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BUNDESAMT FÜR SEESCHIFFFAHRT UND HYDROGRAPHIE

Eisbericht Nr. 78

Amtsblatt des BSH

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Übersicht

In der Bottenwiek befindet sich in den nördlichen Schären bis 70 cm dickes, in den südlichen bis 50 cm dickes Festeis. Auf See treibt im Norden zumeist 30–70 cm dickes, sehr dichtes, örtlich aufgepresstes und übereinandergeschobenes Eis, das teilweise schwer zu passieren ist. Weiter südlich kommt meist sehr lockeres Eis vor. An den Küsten von Norra Kvarken liegt bis 50 cm dickes Festeis und auf See liegt im Westen 10–40 cm dickes, sehr dichtes Eis. An den Küsten der Bottensee kommt im Osten bis 55 cm und im Westen bis 30 cm dickes Festeis vor. Weiter außerhalb kommt im Osten meist offenes Wasser vor. Das Schärenmeer ist größtenteils mit ebenem Eis oder Festeis bedeckt. Im Osten und Norden des Finnischen Meerbusens liegt bis 55 cm dickes Festeis. Im Norden treibt nördlich von 60°10‘N meist sehr dichtes, 10–35 cm dickes Eis und im Südosten kommt offenes Wasser vor. Im Rigaischen Meerbusen kommt im Nordosten zu 35 cm dickes, morsches Festeis vor. Auf See treibt im Norden entlang der Küste sehr dichtes Eis. Ansonsten kommt im Mälaren, Vänern, norwegischen Fjorden und entlang der schwedischen Küste nördlich von Kalmar örtlich dünnes Eis vor, teilweise aber auch bis 30 cm dickes Festeis

Overview

In the Bay of Bothnia there is fast ice in the archipelagos, up to 70 cm thick in the north and up to 50 cm thick in the south. At sea in the north, there is mostly 30–70 cm thick, very close, ridged and rafted ice that is difficult to force at places. Further south there is mostly very open ice. In the Quark there is up to 50 cm thick fast ice at the coasts and at sea in the west there is 10–40 cm thick, very close ice. At the coasts of the Sea of Bothnia there is fast ice, up to 55cm thick in the east and up to 30 cm thick in the west. Outside the eastern coast there is mainly open water. Level ice or fast ice covers large parts of the Archipelago Sea. There is up to 55 cm thick fast ice at the eastern and northern coast of the Gulf of Finland. In the northern part there is very close, 10–35 cm thick drift ice north of 60°10’N and in the southeast there is mostly open water at sea. In the Gulf of Riga there is up to 35 cm thick rotten fast ice in the northeast and very close ice is present off the coast in the north. Else thin ice is present at places, but also up to 30cm thick fast ice, in the Mälaren, Vänern, Norwegian fjords and along the Swedish coast north of Kalmar.

Bay of Bothnia

In the archipelagos of the Bay of Bothnia there is fast ice; 40–70 cm thick in the north and up to 25–50 cm thick in the south. In the northeast the fast ice stretches out to Malören, Kemi-3, Oulu-3 and Raahe lighthouse. At sea north of about 64°35’N and east of 22°20’E, there is mostly 30–70 cm thick, ridged and rafted ice; the field is very difficult to force at places. Further west and north of 64°50’N there is rafted, 20-50cm thick very close ice. Further south there is mostly 10-35cm thick very open ice with smaller areas of close and very close ice in the north and open ice in the south-

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west.
With light frost a light breeze from more northerly directions will lead to slowly falling temperatures. Some ice formation is expected, but overall no larger changes to the ice distribution are expected.

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. Off the Swedish coast, there is a 15-20nm wide region with 15–50 cm thick, rafted and ridged, very close ice Else at sea there is mostly very open ice with smaller areas of ice of higher concentration towards both coasts.
With light frost and only weak winds, some new ice formation is expected, but else no larger changes to the ice distribution are expected.

