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BUNDESAMT FÜR SEESCHIFFFAHRT UND HYDROGRAPHIE

Eisbericht Nr. 48

Amtsblatt des BSH

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Übersicht

In der Bottenwiek befindet sich in den nördlichen Schären bis 60 cm dickes, in den südlichen bis 40 cm dickes Festeis. Entlang der schwedischen Küste befindet sich eine schmale Rinne und entlang der finnischen Küste kommt sehr lockeres bis dichtes Eis vor. Auf See treibt zumeist 20–50 cm dickes, sehr dichtes Eis, örtlich aufgepresst und übereinandergeschoben. An den Küsten von Norra Kvarken liegt bis 40 cm dickes Festeis. Auf See treibt 5-30cm dickes, sehr lockeres bis dichtes Eis. An den Küsten der Bottensee kommt im Osten bis 40 cm und im Westen bis 25 cm dickes Festeis vor. Davor treibt im Westen meist sehr lockeres Eis und im Osten ein dünnes Band sehr dichtes Eis. Das Schärenmeer ist mit ebenen Eis bedeckt. Im Osten und Norden des Finnischen Meerbusens liegt bis 45 cm dickes Festeis und ganz im Osten treibt auf See sehr dichtes, bis 30 cm dickes Eis. Im Rigaischen Meerbusen kommt im Nordosten bis zu 35 cm dickes Festeis vor und entlang der nördlichen Küste treibt sehr dichtes Treibeis. Ansonsten kommt im Mälaren, Vänern und Norwegischen Fjords etwas dickeres Eis vor. Dünnes Eis, Neueis oder Resteis ist in geschützten Bereichen örtlich bis in die Nordsee hinein zu finden.

Overview

In the Bay of Bothnia there is fast ice in the archipelagos, up to 60 cm thick in the north and up to 40 cm thick in the south. At sea there is mostly 20–50 cm thick, very close, partly ridged and rafted ice. Along the Swedisch coast there is a narrow lead and along the Finnish coast there is wide area with very open and close ice. In the Quark there is up to 40 cm thick fast ice at the coasts and at sea there is 5-30cm thick very open to close ice. At the coasts of the Sea of Bothnia there is fast ice, up to 40 cm thick in the east and up to 25 cm thick in the west. Further out there is very open to open drift ice in the west and a narrow band of very close ice in the east. Level ice covers the Archipelago Sea. There is up to 45 cm thick fast ice at the eastern and northern coast of the Gulf of Finland. In the easternmost part there is up to 30 cm thick very close ice at sea. In the Gulf of Riga there is up to 35 cm thick fast ice in the northeast and along the northern coast there is very close drift ice. Else thicker ice is present in the Mälaren, Vänern and Norwegian fjords and thin ice, new ice or ice remnants are found in some sheltered areas all the way to the North Sea.

Bay of Bothnia

In the archipelagos of the Bay of Bothnia there is fast ice with some consolidated ice further out; 30–50 cm thick in the northwest, 40–60 cm thick in the northeast and up to 25–40 cm thick in the southern part. In the northeast the fast ice stretches out to Malören, Kemi-3, Oulu-3 and Raahe. Outside the fast ice, with adjoining smaller areas of very close ice, in the northwest there is a narrow lead. This lead which widens somewhat south of 65°N and then stretches to south of Blackkallen. Outside the eastern fast ice there is a broader region of very open to close ice from about outside Raage to the

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Quark. At Sea, there is mostly very close, ridged and rafted, 20–50 cm thick drift ice. 10–30 cm thick, very close ice is present in the northeast and 20-40cm thick very close ice in the south.
With strong frost ice formation and ice growth will occur. The ice will drift slightly to the south.

The Quark

There is 20–40 cm thick fast ice in the Vaasa archipelago and out to about Ensten. Along the Swedish coast there is up to 30 cm thick fast ice. At sea, there is 5–30 cm thick drift ice of varying concentration, the southern sea area is ice free.
With temperatures down to -10°C ice formation and growth is expected. The ice will drift in slowly in mostly southerly directions.

Sea of Bothnia

Along the coasts there is mostly fast ice in the inner bays; 15–40 cm thick in the east and 5–30 cm thick in the west. On Ångermanälven, there is 15–25 cm thick fast ice. Outside the Swedish coast there is a wide band of 5-15cm thick very open ice. Off the Finnish coast is a 2–10 NM wide band of 5-30cm thick, very close ice with new ice further out.
With light to moderate frost some ice formation is expected.

Archipelago Sea and Åland Sea

In the Archipelago Sea there is 20–40 cm thick fast ice in the inner archipelago of the Finnish coast and 5–15 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 along the coast.
With temperatures around or slightly below 0 °C no larger changes are expected.

