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BUNDESAMT FÜR SEESCHIFFFAHRT UND HYDROGRAPHIE

Eisbericht Nr. 39

Amtsblatt des BSH

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Übersicht

In der Bottenwiek befindet sich in den nördlichen Schären bis 55 cm dickes, in den südlichen bis 40 cm dickes Festeis. Auf See treibt zumeist sehr dichtes, übereinandergeschobenes 5–20 cm dickes Eis, welches im Nordwesten bis zu 40 cm dick und aufgepresst ist. Im Norden und Westen befinden sich breite Rinnen mit sehr lockerem Eis oder offenem Wasser. An den Küsten von Norra Kvarken liegt bis 35 cm dickes Festeis und auf See treibt bis 30 cm dickes, sehr dichtes Eis. An den Küsten der Bottensee kommt im Osten bis 30 cm und im Westen bis 20 cm dickes Festeis vor. Davor treibt im Osten ein schmaler Streifen sehr dichtes Eis und im Südwesten sehr lockeres Eis. Das Schärenmeer ist mit dünnem, ebenen Eis bedeckt. Im Osten und Norden des Finnischen Meerbusens liegt bis 35 cm dickes Festeis und davor treibt sehr lockeres bis sehr dichtes, dünnes Eis. Im Rigaischen Meerbusen kommt bis zu 30 cm dickes Festeis vor und vor den Küsten treibt Neueis. Neueis und örtlich dickeres Eis kommt im Vänern und in geschützten Teilen der zentralen und südöstlichen Ostsee wie auch im Skagerrak vor. Neueis kommt örtlich in der Nordsee, dem Kattegat, in den Belten und Sund sowie der westlichen Ostsee vor.

Overview

In the Bay of Bothnia there is fast ice in the archipelagos, up to 55 cm thick in the north and up to 40 cm thick in the south. At sea there is mostly 10–25 cm thick, rafted and very close ice, but in the northwest the ice is up to 40 cm thick and ridged. In the north and west are wide leads with very open ice or open water. In the Quark there is up to 35 cm thick fast ice at the coasts and at sea there is up to 30 cm thick, very close ice. At the coasts of the Sea of Bothnia there fast ice, up to 30 cm thick in the east and up to 20 cm thick in the west. Further out there is a small region with very close ice in the east and very open ice is present further out in the southwest. Thin level ice covers the Archipelago Sea. There is up to 35 cm thick fast ice at the eastern and northern coast of the Gulf of Finland and further out there is very open to very close thin ice. In the Gulf of Riga there is up to 20 cm thick fast ice in the northeast and outside the coasts there is new ice. New ice and at places thicker ice is present in the Vänern and at sheltered places of the central and southeastern Baltic proper as well as in the Skagerrak. New ice occurs also in sheltered places in the North Sea, Kattegat, belts and Sound and the Western Baltic.

Bay of Bothnia

In the archipelagos of the Bay of Bothnia there is fast ice; 20–40 cm thick in the northwest, 30–55 cm thick in the northeast and up to 25–40 cm thick in the southern part. Off the fast ice in the north, a 5–10 NM wide lead has opened from about Farstugrunden to south of Kemi-3. At sea there is mostly 10–30 cm thick, rafted very close ice, but 25–40 cm thick, ridged, very close ice is present in

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

the northwest. Along the Swedish side runs a wide navigable lead with very open drift ice in the north and open water further south from Farstugrunden to north of Holmöarna.

With mostly moderate frost some ice formation and ice growth is expected the coming day. The wind direction will back from north to south and therefore the ice drift will change from south to north.

The Quark

There is 10–35 cm thick fast ice in the Vaasa archipelago and out to about Norra Gloppsten. Further out to about 10 NM west of Norrskär there is 15–25 cm thick, very close ice. Along the Swedish coast there is up to 20 cm thick fast ice in inner bays and very close ice slightly further out. At sea, there is mostly 5–30 cm thick, very close drift with some very open ice in the western part.
With light to moderate frost along the coasts some ice formation and ice growth is expected. The wind direction will back from north to south and therefore the ice drift will change from south to north.

