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BUNDESAMT FÜR SEESCHIFFFAHRT UND HYDROGRAPHIE

Eisbericht Nr. 83

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 im Westen lockeres Eis vor und im Osten treibt dichtes Eis. An den Küsten von Norra Kvarken liegt bis 50 cm dickes Festeis; auf See treibt 5-30cm dickes, dichtes Eis und im Westen kommt 15–50 cm dickes, dichtes Eis vor, was bis in die nördliche Bottensee reicht. An den Küsten der Bottensee kommt im Osten bis 55 cm und im Westen bis 30 cm dickes Festeis vor. Im Schärenmeer kommt ebenes Eis oder Festeis vor. Im Osten und Norden des Finnischen Meerbusens liegt bis 55 cm dickes Festeis. Auf See treibt im Norden meist sehr dichtes, 5–35 cm dickes Eis. Im Rigaischen Meerbusen kommt im Nordosten bis zu 40 cm dickes Festeis und an den Küsten treibt örtlich sehr dichtes Eis vor. Ansonsten kommt im Mälaren, Vänern und einigen norwegischen Fjorden örtlich dünnes Eis, teilweise aber auch bis 30 cm dickes Festeis vor.

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 open ice in the west and close ice in the east. In the Quark there is up to 50 cm thick fast ice at the coasts and at sea there is 5-20cm thick, close ice and in in the west there is 15–50 cm thick, close ice stretching into the northern Sea of Bothnia. 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. Level ice or fast ice is present in the Archipelago Sea. There is up to 55 cm thick fast ice at the eastern and northern coast of the Gulf of Finland. At sea in the more northern part there is 5-35cm thick mostly very close ice. In the northeastern Gulf of Riga there is up to 40 cm thick fast ice at the coast with very close ice in places along the coast. Else thin ice is present at places, but also up to 30cm thick fast ice, in the Mälaren, Vänern, and some Norwegian fjords.

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 25–65 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 a line Nygrån to Kalajoki there is mostly 40–70 cm thick, ridged and rafted ice; the field is difficult to force at places. Leads and cracks are present in places. Further south there is first a band of 10-35cm thick very close ice and further south there is 5-20cm thick open ice in the west and close ice in the east. In the extreme southeast also very open ice.

With temperatures slightly above 0°C minor ice melt could occur, the ice will drift towards the

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northeast.

The Quark

There is 35–60 cm thick fast ice in the Vaasa archipelago out to Ensten. Farther out to 5-35cm thick, mostly close ice to Odelgrund. Along the Swedish coast there is up to 40 cm thick fast ice with adjacent consolidated ice. Off this ice, there is a 10-20nm wide region with 15–50 cm thick, ridged, close ice. Else at sea there is mostly 5-35cm thick close ice and open water in the south.
With temperatures above 0°C the ice will drift northeastwards and melt slowly.

Sea of Bothnia

Along the coasts there is mostly fast ice in the inner bays; 20–55 cm thick in the east and 5–40 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 some thicker floes. Just outside the northwestern coast, north of about Härnösand, there is close, 10–50 cm thick ridged ice.
With temperatures above 0°C and southwesterly winds the ice will drift northeastwards and melt.

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 areas of open water 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 temperatures above 0°C ice melt is expected.

Northern Baltic

In Lake Mälaren there is 10–30 cm thick fast ice with some open areas. Along the outer Swedish coast there is open water or thin open ice.

With temperatures well above 0 °C ice melt is 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 10-30cm thick very close ice, extending further out at the longitude of Kalbådagrund and Tiiskeri and with some riges. Around Gogland there is open water to close ice. West of Moščnyj and in the whole northeastern and easternmost area there is 10-35cm thick, ridged, very close ice. Outside the southern coast there is very open ice in Luga bay and very close ice in Koporye Bay. In Lake Saimaa there is 30–50 cm thick ice.
With southwesterly winds and temperatures above 0°C the ice will drift towards the northeast and melt.