Northern Baltic

In Lake Mälaren there is 5–20 cm thick fast ice. At the outer Swedish coast there is 5–10 cm thick fast ice or level ice and some new ice slightly further out.
With temperatures around or slightly above 0 °C no larger changes are expected.

Gulf of Finland

From St. Petersburg to Kotlin there is 30–40 cm thick fast ice. Further out is very close, partly rafted 10–30 cm thick ice to about the line Šepelevskij – Seskar – Kotka. Further west to about Moščnyj, there is open drift ice. From Šepelevskij to north of Narva there is a belt of 5-20cm thick close ice along the coast. In the Bjerkesund there is 10–20 cm thick fast and in the Vyborg Bay there is 15–35 cm thick fast ice. Along the northern coast there fast ice in the archipelago, 10–35 cm thick in the west and up to 45 cm thick in the east. Further out, there a band of very close ice with brash ice barriers at places. In the southwest there is very open ice stetching along the coast from Paldiski to Väinameri.
With temperatures mostly around 0 °C the ice will drift to the southwest but else no larger changes are expected.

Gulf of Riga

In Väinameri there is 25–35 cm thick fast ice near the coasts. Farther out and on the fairway there is very close, 5–20 cm thick ice. Along the coast of Saarema there is a band of very close ice. In the Bay of Pärnu, there is 25–35 cm thick fast ice to the line Liu – Tahkuranna followed by very close, partly ridged ice to a line from southern point of Kihnu to Kabli. In the port of Riga there is open water.
With temperatures around 0 °C no larger changes, expect a slow southward ice drift are expected.

Central Baltic

Thin level ice is present along the Swedish coast. In the Kalmarsund there is very close, thin ice south of Kalmar and very open ice slightly further north. New ice is present at few places along the coasts of Öland and around Gotland.
With temperatures above 0°C some ice melt is expected.

Southeastern Baltic

15–20cm thick fast ice covers the Curonian Lagoon and thin ice of varying concentrations covers the Vistula Lagoon. With temperatures above 0°C some ice melt is expected.

Southern Baltic
New ice is present in the archipelagos along the Swedish coast. Around Karlskrona there is some thin level ice.

With expected temperatures above 0°C, some further ice melt is expected.

Western Baltic
Some thin ice remnants are present along the coast of the Szczecin Lagoon.

With temperatures around 5°C most of the ice will vanish.

Skagerrak, Kattegat, Belts and Sound
In the Svinesund there is 15–30 cm thick open ice, in the Mossesundet and Drammensfjord there is a lead in very close, mostly thicker than 30 cm 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 some sheltered areas.
With temperatures mostly above 0°C some ice melt is expected.

Swedish Lakes
In Lake Vänern 5–20 cm thick fast ice is present in northern bays and 10–30 cm thick fast ice in southern bays. Further out along the coast there is mostly up to 15cm thick ice very open to open ice.

Along the coast southeast of Åmal, there is very close ice. At sea, there is open water.
With temperatures mostly above 0 °C some ice melt is expected with only minimal ice drift.

North Sea
Some ice remnants may be present at a few places in the Limfjord..

With temperatures around +5°C the remaining ice will melt.

Dr. J.Holfort

Restrictions to Navigation

	Harbour/District	At least dwt/hp/kW	Ice Class	Begin
Estonia	Pärnu	1600 kW	1C (Lloyd's)	22.12.
	Pärnu	**1800 kW**	**1B (Lloyd's)**	**27.01.**
	Kunda and Sillamäe	**1200 kW**	**II (Lloyd's)**	**04.02.**
Finland	Tornio, Kemi and Oulu	2000/4000 dwt	IA Super/IA	13.01.
	Vaasa	2000 dwt	IA	10.01.
	Raahe, Kalajoki, Kokkola and Pietarsaari	4000 dwt	IA	13.01.
	Pori and Rauma	2000 dwt	I	13.01.
	Kaskinen, Kristiinankaupunki and Uusikaupunki	**2000 dwt**	**IB**	**23.01.**
	Eckerö, Maarianhamina and Langnäs	2000 dwt	II	13.01.
	Naantali, Turku and Mussalo	**2000 dwt**	**I**	**23.01.**
	Mussalo	**2000 dwt**	**IB**	**29.01.**
	Helsinki and Sköldvik	2000 dwt	II	09.12.
	Helsinki and Sköldvik	**2000 dwt**	I	**29.01.**
	Taalintehdas, Förby, Koverhar, Lappohja, Inkoo and Kantvik	2000 dwt	I	13.01.
	Hanko	2000 dwt	II	13.01.
	Loviisa, Kotka and Hamina	2000 dwt	I	07.01.
	Loviisa, Kotka and Hamina	**2000 dwt**	**IB**	**29.01.**
	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	4000 dwt	IA (2000 t)	14.01.
	Lulea	4000 dwt	IA	14.01.
	Haraholmen and Skelleftehamn	4000 dwt	IA	14.01.
	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	IB	17.01.
	Gävle	2000 dwt	IB	17.01.
	Hargshamn	2000 dwt	IC	04.01.
	Skutskär and Öregrund	2000 dwt	IB	17.01.
	Hallstavik and Grisslehamn	2000 dwt	IC	04.01.
	Kappelskär, Stockholm, Nynäshamn and Södertälje	2000 dwt	II	04.01.
	Köping and Västeras	2000 dwt	IB	04.01.
	Balsta	2000 dwt	IB	14.01.
	Oxelösund, Norrköping, Västervik, Oskarshamn, Mönsteras, Kalmar, Degerhamn, Berkvara, Karlskrona,	2000 dwt	II	04.01.