Sea of Bothnia

Thin level ice or 5–30 cm thick fast ice is present in bays along both coasts. Further out on the Finnish side there is a 3–10 NM wide area with thin very close ice. Outside the Swedish there is very open ice in the south. Outside the southern coast there is also some ridged, very close ice. On Ångermanälven, there is 15–25 cm thick fast ice on the upper part and new ice or thin level ice is present in the lower part.
With temperatures around 0 °C in the west no larger changes are expected. In the east some ice formation is possible with light frost along the coast.

Archipelago Sea and Åland Sea

In the Archipelago Sea there is 5–15 cm thick level or fast ice in the inner archipelago and 2–10 cm thick, level ice reaching to the Åland Islands. In the Åland Sea there is 5–15 cm thick fast or level ice in bays and new ice is drifting close to the coast.
With temperatures around 0 °C and light frost in the east no larger changes but some ice formation in the east are expected.

Northern Baltic

In Lake Mälaren there is 5–20 cm thick fast ice in the west, level ice in the central part and new ice and in the east. New ice or thin level ice is present in sheltered places at the outer coast.
With temperatures around 0° no larger changes are expected.

Gulf of Finland

From St. Petersburg to Kotlin there is 20–30 cm thick fast ice. In the Bjerkesund there is level ice and in the Vyborg Bay there is 10–25 cm thick fast ice. At sea, there is thin, mostly very close ice east of about 28°45'E and open drift ice to about Seskar further west. Along the northern coast there fast ice in the archipelago, 5–20 cm thick in the west and up to 35 cm thick in the east. Further out is thin very open ice in the east and open water in the west. At the southern shore there is new ice in places. In Lake Saimaa there is 15–40 cm thick fast ice.
With moderate frost and severe frost at places in the east ice formation is expected the coming day. The ice will drift in southerly directions.

Gulf of Riga

In Väinameri there is 10–30 cm thick fast ice near the coasts. Farther out and on the fairway there is very close ice or level ice. In the Bay of Pärnu, there is 10-20 cm thick fast ice to the line Liu – Voiste followed by very close ice to a line from Manilaid to Häädemeste. Further out is very open to close ice to the longitude of Kihnu. Off the northern coast of the Gulf of Riga there is thin drifting ice and in Irben Strait there is thin, very open drift ice. Along the western coast is new ice.
With mostly slight frost some ice formation is expected the coming day. The ice will drift to the south.

Central Baltic

New ice is present along the Swedish coast, the Kalmarsund and along the coast of Öland. At the Latvian coast very open and thin ice is present in the harbor of Liepaja while the harbor of Ventspils is ice free.
With temperatures around or slightly above 0 °C no larger changes are expected.

Southeastern Baltic

New ice and thin very close ice covers the Vistula Lagoon and the Curonian Lagoon.

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

Southern Baltic
New ice is present in the eastern archipelagos along the Swedish coast. With temperatures around 0°C no larger changes are expected.

Western Baltic
New ice is present in sheltered coastal areas. With light frost at places at night and else temperatures around or slightly above 0 °C no larger changes are expected but some melt in non-sheltered areas with some wave action.

Skagerrak, Kattegat, Belts and Sound
In the Svinesund there is 15–30 cm thick open ice, in the Mossesundet there is a lead in very close, 15–30 cm thick ice, in Vestfjorden at Tønsberg and the inner harbour there is 10–15 cm thick fast ice. Near Kragerø there is new ice and 10–15 cm thick fast ice. New ice can also be found in other Norwegian Fjords. Along the Swedish and Danish coast, there is new ice in few sheltered areas. With mostly light frost along the coast in the northern Skagerrak some new ice formation is possible. Else no larger changes are expected with some melt in the Belts and Sound.

Swedish Lakes
Thin level ice is present in the southern part and in sheltered areas elsewhere in Lake Vänern. New ice is forming at sea in the west and north. With light frost to temperatures around 0 °C some new ice will form but overall no larger changes are expected.

North Sea
New ice is present in the Limfjord and in few sheltered or shallow places along the coast. With temperatures mostly above 0 °C the ice will slowly melt.

