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BUNDESAMT FÜR SEESCHIFFFAHRT UND HYDROGRAPHIE

Eisbericht Nr. 43

Amtsblatt des BSH

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Übersicht

In den Schären der Bottenwiek liegt im Norden 25–55 cm dickes Festeis und im Süden 10–55 cm dickes Festeis. Außerhalb des östlichen Festeises liegt 20–45 cm dickes, sehr dichtes und örtlich aufgepresstes Eis. Außerhalb des Festeises im Norden und Westen kommt zumeist Neueis vor. Im Süden treibt auf See zumeist Neueis und in der zentralen Bottenwiek ist offenes Wasser. In Norra Kvarken liegt in den Schären bis zu 55 cm dickes Festeis und auf See kommt Neueis vor. Entlang der Küsten und in den Schären der Bottensee, dem Schärenmeer und der Ålandsee liegt Festeis oder dünnes ebenes Eis und Neueis. Im Finnischen Meerbusen liegt entlang der Nordküste und im Osten bis 40 cm dickes Festeis. Im östlichen Teil treibt auf See sehr dichtes, 15–25 cm dickes Eis. Im Rigaischen Meerbusen befindet sich bis zu 25 cm dickes Eis im Moonsund und in der Pärnubucht. Dünnes, teilweise ebenes Eis kommt örtlich in der nördlichen Ostsee, dem Vänern und der südöstlichen Ostsee vor. Dünnes Eis kommt in geschützten Buchten der zentralen Ostsee vor. In einigen inneren Fjorden des Skagerraks liegt dünnes Eis oder Festeis.

Overview

In the archipelagos of the Bay of Bothnia, there is 25–55 cm thick fast ice in the north and 10–55 cm thick fast ice in the south. Off the eastern fast ice, there is very close, 20–45 cm thick and partly ridged ice. Off the fast ice in the north and west, there is mostly new ice. In the southern part, there is mostly new ice and in the central Bay of Bothnia is open water. In Norra Kvarken, there is up to 55 cm thick fast ice in the archipelagos and new ice at sea. Along the coasts and archipelagos of the Sea of Bothnia, the Archipelago Sea and Åland Sea, there is fast ice or thin level ice and new ice. In the Gulf of Finland, there is up to 40 cm thick fast ice along the northern coast and in the easternmost part. At sea in the east, there is mostly very close, 15–25 cm thick ice. In the Gulf of Riga, there is up to 25 cm thick ice in Moonsund and Pärnu Bay. Thin ice and thin level ice occurs at places in the northern Baltic, Lake Vänern and the southeastern Baltic. Thin ice occurs in sheltered areas of the central Baltic. Fast ice or thin ice is present in some inner fjords of the Skagerrak.

Bay of Bothnia

In the archipelagos of the northern Bay of Bothnia, there is 20–55 cm thick fast ice, from the Finnish coast reaching out to Kemi-3, Oulu-2 and Johan. Off the fast ice in the east, there is 20–45 cm thick, partly ridged, very close ice to the line Kemi-2 - Merikallat –Raahe lighthouse. The ice field is difficult to force in places. Further out to Kemi-1 and Nahkiainen, there is thin very close ice, followed by new ice and ice formation. Off the fast ice in the north, there is new ice formation past Malören. Off the fast ice in the west, there is new ice and new ice formation. East of Rödkallen, there is open ice, 2–20 cm thick. In the southern Bay of Bothnia, there is 20–40 cm thick fast ice along the Swedish

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coast and 25–55 cm thick fast ice in the eastern archipelagos. Further out on the Finnish side, there is close to very close ice, 10–30 cm thick, to Ulkokalla and west of Kallan and Kokkola lighthouse. At sea, there is new ice and new ice formation. In the central part of the Bay of Bothnia is open water.
Some new ice formation will occur and the ice drift will mostly be in southerly directions.

Norra Kvarken

In the archipelagoes off Vaasa, there is 20–55 cm thick fast ice to Ensten. Further out to Norra Globsten, there is 5–25 cm thick very close ice and new ice formation further out. Along the Swedish coast, there is 10–35 cm thick fast in the inner archipelagos and new ice further out. At sea, there is new ice and ice formation around and north of Nordvalen.
Some ice formation is expected and the ice drift will be mostly in southerly directions.

