholmen and Skelleftehamn	4000 dwt	IA	19.02.
	Holmsund, Rundvik and Husum	2000 dwt	IC	14.03.
	Örnsköldsvik	2000 dwt	IC	15.01.
	Ångermanälven	2000 dwt	IB	06.01.
	Härnösand	2000 dwt	II	22.12.
	Köping and Västerås	1300/2000 dwt	IC/II	02.03.

# Information of the Icebreaker Services

#### Estonia

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

# Finland/Sweden

The Saimaa Canal is closed for traffic from 30th of January.

The traffic separation schemes in the Quark are temporarily out of use from 15 January 2022.

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 78. 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:

OTSO, KONTIO, URHO, POLARIS, NORDICA, SISU, FREJ and YMER assist in the Bay of Bothnia. ATLE und ALE assist in the Quark and ZEUS in the Sea of Bothnia, FENNICA in the eastern Gulf of Finland.

# Norway

Hellefjorden (Kragerø): Navigation temporarily closed. (28.02.22)

# Russia

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

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

# 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: <b>S</b> <sub>B</sub> Stage of ice development 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
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	<ul> <li>Fourth number:</li> <li>K<sub>B</sub> Navigation conditions in ice</li> <li>Navigation unobscured</li> <li>Navigation difficult or dangerous for wooden vessels without ice sheathing</li> <li>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>Navigation without icebreaker assistance possible only for high-powered vessels of strong construction and suitable for navigation in ice</li> <li>Navigation proceeds in lead or broken ice-channel without the assistance of an icebreaker</li> <li>Icebreaker assistance can only be given to vessels suitable for navigation in ice and of special size</li> <li>Icebreaker assistance can only be given to vessels of special ice class and of special size</li> <li>Icebreaker assistance can only be given to vessels after after special permission</li> <li>Navigation temporarily closed</li> <li>Navigation has ceased</li> <li>Unknown</li> </ul>

# Estonia, 16.03.2022

Shipping route from Narva-Jõssuu Paernu, port and bay Moonsund	30// 7375 1//1	
Finland, 16.03.2022		

Roeyttae – Etukari	8546
Etukari – Ristinmatala	8846
Ajos – Ristinmatala	8846
Ristinmatala – Kemi 2	6876
Kemi 2 – Kemi 1	5876
Sea area SW of Kemi 1	5376
Kemi 2 – Ulkokrunni – Virpiniemi	8546
Oulu harbours – Kattilankalla	8546
Kattilankalla – Oulu 1	6876
Sea area SW of Oulu 1	5476
High Sea N of the latitude of Marjaniemi	5876
Raahe harbour – Heikinkari	8446
Heikinkari – Raahe lighthouse	7446
Raahe lighthouse – Nahkiainen	5876
Latitude Marjaniemi – Ulkokalla, Sea	5876
Rahja harbour – Välimatala	6366
Vaelimatala to line Ulkokalla – Ykskivi	5476
Sea betw. lat. of Ulkokalla –Pietarsaari	5856
Ykspihlaja – Repskaer	8846
Repskaer – Kokkola lighthouse	6366
Sea area off Kokkola lighthouse	9836
Pietarsaari – Kallan	7856

Kotka – Viikari	5346
Viikari – Orrengrund	3725
Orrengrund – Tiiskeri	3725
Tiiskeri – Kalbådagrund	2005
Hamina – Suurmusta	7846
Suurmusta – Merikari	4746
Merikari – Kaunissaari	4746
<b>Norway, 14.03.2022</b> Svinesund – Halden Tønsberg, inner harbour Vestfjord (Tønsberg)	31// 8031 8031
Russian Federation, 16.03.2022	84/3
Port of St. Petersburg	84/3
St. Petersburg – E-point island Kotlin	53/3
E-point Kotlin – long. lighth. Tolbuhkin	52/2
Lighth. Tolbuhkin – lighth. –Šepelevskij	53/3
Lighthouse Šepelevskij – island Sescar	53/3
Island Sescar – Island Sommers	60/1
Island Sommers– S-point island Gogland	84/3
Vyborg, port and bay	53/3
Island Vichrevoj – Island Sommers	53/3
Strait Bjerkesund	53/3
E-point Bol'šoj Ber'ozovyj – Šepelevskij	51/2
Luga bay	52/2
Appr. Luga bay – line MošŠepel.	52/2
Sweden, 16.03.2022 Karlsborg – Maloeren Sea area off Maloeren Luleå – Bjoernklack Bjoernklack – Farstugrunden E and SE of Farstugrunden Sandgroenn fairway Roedkallen – Norstroemsgrund Haraholmen – Nygrån Sea area off Nygrån Skelleftehamn – Gåsoeren Sea area off Gåsoeren Sea area off Bjuroeklubb NE of Nordvalen Western Quark (W of Holmoearna) Umeå – Vaektaren Fairway to Husum Oernskoeldsvik – Hoernskaten Hoernskaten – Skagsudde Sea area off Skagsudde Sea area fof Ulvoearna Šea area E of Ulvoearna Ångermanaelven north Sandoe Bridge Ångermanaelven south Sandoe Bridge Haernoesand – Haernoen Sea area off Haernoe Sundsvall – Draghaellan Draghaellan – Åstholmsudde Hudiksvallfjaerden Iggesund – Agoe Sandarne – Haellgrund Ljusnefjaerden – Storjungfrun	6456 5576 6456 5576 6456 5576 6456 5456 5

Gaevle – Eggegrund	8442
Oeregrundsgrepen	1000
Hallstavik – Svartklubben	8342
Koeping – Kvicksund	8344
Västerås – Grönsö	8344
Grönsö – Södertälje	5244
Stockholm – Södertälje	5242
Fairway to Gruyön	5041
Stockholm – Södertälje Fairway to Gruvön	
Fairway to Karlstad	8392
Fairway to Kristinehamn	8392