Dr. W. Aldenhoff

Restrictions to Navigation

	Harbour/District	At least dwt/hp/kW	Ice Class	Begin
Estonia	Pärnu	1600 kW	1C (Lloyd's)	22.12.
Finland	Tornio, Kemi and Oulu	2000 dwt	IA	07.01.
	Tornio, Kemi and Oulu	**2000/4000 dwt**	**IA Super/IA**	**13.01.**
	Vaasa	2000 dwt	IA	10.01.
	Raahe, Kalajoki, Kokkola and Pietarsaari	2000 dwt	IA	07.01.
	Raahe, Kalajoki, Kokkola and Pietarsaari	**4000 dwt**	**IA**	**13.01.**
	Pori and Rauma	2000 dwt	II	01.01.
	Pori and Rauma	**2000 dwt**	**I**	**13.01.**
	Kaskinen,Kristiinankaupunki and Uusikaupunki	2000 dwt	I	10.01.
	Naantali, Turku, Eckerö, Maarianhamina and Langnäs	**2000 dwt**	**II**	**13.01.**
	Taalintehdas, Förby, Koverhar, Lappohja, Inkoo, Kantvik, Helsinki, Sköldvik and Mussalo	2000 dwt	II	09.12.
	Taalintehdas, Förby, Koverhar, Lappohja, Inkoo and Kantvik	**2000 dwt**	**II**	**13.01.**
	Hanko	**2000 dwt**	**II**	**13.01.**
	Loviisa, Kotka and Hamina	2000 dwt	I	07.01.
	Lake Saimaa	2000 dwt	IA	08.01.
	Saimaa Canal	2000 dwt	IA	08.01.
Russia	Vyborg	-	Ice 1	30.12.
	Vysotsk	-	Ice 1	30.12.

	Ust-Luga	-	Ice 1	29.12.
Sweden	Karlsborg and Lulea	2000 dwt	IA	09.01.
	Karlsborg	**4000 dwt**	**IA (4000 t)**	**14.01.**
	Lulea	**4000 dwt**	**IA**	**14.01.**
	Haraholmen and Skelleftehamn	2000 dwt	IA	09.01.
	Haraholmen and Skelleftehamn	**4000 dwt**	**IA**	**14.01.**
	Rundvik and Husum	2000 dwt	IC	04.01.
	Örnsköldsvik	2000 dwt	IC	18.12.
	Rundvik, Husum and Örnsköldsvik	**2000 dwt**	**IB**	**17.01.**
	Holmsund	2000 dwt	IB	04.01.
	Angermanälven	2000 dwt	IB	18.12.
	Härnösand, Söråker, Sundsvall, Stocka, Hudiksvall, Iggesund, Söderhamn, Orrskär and Norrsundet	2000 dwt	IC	04.01.
	Härnösand, Söråker, Sundsvall, Stocka, Hudiksvall, Iggesund, Söderhamn, Orrskär and Norrsundet	**2000 dwt**	**IB**	**17.01.**
	Gävle	2000/4000 dwt	IC/II	04.01.
	Gävle	**2000 dwt**	**IB**	**17.01.**
	Skutskär, Öregrund and Hargshamn	2000 dwt	IC	04.01.
	Skutskär and Öregrund	**2000 dwt**	**IB**	**17.01.**
	Hallstavik and Grisslehamn	2000 dwt	II	04.01.
	Kappelskär, Stockholm, Nynäshamn and Södertälje	2000 dwt	IB	04.01.
	Köping and Västeras	2000 dwt	IC	04.01.
	Balsta	**2000 dwt**	**IB**	**14.01.**
	Balsta	2000 dwt	II	04.01.
	Oxelösund, Norrköping, Västervik, Oskarshamn, Mönsteras, Kalmar, Degerhamn, Berkvara and Karlskrona	2000 dwt	II	04.01.
	Stenungsund and Uddevalla	2000 dwt	IC	04.01.
	Trollhätte Canal and Göta Älv Vänern	2000 dwt	IC	04.01.
	Trollhätte Canal and Göta Älv Vänern	**2000 dwt**	**IB**	**16.01.**

Estonia

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

Finland/Sweden

The transit traffic west of Holmöarna is temporarily prohibited. Kalmarsund and 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, KONTIO, OTSO and URHO assist in the Bay of Bothnia. ATLE and POLARIS assist in the Quark. ZEUS assists in the Sea of Bothnia. VOIMA and CALYPSO assist the Gulf of Finland. SISU is heading to the Bay of Bothnia. ALE, EMBLA and SCANDICA assist in Vänern.