Sea of Bothnia

Along the coasts there is mostly fast ice in the inner bays; 20–55 cm thick in the east and 5–30 cm thick in the west. On Ångermanälven, there is 15–40 cm thick fast ice. Off the coast in the east there is open water with very open ice at places. North of about 63°00’ N towards the Quark there is very close, 10–40 cm thick ice outside the western coast.
With at most light frost and a mostly light breeze some new ice may form, but in general no larger change is expected.

Archipelago Sea and Åland Sea

In the Archipelago Sea there is 25–50 cm thick fast ice in the inner archipelago of the Finnish coast. Mostly 10–30 cm thick, fast ice or level ice with some cracks is present in the outer archipelagos to the Åland Islands. In the Åland Sea there is 5–20 cm thick fast or level ice in bays along the coast.
With light frost near the coasts and a variable mostly light breeze some new ice may form over night, but in general no larger change is expected.

Northern Baltic

In Lake Mälaren there is 10–30 cm thick fast ice. Along the outer Swedish coast there is 5–15 cm thick fast ice or thin level ice.
With temperatures above 0 °C during day and light frost at night no larger changes are expected.

Gulf of Finland

Along the northern coast there is fast ice in the archipelago, 10–40 cm thick in the west and up to 60 cm thick in the east. In the Vyborg Bay there is 35-45cm thick fast ice and in the Bjerkesund there is 20–45 cm thick fast ice; very close ice is present in both entrances. From St. Petersburg to the longitude of lighthouse Tolbuchin there is 40–50 cm thick fast ice. Off the northern fast ice there is 10–25 cm thick drift ice of varying concentrations in the west and in the east there is 10–35 cm thick and in placed ridged,close to very close ice reaching out to about the line Porvoo lighthouse – Sommers – Seskar and further east to Stirsudden. In the southeastern part there is open water at sea. In Lake Saimaa there is 30–50 cm thick ice.
With light frost and weak winds, some new ice may form, but else no larger changes are expected.

Gulf of Riga

In Väinameri there is 25–35 cm thick rotten fast ice near the coasts and very close, 10–30 cm thick ice at sea with some areas of open water. Off the south coast of Saaremaa there is very close, 5–20 cm thick ice with areas of open ice or open water. In the Bay of Pärnu, there is 20–40 cm thick rotten fast ice to about the line Lindi – Tahkuranna and further out, up to the line Sorgu shoal – Rannametsa, there is very close ice changing to open ice in the east.
With temperatures around 0 °C during day and light frost at night no larger changes are expected.

Central Baltic

5-15cm thick ice of varying concentrations is present in sheltered areas along the Swedish coast north of Kalmar.
With temperatures above 0 °C during day and light frost at night some ice melt is possible.

Skagerrak and Kattegat

In some sheltered Norwegian fjords and bays is thin level ice or fast ice notably near Tønsberg, Kragerø, Svinesund, and Drammensfjord.
With temperatures above 0 °C during day and light frost at night some ice melt is possible.

Swedish Lakes

In Lake Vänern 5–20 cm thick fast ice is present in places at the coasts. In the Dalbosjön there is 5–20 cm thick, very close drift ice in the northwestern part. Else it is practically ice free at sea.
With temperatures around 0 °C no larger change is expected.

Dr. J. Holfort

Restrictions to Navigation

	Harbour/District	At least dwt/hp/kW	Ice Class	Begin
Estonia	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 (2000 t)/ IA (2000 t)	27.02.
	Vaasa	2000 dwt	IA	10.01.
	Raahe, Kalajoki, Kokkola and Pietarsaari	4000 dwt	IA	13.01.
	Pori, Rauma	**2000 dwt**	**I**	**06.03.**
	Kaskinen and Kristiinankaupunki	**2000 dwt**	**IB**	**06.03.**
	Uusikaupunki	**2000 dwt**	**IB**	**06.03.**
	Eckerö, Maarianhamina and Langnäs	2000 dwt	II	13.01.
	Naantali and Turku	2000 dwt	I	23.01.
	Mussalo	2000 dwt	IB	29.01.
	Helsinki and Sköldvik	2000 dwt	I	29.01.
	Koverhar, Lappohja, Inkoo and Kantvik	2000 dwt	I	13.01.
	Taalintehdas and Förby	2000 dwt	IB	17.02.
	Hanko	2000 dwt	II	13.01.
	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.
	Primorsk	-	Ice 1	01.02.
	Ust-Luga	-	Ice 1	29.12.
Sweden	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	IA	17.02.
	Stocka, Hudiksvall, Iggesund, Söderhamn, Orrskär, Norrsundet, Gävle, Skutskär and Öregrund	2000 dwt	IC	26.02.

