ISSN 0013-2705

BUNDESAMT FÜR SEESCHIFFFAHRT UND HYDROGRAPHIE

Eisbericht Nr. 28

Amtsblatt des BSH

Jahrgang 95	Nr. 28	Thursday, 06.01.2022	1

Übersicht

In der nördlichen Bottenwiek liegt in den Schären 20–35 cm dickes Festeis. Weiter außerhalb treibt nördlich von etwa 65°N bis 30cm dickes, dichtes bis sehr dichtes Eis, örtlich auch Neueis. In der südlichen Bottenwiek und Norra Kvarken liegt in den Schären bis zu 30 cm dickes Festeis. Weiter außerhalb kommt zumeist dünnes Eis oder Neueis vor, örtlich auch 15cm dickes, dichtes Eis. Entlang der Küsten der Bottensee, dem Schärenmeer und der Ålandsee liegt Festeis oder dünnes ebenes Eis und etwas weiter außerhalb kommt Neueis vor. Im Finnischen Meerbusen liegt entlang der Nordküste und im Osten Festeis. Im östlichen Teil treibt auf See lockeres Eis oder Neueis. Im Rigaischen Meerbusen befindet sich bis zu 25 cm dickes Eis im Moonsund und in der Pärnubucht. Neueis oder dünnes, ebenes Eis kommt in der nördlichen Ostsee und dem Vänern vor. Neueis kommt in geschützten Buchten der zentralen Ostsee und der südlichen Ostsee vor. In einigen inneren Fjorden des Skagerraks liegt Neueis oder Festeis.

Overview

In the northern Bay of Bothnia, there is 20–35 cm thick fast ice in the archipelagos. Further out, north of ~65°N there is up to 30 cm thick, close to very close ice, in places also new ice. In the southern Bay of Bothnia and Norra Kvarken, there is up to 30 cm thick fast ice in the archipelagos. Further out, there is mostly thin ice and new ice, but in places also 15cm thick close ice. Along the coasts of the Sea of Bothnia, the Archipelago Sea and Åland Sea, there is fast ice or thin level ice and further new ice is present. In the Gulf of Finland, there is fast ice along the northern coast and in the easternmost part. At sea in the east, there is open ice and new ice. In the Gulf of Riga, there is up to 25 cm thick ice in Moonsund and Pärnu Bay. New ice and thin level ice occurs at places in the northern Baltic and Lake Vänern. New ice occurs in sheltered areas of the central Baltic and the southern Baltic. Fast ice or new ice is present in some inner fjords of the Skagerrak.

Bay of Bothnia

In the archipelagos of the northern Bay of Bothnia, there is 20–35 cm thick fast ice, from the Finnish coast reaching out to Hebe and Kattilankalla. Off the fast ice in the east, there is 10–30 cm thick consolidated ice to Kemi-2 and Oulu-3. Further out to about 23°30'E at the latitude of Hailuoto, there is thin level ice and 15-30 cm thick, close ice, ridged in places. Off the fast ice in the west, there is first thin level ice and new ice. West of the line from Björoklubb to Falkensgrund there is 2-10cm thick, close ice; further north in direction Karlsborg, there is 5-25cm thick close ice. In the southern Bay of Bothnia, there is 10–30 cm thick fast ice in the archipelagos. Further out in the east, there is new ice and thin level ice to somewhat west of Nahkiainen and Ulkokalla. In the west, there is an up to 20nm wide band of first 5-15cm thick close and then very open ice and new ice. Further ice growth

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

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

and ice formation and a southward ice drift is expected.

Norra Kvarken
In the archipelagoes off Vaasa, there is 10–35 cm thick fast ice to Ensten. Further out to Vaasa lighthouse there is thin open ice. Along the Swedish coast, there is 10–20 cm thick fast in the inner archipelagos. At sea, there is 3–15 cm thick very open to close ice and areas of open water with new ice. Ice formation and growth is expected and the ice will drift southwards.

Sea of Bothnia
On Ångermanälven, there is 15–35 cm thick fast ice in the upper part and 5–20 cm level ice in the lower part. Else, there is 10–20 cm fast ice or thin level ice in the archipelagos and bays. Farther out along the Finnish coast, there is a thin belt with new ice and in places thin close ice. Mostly southward drifting ice and some ice growth is expected the coming days.

Archipelago and Åland Sea
Thin level ice is present in inner archipelagos of the coasts. Else, there is new ice in the archipelagos. Some ice formation and growth is expected.

Gulf of Finland
From St. Petersburg up to the dike, there is 20–30 cm thick fast ice. Farther out, there is first 15-25cm thick, very close ice to about 29°30'E. In the Bay of Vyborg, there is 20–30 cm fast ice and in the Bjerkesund, there is 15-25cm thick fast ice; further out there is an about 5nm wide region with 5-10cm thick, very close ice. At sea, east of 27°50' E, there is 5–10 cm thick open ice north of Seskar and very open thin ice further south. In the archipelagos of the northern coast, there is 10–30 cm fast ice and thin close ice and new ice further out. At the southern coast, new ice is present Narva Bay and in places near the shore. In Lake Saimaa and the Saimaa Canal, there is 15–35 cm thick ice. Some ice formation is expected and the ice drift is in southeasterly directions.