Norway

Mossesundet (Moss): Icebreaker assistance can only be given to vessels of special ice class and of special size. (05.01.24)
Drammensfjorden (Drammen), Skåtøysund (Kragerø), Kilsfjorden (Kragerø) and Hellefjorden (Kragerø): Icebreaker assistance can only be given to vessels suitable for navigation in ice and of special size. (08.01.24)
Langårsund (Kragerø): Navigation temporarily closed. (08.01.24)
Farsund: Icebreaker assistance can only be given to vessels suitable for navigation in ice and of special size. (11.01.24)

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

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

Germany, 10.01.2024

Wismar – Walfisch	4001

Estonia, 11.01.2024

Kunda, port and bay	3000
Paernu, port and bay	8345
Shipp. route from Paernu to Irben Strait	4000
Irben Strait	2000
Moonsund	5353

Finland, 11.01.2024

Röyttä – Etukari	8446
Etukari – Ristinmatala	6856
Ajos – Ristinmatala	6356
Ristinmatala – Kemi 2	4356
Kemi 2 – Kemi 1	5876
Sea area SW of Kemi 1	5876
Kemi 2 – Ulkokrunni – Virpiniemi	7356
Oulu harbours – Kattilankalla	8446
Kattilankalla – Oulu 1	7756

Sea area SW of Oulu 1	5756
High Sea N of the latitude of Marjaniemi	5876
Raahe harbour – Heikinkari	7346
Heikinkari – Raahe lighthouse	5346
Raahe lighthouse – Nahkiainen	5356
Latitude Marjaniemi – Ulkokalla, Sea	5376
Rahja harbour – Välimatala	7756
Vaelimatala to line Ulkokalla – Ykskivi	5756
Sea betw. lat. of Ulkokalla –Pietarsaari	5376
Ykspihlaja – Repskär	8346
Repskär – Kokkola lighthouse	7756
Sea area off Kokkola lighthouse	5756
Pietarsaari – Kallan	8346
Sea area off Kallan	5756
Sea lat. Pietarsaari – NE Nordvalen	5776
Sea area ENE of Nordvalen	5746
Sea area Nordvalen to W of Norrskär	5746
Vaskiluoto – Ensten	8346
Ensten – Vaasa lighthouse	7346
Vaasa lighthouse – Norrskär	5746
Sea area SW of Norrskär	5746
Kaskinen – Sälgrund	8346
Sea area off Sälgrund	7746
High sea from N to latitude Yttergrund	3036
Pori harb. to line Pori lighth. – Säppi	5745
Sea W of line Pori lighthouse – Säppi	0//5
Rauma, Harbour – Kylmäpihlaja	8745
Kylmäpihlaja – Rauma lighthouse	5145
Uusikaupunki harbour – Kirsta	8746
Kirsta – Isokari	5146
Isokari – Sandbäck	5146
Maarianhamina – Marhällan	5142
Naantali and Turku – Rajakari	5142
Rajakari – Lövskär	5142
Lövskär – Korra	5142
Korra – Isokari	5142
Lövskär – Berghamn	3002
Stora Sottunga – Ledskär	5142
Sea area at Rödhamn	2001
Lövskär – Grisselborg	5142
Hanko – Vitgrund	5142
Koverhar – Hästö Busö	5145
Hästö Busö – Ajax	2005
Inkoo a. Kantvik – sea area Porkkala	8745
Sea area at Porkkala	1105
Sea area S of Porkkala lighthouse	1105
Helsinki harbours – Harmaja	8145
Harmaja – Helsinki lighthouse	2125
Fairway Helsinki – Porkkala – Rönnskär	5145
Vuosaari harbour – Eestiluoto	8145
Eestiluoto – Helsinki lighthouse	2125
Porvoo harbours – Varlax	8145
Varlax – Porvoo lighthouse	2125
Porvoo lighthouse – Kalbådagrund	0//5
Valko Harbour – Täktarn	8746
Archipelago fairway Boistö – Glosholm	2126
Archipelago fairway Glosholm–Helsinki	8145
Kotka – Viikari	8745
Viikari – Orrengrund	2125
Orrengrund – Tiiskeri	2126
Tiiskeri – Kalbådagrund	0//5
Hamina – Suurmusta	8746
Suurmusta – Merikari	8746
Merikari – Kaunissaari	2126