	Härnösand, Söråker and Sundsvall	2000 dwt	IB	26.02.
	Hargshamn	2000 dwt	IC	04.01.
	Hallstavik and Grisslehamn	2000 dwt	IC	04.01.
	Kappelskär and Nynäshamn	2000 dwt	II	04.01.
	Köping and Västeras	2000 dwt	IC	26.02.
	Balsta	2000 dwt	IC	26.02.
	Stockholm and Södertälje	2000 dwt	II	04.01.
	Trollhätte Canal and Göta Älv	2000 dwt	II	23.02.
	Vänern	2000 dwt	IC	26.02.

Estonia

Icebreaker: EVA-316 assists to the port of Pärnu. BOTNICA assists to the ports of Kunda and Sillamäe.

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, POLARIS, SISU, KONTIO and URHO assist in the Bay of Bothnia. ATLE and OTSO assist in the southern Bay of Bothnia.. .ATLE, FENNICA and BRAGE VIKING assist in the Quark. ZEUS and CALYPSO assist in to the Finnish coast of Sea of Bothnia. VOIMA and NORDICA assist the Gulf of Finland. ALE assists in the Vänern.

Norway

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)

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

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

Norway, 04.03.2024

Svinesund – Halden	33//
Drammensfjord	2201
Tønsberg, inner harbour	82/3
Vestfjord (Tønsberg)	6963
Larviksfjorden (Stavern – Larvik)	121/

Estonia, 06.03.2024

Paernu, port and bay	7475
Moonsund	7343

Finland, 06.03.2024

Röyttä – Etukari	8546
Etukari – Ristinmatala	7476
Ajos – Ristinmatala	7476
Ristinmatala – Kemi 2	5476
Kemi 2 – Kemi 1	5476
Sea area SW of Kemi 1	5476
Kemi 2 – Ulkokrunni – Virpiniemi	7476
Oulu harbours – Kattilankalla	8446
Kattilankalla – Oulu 1	7476
Sea area SW of Oulu 1	5476
High Sea N of the latitude of Marjaniemi	5476
Raahe harbour – Heikinkari	8446
Heikinkari – Raahe lighthouse	6856
Raahe lighthouse – Nahkiainen	5476
Latitude Marjaniemi – Ulkokalla, Sea	5476
Rahja harbour – Välimatala	7456
Vaelimatala to line Ulkokalla – Ykskivi	4356
Sea betw. lat. of Ulkokalla –Pietarsaari	4376
Ykspihlaja – Repskär	7476
Repskär – Kokkola lighthouse	5476
Sea area off Kokkola lighthouse	2326
Pietarsaari – Kallan	8446
Sea area off Kallan	2326
Sea lat. Pietarsaari – NE Nordvalen	2326
Sea area ENE of Nordvalen	3836
Sea area Nordvalen to W of Norrskär	5876
Vaskiluoto – Ensten	8356
Ensten – Vaasa lighthouse	4356
Vaasa lighthouse – Norrskär	4356
Sea area SW of Norrskär	4876
Kaskinen – Sälgrund	8446
Sea area off Sälgrund	7356
High sea from N to latitude Yttergrund	1306
Pori harb. to line Pori lighth. – Säppi	7366
Sea W of line Pori lighthouse – Säppi	2326
High sea betw. lat. Yttergrund a. Rauma	2326
Rauma, Harbour – Kylmäpihlaja	8846
Kylmäpihlaja – Rauma lighthouse	1306
Sea area W of Rauma lighthouse	1306
The high sea S of the latitude of Rauma	1306
Uusikaupunki harbour – Kirsta	8846
Kirsta – Isokari	7756
Isokari – Sandbäck	1306
Sea area off Sandbäck	1306