Gulf of Riga

In Väinameri there is 20–35 cm thick fast ice near the coasts and very close, 10–30 cm thick ice at sea with some areas of very open ice or open water. Off the south coast of Saaremaa there is a band with very close, 5–20 cm thick ice. In the Bay of Pärnu, there is 20–40 cm thick fast ice to about the line Lindi – Uulu and further out, up to the line Manilaid – Voiste there is very close ice in the western part and very open ice in the east. Further out open water.
With temperatures above 0°C ice melt is expected and the ice drifts towards the northeast.

Central Baltic

In sheltered areas along the Swedish coast there is open water.

With temperatures well above 0 °C ice melt is expected.

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 ice melt is expected.

Swedish Lakes

In Lake Vänern 5–20 cm thick rotten fast ice is present northern coasts. In the Dalbosjön there is 5–15 cm thick, very close drift ice along the northwestern coast. At sea mostly ice free.
With temperatures well above 0 °C ice melt is expected.

Dr. J. Holfort

Restrictions to Navigation

	Harbour/District	At least dwt/hp/kW	Ice Class	Begin
Estonia	Pärnu	1600 kW	1c (Lloyd's)	11.03.
	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**	**I**	**12.03.**
	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/Ice 2	11.03.
	Vysotsk	-	Ice 1/Ice 2	11.03.
	Primorsk	-	Ice 1/Ice 2	11.03.
	St. Petersburg, Ust-Luga		**Ice 1/Ice 2**	**15.3.**
	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		**cancelled**	**14.03.**
	Vänern	**2000 dwt**	**II**	**14.03.**

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. OTSO assist in the southern Bay of Bothnia. ATLE and FENNICA assist in the Quark. ZEUS and CALYPSO assist in the eastern Bothnian Sea. VOIMA and NORDICA assist the Gulf of Finland. ALE assists in the Vänern.

Norway
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

Estonia, 14.03.2024

Shipping route Kunda meridian to Tallinn	1///
Paernu, port and bay	7475
Moonsund	7343

Finland, 14.03.2024

Röyttä – Etukari	8546
Etukari – Ristinmatala	8546
Ajos – Ristinmatala	8546
Ristinmatala – Kemi 2	7476
Kemi 2 – Kemi 1	5476
Sea area SW of Kemi 1	5476
Kemi 2 – Ulkokrunni – Virpiniemi	7476
Oulu harbours – Kattilankalla	8546
Kattilankalla – Oulu 1	7476
Sea area SW of Oulu 1	5476
High Sea N of the latitude of Marjaniemi	5476
Raahe harbour – Heikinkari	8546
Heikinkari – Raahe lighthouse	6856
Raahe lighthouse – Nahkiainen	5476
Latitude Marjaniemi – Ulkokalla, Sea	5476
Rahja harbour – Välimatala	8446
Vaelimatala to line Ulkokalla – Ykskivi	5356
Sea betw. lat. of Ulkokalla –Pietarsaari	4376
Ykspihlaja – Repskär	7476
Repskär – Kokkola lighthouse	5476
Sea area off Kokkola lighthouse	4746
Pietarsaari – Kallan	8446
Sea area off Kallan	4746
Sea lat. Pietarsaari – NE Nordvalen	5356
Sea area ENE of Nordvalen	5356
Sea area Nordvalen to W of Norrskär	4876
Vaskiluoto – Ensten	7356
Ensten – Vaasa lighthouse	5356
Vaasa lighthouse – Norrskär	4746
Sea area SW of Norrskär	2716
Kaskinen – Sälgrund	8446
Sea area off Sälgrund	8446
High sea from N to latitude Yttergrund	2716
Pori harb. to line Pori lighth. – Säppi	4046
Sea W of line Pori lighthouse – Säppi	1706
High sea betw. lat. Yttergrund a. Rauma	0//6
Rauma, Harbour – Kylmäpihlaja	8846
Kylmäpihlaja – Rauma lighthouse	1706
Sea area W of Rauma lighthouse	0//6
The high sea S of the latitude of Rauma	0//6
Uusikaupunki harbour – Kirsta	8846
Kirsta – Isokari	7756
Isokari – Sandbäck	1706
Sea area off Sandbäck	0//6
Naantali and Turku – Rajakari	8846
Rajakari – Lövskär	8846
Lövskär – Korra	8846
Korra – Isokari	1706
Lövskär – Berghamn	8346
Berghamn – Stora Sottunga	1706