Latvia, 11.01.2024

Port of Riga	3112
Riga to the Cape of Mersrags, fairway	1000
Mersrags to Irben Strait, fairway	1000
Irben Strait, fairway	2000
Irben Strait to the port of Ventspils	1000
Port of Liepaya	2000

Norway, 11.01.2024

Svinesund – Halden	33//
Mossesund	9856
Drammensfjord	6315
Tønsberg, inner harbour	82/3
Vestfjord (Tønsberg)	82/3
Larviksfjorden (Stavern – Larvik)	121/
Jomfrulandsrenna	3021
Skåtøysund (Kragerø)	8145
Langårsund (Kragerø)	8148
Kragerøfjord	3021

Russian Federation, 11.01.2024

Port of St. Petersburg	88//
St. Petersburg – E-point island Kotlin	88//
E-point Kotlin – long. lighth. Tolbuhkin	63//
Lighth. Tolbuhkin – lighth. –Šepelevskij	42//
Lighthouse Šepelevskij – island Sescar	42//
Vyborg, port and bay	83//
Island Vichrevoj – Island Sommers	42//
Strait Bjerkesund	82//
E-point Bol'šoj Ber'ozovyj – Šepelevskij	42//
Luga bay	41//
Appr. Luga bay – line Moš.-Šepel.	41//

Sweden, 11.01.2024

Karlsborg – Malören	8546
Sea area off Malören	6456
Luleå – Björnklack	8446
Björnklack – Farstugrunden	5476
E and SE of Farstugrunden	5476
Sandgrönn fairway	8446
Rödkallen – Norströmsgrund	5476
Haraholmen – Nygrån	8446
Sea area off Nygrån	1106
Skelleftehamn – Gåsören	8346
Sea area off Gåsören	5276
Sea area off Bjuröklubb	5276
NE of Nordvalen	2226
SW of Nordvalen	2226
Western Quark (W of Holmöarna)	5356
Umeå – Väktaren	5246
SE of Väktaren	5256
NE and SE of Sydostbrotten	1106
Fairway to Husum	4046
Örnsköldsvik – Hörnskaten	8346
Hörnskaten – Skagsudde	8346

Sea area off Skagsudde	1106
Fairway W of Ulvöarna	5146
Ångermanälven north Sandö Bridge	8344
Ångermanälven south Sandö Bridge	8344
Härnösand – Härnön	8344
Sundsvall – Draghällan	8346
Draghällan – Åstholmsudde	8346
Off Åstholmsudde and Brämön	4046
Hudiksvallfjärden	8246
Iggesund – Agö	8246
Sea area off Agö	2026
Sandarne – Hällgrund	8146
Sea area off Hällgrund	2026
Ljusnefjärden – Storjungfrun	8146
Sea area off Storjungfrun	2026
Gävle – Eggegrund	5236
Sea area off Eggegrund	2026
Sea area off Orskär	2026
Öregrundsgrepen	5146
Hallstavik – Svartklubben	8246
Trälhavet – Furusund – Kapellskär	5146
Stockholm – Trälhavet – Klövholmen	5146
Klövholmen – Sandhamn	4046
Trollharan – Langgarn	4046
Nynäshamn – Landsort	4046
Köping – Kvicksund	8344
Västerås – Grönsö	8344
Grönsö – Södertälje	5244
Stockholm – Södertälje	5244
Södertälje – Fifong	5144
Fifong – Landsort	4046
Norrköping – Hargökalv	5146
Järnverket-Lillhammaren – N Kränkan	4046
Västervik – Marsholmen – Idö	4046
Blå Jungfrun – Kalmar	4046
Kalmar – Utgrunden	4046
Utgrunden – SW Ölands S. Udde	4046
Karlskrona – Aspö	4046
Uddevalla – Stenungsund	4046
Vänersborgsviken	5146
Fairway through Lurö archipelago	5146
Fairway to Gruvön	5146
Fairway to Karlstad	5146
Fairway to Kristinehamn	5146
Fairway to Otterbäcken	5146
Fairway to Lidköping	5146