Gulf of Riga
In Moonsund, there is very close, 10–25 cm thick ice. In the central part, there is very open to close ice. At the south coast of Saaremaa, there is thin level ice and very open ice further out. In Pärnu Bay, there is 10–25 cm thick fast ice or very close ice to Kihnu. Some new ice may form, and ice drift is mostly to the east.

Northern Baltic
In Lake Mälaren, there is 10–20 cm thick fast ice or level ice in the western part. The central part is mostly ice free and in sheltered bays further east, there is thin level or new ice. Along the Swedish coast, there is new ice or shuga in some sheltered bays. Some ice may form until tomorrow; later on, no major changes are expected the coming days.

Central Baltic
New ice occurs in some sheltered bays along the Swedish coast. No major changes are expected.

Southeastern Baltic
In the Curonian Lagoon, there is very close ice in the eastern part. In the Vistula Lagoon, there is thin ice in places.
No major changes are expected.

Skagerrak and Kattegat
In some inner fjords of the Skagerrak, there is fast ice, up to 30 cm thick at a few places, and new ice at places. Else, it is mostly ice free. Some ice formation is expected in the northern fjords, else no larger changes are expected.

Swedish Lakes
New ice as well as thin level ice is present in sheltered bays of Lake Vänern. Along the northern coast, there is 5–20 cm thick fast ice.
Some new ice may form.

Dr. J. Holfort

Restrictions to Navigation

	Harbour/District	At least dwt/hp/kW	Ice Class	Begin
Estonia	Pärnu	1600 kW	1C	17.12.
Finland	Tornio, Kemi, Oulu and Raahe	2000 dwt	IB	25.12.
	Tornio, Kemi and Oulu	**2000 dwt**	**IA**	**11.01.**
	Kokkola and Vaasa	2000 dwt	I	22.12.
	Kokkola	**2000 dwt**	**IB**	**11.01.**
	Kalajoki and Pietarsaari	2000 dwt	I	25.12.
	Kalajoki and Pietarsaari	**2000 dwt**	**IB**	**11.01.**
	Kaskinen, Kristiinankaupunki, Pori, Rauma, Uusikaupunki, Naantali, Turku, Taalintehdas, Förby, Koverhar, Lappohja, Inkoo, Kantvik, Helsinki and Sköldvik	2000 dwt	II	01.01.
	Loviisa and Kotka	2000 dwt	I	04.01.
	Hamina	2000 dwt	I	01.01.
	Mussalo	2000 dwt	II	25.12.
	Lake Saimaa and Saimaa Canal	**2000 dwt**	**IB**	**06.01.**
Russia	Vyborg	-	Ice 1	30.12.
	Vysotsk	-	Ice 1	27.12.
	Primorsk	**-**	**Ice 1**	**12.01.**
	Ust-Luga	-	Ice 1	04.01.
	St. Petersburg	**-**	required	31.12.
Sweden	**Karlsborg and Luleå**	**2000 dwt**	**IB**	**06.01.**
	Haraholmen and Skelleftehamn	**2000 dwt**	**IB**	**06.01.**
	Holmsund, Rundvik and Husum	2000 dwt	II	22.12.
	Örnsköldsvik	2000 dwt	II	22.12.
	Ångermanälven	**2000 dwt**	**IB**	**06.01.**
	Härnösand- Skutskär	2000 dwt	II	22.12.
	Köping and Västerås	2000 dwt	IC	27.12.
	Bålsta	1300/2000 dwt	IC/II	27.12.
	Trollhätte Canal and Göta Älv	1300/2000 dwt	IC/II	03.01.
	Vänern	1300/2000 dwt	IC/II	03.01.

Information of the Icebreaker Services

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 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, FREJ and YMER assist in the Bay of Bothnia. ALE and **ZEUS** assist in the Quark and SISU in the eastern Gulf of Finland. PROTECTOR and METEOR assist in the northern Lake Saimaa. CALYPSO assists in the southern Lake Saimaa and the Saimaa Canal.

Norway
Husøysund, Tønsberg indre havn and Vestfjorden (Tønsberg): Icebreaker assistance can only be given to vessels suitable for navigation in ice and of special size. (28.12.21)
Langårsund and Hellefjorden (Kragerø): Navigation temporarily closed. (27.12.21)

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:
A_B 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:
S_B 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:
T_B Topography or form of ice
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

Fourth number:
K_B Navigation conditions in ice
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

Estonia , 06.01.2022

Shipping route from Narva-Jõssuu	30/1
Kunda, port and bay	20/0
Muuga, port and bay	1//0
Tallinn, port and bay	1//0
Paernu, port and bay	7345
Moonsund	52/2