Stora Sottunga – Ledskär	2116
Lövskär – Grisselborg	7346
Grisselborg – Norparskär	4346
Hanko harbours – Hanko 1	1705
Hanko – Vitgrund	5145
Vitgrund – Utö	5145
Koverhar – Hästö Busö	8346
Hästö Busö – Ajax	1706
Sea area S of Ajax	0//6
Inkoo a. Kantvik – sea area Porkkala	7756
Sea area at Porkkala	1706
Sea area S of Porkkala lighthouse	1706
Helsinki harbours – Harmaja	7376
Harmaja – Helsinki lighthouse	5376
Helsinki lighth. – sea S of Porkkala lh.	1706
Fairway Helsinki – Porkkala – Rönnskär	5376
Vuosaari harbour – Eestiluoto	5376
Eestiluoto – Helsinki lighthouse	5756
Porvoo harbours – Varlax	7376
Varlax – Porvoo lighthouse	5376
Porvoo lighthouse – Kalbådagrund	5756
Sea Kalbådagrund – Helsinki lighthouse	3756
Valko Harbour – Täktarn	7346
Archipelago fairway Boistö – Glosholm	5376
Archipelago fairway Glosholm–Helsinki	7376
Kotka – Viikari	8346
Viikari – Orrengrund	5376
Orrengrund – Tiiskeri	5376
Tiiskeri – Kalbådagrund	5756
Hamina – Suurmusta	8446
Suurmusta – Merikari	7346
Merikari – Kaunissaari	5346

Norway, 13.03.2024

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

Russian Federation, 14.03.2024

Port of St. Petersburg	89//
St. Petersburg – E-point island Kotlin	89//
E-point Kotlin – long. lighth. Tolbuhkin	53//
Lighth. Tolbuhkin – lighth. –Šepelevskij	53//
Lighthouse Šepelevskij – island Sescar	42//
Island Sescar – Island Sommers	53//
Island Sommers– S-point island Gogland	32//
S-point isl. Gogland – long. p. Kunda	32//
Vyborg, port and bay	89//
Island Vichrevoj – Island Sommers	53//
Strait Bjerkesund	89//
E-point Bol'šoj Ber'ozovyj – Šepelevskij	53//
Appr. Luga bay – line Moš.-Šepel.	21//

Sweden, 14.03.2024

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	3326
NE of Nordvalen	4476
SW of Nordvalen	4476
Western Quark (W of Holmöarna)	6456
Umeå – Väktaren	6456
SE of Väktaren	5476
NE and SE of Sydostbrotten	4476
Fairway to Husum	6476
Örnsköldsvik – Hörnskaten	8446
Hörnskaten – Skagsudde	6476
Sea area off Skagsudde	6476
Fairway W of Ulvöarna	6476
Sea area E of Ulvöarna	5476
Ångermanälven north Sandö Bridge	8444
Ångermanälven south Sandö Bridge	8444
Härnösand – Härnön	8444
Sundsvall – Draghällan	4436
Hudiksvallfjärden	8346
Iggesund – Agö	8346
Sandarne – Hällgrund	8346
Ljusnefjärden – Storjungfrun	8346
Gävle – Eggegrund	8346
Öregrundsgrepen	8346
Hallstavik – Svartklubben	8346
Trälhavet – Furusund – Kapellskär	1006
Stockholm – Trälhavet – Klövholmen	3026
Klövholmen – Sandhamn	1006
Trollharan – Langgarn	1006
Köping – Kvicksund	8344
Västerås – Grönsö	8344
Grönsö – Södertälje	8344
Stockholm – Södertälje	8344
Södertälje – Fifong	1104
Norrköping – Hargökalv	1000
Västervik – Marsholmen – Idö	1101
Fairway to Gruvön	8396
Fairway to Karlstad	5376
Fairway to Kristinehamn	8396