	Stenungsund and Uddevalla			
	Trollhätte Canal and Göta Älv	2000 dwt	IB	16.01.
	Vänern	2000 dwt	IB	16.01.

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

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. 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, BRAGE VIKING, ODEN, FREJ, KONTIO, OTSO and URHO assist in the Bay of Bothnia. POLARIS, ATLE and SISU assist in the southern Bay of Bothnia and in the Quark. ZEUS and BALTICA assist in the Sea of Bothnia. VOIMA, CALYPSO and FENNICA assist the Gulf of Finland. ALE, EMBLA, SCANDICA and TOFTE 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), 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)

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, 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

Estonia, 24.01.2024

Paernu, port and bay	8355
Moonsund	7353

Finland, 24.01.2024

Röyttä – Etukari	8446
Etukari – Ristinmatala	6346
Ajos – Ristinmatala	6846
Ristinmatala – Kemi 2	5356
Kemi 2 – Kemi 1	5356
Sea area SW of Kemi 1	5356
Kemi 2 – Ulkokrunni – Virpiniemi	7356
Oulu harbours – Kattilankalla	8446
Kattilankalla – Oulu 1	7356
Sea area SW of Oulu 1	5356
High Sea N of the latitude of Marjaniemi	5476
Raahe harbour – Heikinkari	8446
Heikinkari – Raahe lighthouse	7876
Raahe lighthouse – Nahkiainen	5476
Latitude Marjaniemi – Ulkokalla, Sea	5476
Rahja harbour – Välimatala	8846
Vaelimatala to line Ulkokalla – Ykskivi	4876
Sea betw. lat. of Ulkokalla –Pietarsaari	5476
Ykspihlaja – Repskär	8846
Repskär – Kokkola lighthouse	7876
Sea area off Kokkola lighthouse	4856
Pietarsaari – Kallan	8846
Sea area off Kallan	7876
Sea lat. Pietarsaari – NE Nordvalen	5876
Sea area ENE of Nordvalen	4746
Sea area Nordvalen to W of Norrskär	4746
Vaskiluoto – Ensten	8346
Ensten – Vaasa lighthouse	4776
Vaasa lighthouse – Norrskär	4776
Sea area SW of Norrskär	1306
Kaskinen – Sälgrund	8346
Sea area off Sälgrund	5746
Pori harb. to line Pori lighth. – Säppi	5776
Sea W of line Pori lighthouse – Säppi	4046
Rauma, Harbour – Kylmäpihlaja	8846
Kylmäpihlaja – Rauma lighthouse	7776
Sea area W of Rauma lighthouse	4046
Uusikaupunki harbour – Kirsta	8846
Kirsta – Isokari	7776
Isokari – Sandbäck	0//6
Sea area N of Sälskär	0//5
Sea area N of Märket	0//5
Sea area W of Märket	0//5
Maarianhamina – Marhällan	5145
Naantali and Turku – Rajakari	8846
Rajakari – Lövskär	8846
Lövskär – Korra	8846
Korra – Isokari	5776
Lövskär – Berghamn	5146
Berghamn – Stora Sottunga	1006
Stora Sottunga – Ledskär	5146