Sea of Bothnia

On Ångermanälven, there is 20–50 cm thick fast ice in the upper part and 5–35 cm fast or level ice in the lower part. Along the eastern coast, there is 10–30 cm fast and new ice further out. In the bays along the western coast, there is 10–30 cm thick fast ice or thin level ice and new ice at places.
Some ice formation is expected along the coast, but else no larger changes.

Archipelago and Åland Sea

Thin level ice is present in inner archipelagos of the coasts and around the Åland islands. On the larger fairways and the outer archipelago at the eastern coast, there is mainly open water, but some new ice occurs at places.
No larger changes are expected.

Gulf of Finland

From St. Petersburg up to the longitude of Tolbuchin lighthouse there is 30–40 cm thick fast ice. In the Bay of Vyborg, there is 20–40 cm fast ice. In the Bjerkesund, there is 20–40 cm thick fast ice or 15–25 cm thick very close ice. At sea east of Seskar, there is very close, 15–25 cm thick ice and new ice further out to Moščnyj. In the archipelagos of the northern coast, there is fast ice, 10–30 cm thick in the west and 20–40 cm thick in the east. Off the fast ice, there is new ice. In Luga bay, 10–20 cm thick, open to close ice is present. In Narva Bay, there is very close ice at the eastern coast and new ice further out. In Lake Saimaa and the Saimaa Canal, there is 25–45 cm thick ice, which is hard to force at places in the canal.
Ice formation is expected in the east and the ice will first drift to the north changing later by west to southwest.

Gulf of Riga

In Moonsund, there is very close, 5–20 cm thick ice or fast ice along the coasts. On the fairways is very open ice. In Pärnu Bay, there is 10–25 cm thick fast or very close ice and very open ice further out to Kihnu.
No larger changes are expected, but there will be some ice drift first to the north and later to the south.

Northern Baltic

In Lake Mälaren, there is 10–30 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.
No larger changes are expected.

Central Baltic

New ice occurs in few sheltered bays along the Swedish coast.

No larger changes are expected.

Southeastern Baltic

In the Curonian Lagoon, there is very close, 5–10 cm thick ice in the eastern part.

No larger 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.

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. No larger changes are expected.

Dr. W. Aldenhoff

Restrictions to Navigation

	Harbour/District	At least dwt/hp/kW	Ice Class	Begin
Estonia	Pärnu	1600 kW	1C	17.12.
Finland	Tornio, Kemi and Oulu	4000 dwt	IA	16.01.
	Raahe	2000 dwt	IA	16.01.
	Vaasa	2000 dwt	IB	16.01.
	Kokkola, Kalajoki and Pietarsaari	2000 dwt	IB	11.01.
	Kokkola, Kalajoki, Pietarsaari and Vaasa	**2000 dwt**	**IA**	**01.02.**
	Kristiinankaupunki, Pori, Rauma, Uusikaupunki, Naantali, Turku, Koverhar, Lappohja, Helsinki and Sköldvik	2000 dwt	II	01.01.
	Kaskinen, Taalintehdas, Förby, Inkoo, Kantvik	2000 dwt	I	16.01.
	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	IA	22.01.
Russia	Vyborg	-	Ice 1	30.12.
	Vysotsk	-	Ice 2	14.01.
	Primorsk	**-**	**Ice 2**	**27.01.**
	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	IC	15.01.
	Örnsköldsvik	2000 dwt	IC	15.01.
	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.

Information of the Icebreaker Services

Estonia

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

Finland/Sweden

The traffic separation schemes in the Quark are temporarily out of use from 15 January 2022.

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, POLARIS, FREJ and YMER assist in the Bay of Bothnia. ALE and ZEUS assist in the Quark and VOIMA in the eastern Gulf of Finland. CALYPSO and PROTECTOR assist in the 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)
Hellefjorden (Kragerø): Navigation temporarily closed. (10.01.22)

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, 27.01.2022

Shipping route from Narva-Jõssuu	52/2
Kunda, port and bay	20/0
Paernu, port and bay	73/5
Shipp. route from Paernu to Irben Strait	21/2
Moonsund	32/2

Finland, 26.01.2022

Roeyttae – Etukari	8446
Etukari – Ristinmatala	8846
Ajos – Ristinmatala	8846
Ristinmatala – Kemi 2	5876
Kemi 2 – Kemi 1	5246
Sea area SW of Kemi 1	3006
Kemi 2 – Ulkokrunni – Virpiniemi	7876
Oulu harbours – Kattilankalla	8446
Kattilankalla – Oulu 1	7876
Sea area SW of Oulu 1	5876
High Sea N of the latitude of Marjaniemi	3006
Raahe harbour – Heikinkari	8346
Heikinkari – Raahe lighthouse	6366