Sea area N of Sälskär	1005
Naantali and Turku – Rajakari	8846
Rajakari – Lövskär	8846
Lövskär – Korra	8846
Korra – Isokari	3726
Lövskär – Berghamn	8346
Berghamn – Stora Sottunga	5146
Stora Sottunga – Ledskär	8746
Lövskär – Grisselborg	7346
Grisselborg – Norparskär	5346
Hanko – Vitgrund	8342
Vitgrund – Utö	3145
Koverhar – Hästö Busö	8346
Inkoo a. Kantvik – sea area Porkkala	7356
Sea area at Porkkala	1206
Helsinki harbours – Harmaja	7356
Harmaja – Helsinki lighthouse	5356
Fairway Helsinki – Porkkala – Rönnskär	5356
Vuosaari harbour – Eestiluoto	5356
Eestiluoto – Helsinki lighthouse	5356
Porvoo harbours – Varlax	7356
Varlax – Porvoo lighthouse	5356
Porvoo lighthouse – Kalbådagrund	1206
Valko Harbour – Täktarn	7346
Archipelago fairway Boistö – Glosholm	5356
Archipelago fairway Glosholm–Helsinki	7356
Kotka – Viikari	8346
Viikari – Orrengrund	5356
Orrengrund – Tiiskeri	5356
Tiiskeri – Kalbådagrund	5356
Hamina – Suurmusta	8446
Suurmusta – Merikari	7346
Merikari – Kaunissaari	5346

Russian Federation, 06.03.2024

Port of St. Petersburg	89//
St. Petersburg – E-point island Kotlin	89//
E-point Kotlin – long. lighth. Tolbuhkin	89//
Lighth. Tolbuhkin – lighth. –Šepelevskij	22//
Lighthouse Šepelevskij – island Sescar	10//
Island Sescar – Island Sommers	10//
Vyborg, port and bay	89//
Island Vichrevoj – Island Sommers	53//
Strait Bjerkesund	89//
E-point Bol'šoj Ber'ozovyj – Šepelevskij	53//

Sweden, 06.03.2024

Karlsborg – Malören	8546
Sea area off Malören	5576
Luleå – Björnklack	8546
Björnklack – Farstugrunden	5576
E and SE of Farstugrunden	5576
Sandgrönn fairway	8546
Rödkallen – Norströmsgrund	5456
Haraholmen – Nygrån	8546
Sea area off Nygrån	5456
Skelleftehamn – Gåsören	8446
Sea area off Gåsören	5456
Sea area off Bjuröklubb	3426
NE of Nordvalen	3426
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Western Quark (W of Holmöarna)	5476
Umeå – Väktaren	5476
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Fairway to Husum	5476
Örnsköldsvik – Hörnskaten	8446
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Sea area off Skagsudde	5476
Fairway W of Ulvöarna	8446
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Ångermanälven north Sandö Bridge	8444
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Härnösand – Härnön	8444
Sea area off Härnö	1302
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Hudiksvallfjärden	8346
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Ljusnefjärden – Storjungfrun	8346
Gävle – Eggegrund	8346
Öregrundsgrepen	8346
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Stockholm – Trälhavet – Klövholmen	1006
Klövholmen – Sandhamn	1006
Trollharan – Langgarn	1006
Köping – Kvicksund	8344
Västerås – Grönsö	8344
Grönsö – Södertälje	8344
Stockholm – Södertälje	8344
Södertälje – Fifong	4234
Norrköping – Hargökalv	1000
Västervik – Marsholmen – Idö	4232
Fairway through Lurö archipelago	3356
Fairway to Gruvön	8346
Fairway to Karlstad	8346
Fairway to Kristinehamn	8346
Fairway to Otterbäcken	8346