Sea area at Rödhamn	1006
Lövskär – Grisselborg	5146
Grisselborg – Norparskär	1006
Hanko harbours – Hanko 1	5765
Hanko – Vitgrund	5142
Vitgrund – Utö	5145
Koverhar – Hästö Busö	7766
Hästö Busö – Ajax	5766
Inkoo a. Kantvik – sea area Porkkala	7766
Helsinki harbours – Harmaja	7765
Harmaja – Helsinki lighthouse	5765
Fairway Helsinki – Porkkala – Rönnskär	7765
Vuosaari harbour – Eestiluoto	7765
Eestiluoto – Helsinki lighthouse	5765
Porvoo harbours – Varlax	8745
Varlax – Porvoo lighthouse	5765
Porvoo lighthouse – Kalbådagrund	0//5
Valko Harbour – Täktarn	8346
Archipelago fairway Boistö – Glosholm	5766
Archipelago fairway Glosholm–Helsinki	7765
Kotka – Viikari	8346
Viikari – Orrengrund	7766
Orrengrund – Tiiskeri	5766
Tiiskeri – Kalbådagrund	0//6
Hamina – Suurmusta	8346
Suurmusta – Merikari	7766
Merikari – Kaunissaari	5766

Latvia, 24.01.2024

Port of Riga	1000

Norway, 24.01.2024

Svinesund – Halden	33//
Mossesund	9956
Drammensfjord	9955
Tønsberg, inner harbour	82/3
Vestfjord (Tønsberg)	82/3
Larviksfjorden (Stavern – Larvik)	121/
Langårsund (Kragerø)	8248

Russian Federation, 24.01.2024

Port of St. Petersburg	89//
St. Petersburg – E-point island Kotlin	89//
E-point Kotlin – long. lighth. Tolbuhkin	88//
Lighth. Tolbuhkin – lighth. –Šepelevskij	53//
Lighthouse Šepelevskij – island Sescar	53//
Island Sescar – Island Sommers	43//
Vyborg, port and bay	83//
Island Vichrevoj – Island Sommers	53//
Strait Bjerkesund	82//
E-point Bol'šoj Ber'ozovyj – Šepelevskij	53//
Luga bay	53//
Appr. Luga bay – line Moš.-Šepel.	42//

Sweden, 24.01.2024

Karlsborg – Malören	8546
Sea area off Malören	8446
Luleå – Björnklack	8446
Björnklack – Farstugrunden	5356
E and SE of Farstugrunden	5356
Sandgrönn fairway	8446
Rödkallen – Norströmsgrund	8446
Haraholmen – Nygrån	8446
Sea area off Nygrån	5476
Skelleftehamn – Gåsören	8346
Sea area off Gåsören	8346
Sea area off Bjuröklubb	8346
NE of Nordvalen	4336
SW of Nordvalen	4336
Western Quark (W of Holmöarna)	4336
Umeå – Väktaren	4336
SE of Väktaren	4336
Fairway to Husum	3356
Örnsköldsvik – Hörnskaten	8346
Hörnskaten – Skagsudde	8346
Sea area off Skagsudde	3356
Fairway W of Ulvöarna	5146
Sea area E of Ulvöarna	2226
Ångermanälven north Sandö Bridge	8344
Ångermanälven south Sandö Bridge	8344
Härnösand – Härnön	5244
Sea area off Härnö	2226
Sundsvall – Draghällan	8346
Draghällan – Åstholmsudde	5146
Off Åstholmsudde and Brämön	8246
Hudiksvallfjärden	8346
Iggesund – Agö	8346
Sea area off Agö	2226
Sandarne – Hällgrund	8346
Sea area off Hällgrund	2226
Ljusnefjärden – Storjungfrun	8346
Sea area off Storjungfrun	2226
Gävle – Eggegrund	8346
Sea area off Eggegrund	2226
Öregrundsgrepen	8246
Hallstavik – Svartklubben	8246
Trälhavet – Furusund – Kapellskär	8246
Kapellskär – Söderarm	4046
Stockholm – Trälhavet – Klövholmen	8246
Klövholmen – Sandhamn	4046
Trollharan – Langgarn	4046
Mysingen	4046
Köping – Kvicksund	8344
Västerås – Grönsö	8344
Grönsö – Södertälje	8344
Stockholm – Södertälje	8344
Södertälje – Fifong	8244
Fifong – Landsort	8246
Norrköping – Hargökalv	8246
Hargökalv – Vinterklasen – N Kränkan	5246
Oxelösund harbour	5136
Järnverket-Lillhammaren – N Kränkan	8246
Västervik – Marsholmen – Idö	5246
Blå Jungfrun – Kalmar	5136
Kalmar – Utgrunden	5136
Fairway to Halmstad	1000
Uddevalla – Stenungsund	5136
Stenungsund – Hätteberget	5046
Vänersborgsviken	8346
Fairway through Lurö archipelago	5256

Fairway to Gruvön	8346
Fairway to Karlstad	8346
Fairway to Kristinehamn	8346
Fairway to Otterbäcken	8246
Fairway to Lidköping	8346