Raahe lighthouse – Nahkiainen	5766
Latitude Marjaniemi – Ulkokalla, Sea	3006
Rahja harbour – Välimatala	6366
Vaelimatala to line Ulkokalla – Ykskivi	4246
Sea betw. lat. of Ulkokalla –Pietarsaari	3116
Ykspihlaja – Repsaer	8846
Repskaer – Kokkola lighthouse	6366
Sea area off Kokkola lighthouse	4146
Pietarsaari – Kallan	7846
Sea area off Kallan	5266
Sea lat. Pietarsaari – NE Nordvalen	4046
Sea area ENE of Nordvalen	4046
Sea area Nordvalen to W of Norrskaer	2006
Vaskiluoto – Ensten	8846
Ensten – Vaasa lighthouse	5746
Vaasa lighthouse – Norrskaer	1006
Kaskinen – Sälgrund	5746
Sea area off Sälgrund	5266
Pori harb. to line Pori lighth. – Säppi	5145
Rauma, Harbour – Kylmäpihlaja	5745
Kylmäpihlaja – Rauma lighthouse	5145
Uusikaupunki harbour – Kirsta	8745
Kirsta – Isokari	5145
Naantali and Turku – Rajakari	4045
Rajakari – Lövskär	3005
Lövskär – Korra	4045
Korra – Isokari	2005
Lövskär – Berghamn	2005
Lövskär – Grisselborg	2005
Hanko – Vitgrund	4045
Koverhar – Hästö Busö	4045
Inkoo a. Kantvik – sea area Porkkala	7106
Sea area at Porkkala	2005
Helsinki harbours – Harmaja	1005
Vuosaari harbour – Eestiluoto	2005
Porvoo harbours – Varlax	3005
Varlax – Porvoo lighthouse	1115
Valko Harbour – Täktarn	7746
Archipelago fairway Boistö – Glosholm	3005
Archipelago fairway Glosholm–Helsinki	3005
Kotka – Viikari	4046
Viikari – Orrengrund	3005
Hamina – Suurmusta	8846
Suurmusta – Merikari	3006
Merikari – Kaunissaari	3006

Russian Federation, 27.01.2022

Port of St. Petersburg	84/3
St. Petersburg – E-point island Kotlin	84/3
E-point Kotlin – long. lighth. Tolbuhkin	84/3
Lighth. Tolbuhkin – lighth. –Šepelevskij	53/3
Lighthouse Šepelevskij – island Sescar	53/3
Island Sescar – Island Sommers	3201
Vyborg, port and bay	84/3
Island Vichrevoj – Island Sommers	1311
Strait Bjerkesund	53/3
E-point Bol'šoj Ber'ozovyj – –epelevskij	53/3
Luga bay	4313
Appr. Luga bay – line Mo–.-–epel.	3332

Sweden, 27.01.2022

Karlsborg – Maloeren	8546
Sea area off Maloeren	4046
Luleå – Bjoernklack	8546
Bjoernklack – Farstugrunden	3356
E and SE of Farstugrunden	3356
Sandgroenn fairway	8546
Roedkallen – Norstroemsgrund	5046
Haraholmen – Nygrån	8446
Sea area off Nygrån	1306
Skelleftehamn – Gåsoeren	4046
Sea area off Gåsoeren	4046
Sea area off Bjuroeklubb	4046
NE of Nordvalen	4046
SW of Nordvalen	4046
Western Quark (W of Holmoearna)	8346
Umeå – Vaektaren	4046
SE of Vaektaren	4046
Oernskoeldsvik – Hoernskaten	8346
Hoernskaten – Skagsudde	4046
Ångermanaelven north Sandoe Bridge	8444
Ångermanaelven south Sandoe Bridge	8444
Haernoesand – Haernoen	4044
Sundsvall – Draghaellan	8346
Draghaellan – Åstholmsudde	5046
Hudiksvallfjaerden	8346
Iggesund – Agoe	8346
Sandarne – Haellgrund	8346
Ljusnefjaerden – Storjungfrun	4046
Gaevle – Eggegrund	8346
Hallstavik – Svartklubben	8342
Koeping – Kvicksund	8344
Västerås – Grönsö	8344
Stockholm – Södertälje	4044
Fairway to Karlstad	8342
Fairway to Kristinehamn	8342
Fairway to Otterbäcken	3122