Finland , 05.01.2022

Roeyttae – Etukari	8346
Etukari – Ristinmatala	8346
Ajos – Ristinmatala	8346
Ristinmatala – Kemi 2	5746
Kemi 2 – Kemi 1	4746
Sea area SW of Kemi 1	4746
Kemi 2 – Ulkokrunni – Virpiniemi	7346
Oulu harbours – Kattilankalla	8346
Kattilankalla – Oulu 1	6346
Sea area SW of Oulu 1	4146
High Sea N of the latitude of Marjaniemi	4346
Raahe harbour – Heikinkari	7346
Heikinkari – Raahe lighthouse	5746
Raahe lighthouse – Nahkiainen	4146
Latitude Marjaniemi – Ulkokalla, Sea	3726
Rahja harbour – Välimatala	5366
Vaelimatala to line Ulkokalla – Ykskivi	4046
Sea betw. lat. of Ulkokalla –Pietarsaari	2116
Ykspihlaja – Repsaer	7366
Repskaer – Kokkola lighthouse	3116
Sea area off Kokkola lighthouse	3116
Pietarsaari – Kallan	7746
Sea area off Kallan	3016
Sea lat. Pietarsaari – NE Nordvalen	3226
Sea area ENE of Nordvalen	3016
Sea area Nordvalen to W of Norrskaer	3126
Vaskiluoto – Ensten	8346
Ensten – Vaasa lighthouse	3126
Vaasa lighthouse – Norrskaer	3126
Kaskinen – Sälgrund	5745
Sea area off Sälgrund	3015
Pori harb. to line Pori lighth. – Säppi	1015
Rauma, Harbour – Kylmäpihlaja	5745
Kylmäpihlaja – Rauma lighthouse	1105
Uusikaupunki harbour – Kirsta	5245

Kirsta – Isokari	2225
Naantali and Turku – Rajakari	1005
Koverhar – Hästö Busö	1005
Inkoo a. Kantvik – sea area Porkkala	5745
Helsinki harbours – Harmaja	5145
Harmaja – Helsinki lighthouse	0//5
Fairway Helsinki – Porkkala – Rönnskär	1005
Vuosaari harbour – Eestiluoto	5145
Eestiluoto – Helsinki lighthouse	0//5
Porvoo harbours – Varlax	5245
Varlax – Porvoo lighthouse	0//5
Valko Harbour – Täktarn	7766
Archipelago fairway Boistö – Glosholm	0//5
Archipelago fairway Glosholm–Helsinki	7245
Kotka – Viikari	5246
Viikari – Orrengrund	1015
Orrengrund – Tiiskeri	0//5
Hamina – Suurmusta	8346
Suurmusta – Merikari	5246
Merikari – Kaunissaari	1016

Russian Federation , 06.01.2022

Port of St. Petersburg	63/3
St. Petersburg – E-point island Kotlin	83/3
E-point Kotlin – long. lighth. Tolbuhkin	83/3
Lighth. Tolbuhkin – lighth. –Šepelevskij	3222
Lighthouse Šepelevskij – island Sescar	3001
Island Sescar – Island Sommers	3001
Vyborg, port and bay	83/3
Island Vichrevoj – Island Sommers	40/2
Strait Bjerkesund	50/2
E-point Bol'šoj Ber'ozovyj – –epelevskij	51/2
Luga bay	1000
Appr. Luga bay – line Mo–.-–epel.	2001

Sweden , 06.01.2022

Karlsborg – Maloeren	8446
Sea area off Maloeren	4046
Luleå – Bjoernklack	8446
Bjoernklack – Farstugrunden	4136
E and SE of Farstugrunden	4356
Sandgroenn fairway	8446
Roedkallen – Norstroemsgrund	5136
Haraholmen – Nygrån	8446
Sea area off Nygrån	4046
Skelleftehamn – Gåsoeren	5236
Sea area off Gåsoeren	4136
Sea area off Bjuroeklubb	4136
NE of Nordvalen	4236
SW of Nordvalen	4236
Western Quark (W of Holmoearna)	8246
Umeå – Vaektaren	4236
SE of Vaektaren	4236
Oernskoeldsvik – Hoernskaten	5246
Ångermanaelven north Sandoe Bridge	8444
Ångermanaelven south Sandoe Bridge	8444
Haernoesand – Haernoen	5244
Sundsvall – Draghaellan	8346
Draghaellan – Åstholmsudde	3126
Hudiksvallfjaerden	5246
Iggesund – Agoe	5246
Sandarne – Haellgrund	5146
Ljusnefjaerden – Storjungfrun	2026
Gaevle – Eggegrund	5146
Oeregrundsgrepen	2121
Hallstavik – Svartklubben	5142
Koeping – Kvicksund	8344
Västerås – Grönsö	8344
Grönsö – Södertälje	5144
Stockholm – Södertälje	5244
Södertälje – Fifong	3124
Norrköping – Hargökalv	4041
Karlskrona – Aspö	2020
Fairway to Karlshamn	2020
Uddevalla – Stenungsund	4041
Vänersborgsviken	2024
Fairway to Karlstad	8344
Fairway to Kristinehamn	8344
Fairway to Otterbäcken	2024