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BUNDESAMT FÜR SEESCHIFFFAHRT UND HYDROGRAPHIE

Eisbericht Nr. 71

Amtsblatt des BSH

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Übersicht

In den Schären der Bottenwiek befindet sich im Norden bis 60 cm dickes Festeis und im Süden bis 35 cm dickes Festeis. Auf das Festeis folgt im Norden zuerst eine Rinne mit Neueis und dann bis zu 40 cm dickes zusammenhängendes oder sehr dichtes, örtlich aufgepresstes oder aufgeschobenes Eis. Im Westen verläuft eine Rinne mit Neueisbildung oder dünnem, ebenen Eis. Im Osten treibt auf See zumeist bis 25 cm dickes, sehr dichtes Eis. In Kvarken liegt bis 35 cm dickes Festeis in den Schären und Buchten und auf See kommt dichtes dünnes Eis oder Neueis vor. In der Bottensee und dem Schärenmeer kommt dünnes, ebenes Eis oder Festeis entlang der Küsten vor. Im Mälarsee liegt dünnes, ebenes Eis oder Neueis. Im Finnischen Meerbusen liegt in den östlichsten Buchten bis 40 cm dickes Festeis. Auf See treibt im Osten dichtes bis sehr dichtes Eis und im Norden treibt zumeist dünnes Eis. In den Schären und Buchten entlang der nördlichen Küste kommt Festeis vor sowie Neueis weiter außerhalb. Im Nordosten des Rigaischen Meerbusen befindet sich 10–20 cm dickes Festeis oder sehr dichtes Eis in geschützten Gebieten und offenes Wasser oder Neueis etwas weiter außerhalb.

Overview

In the archipelagos of the Bay of Bothnia, there is up to 60 cm thick fast ice in the north and up to 35 cm thick fast ice in the south. In the north, there is first a lead with new ice and later up to 40 cm thick, partly ridged and rafted consolidated or very close ice further out. Along the western coast there is a lead with new ice formation or thin level ice. In the east, there is mostly up to 25 cm thick, very close ice. In the Quark, there is up to 35 cm thick fast ice in the archipelagos and bays and at sea, there is open water to thin open ice. In the Sea of Bothnia and the Archipelago Sea, fast ice or thin level ice is present along the coasts. In Lake Mälaren, there is thin level ice and new ice. In the Gulf of Finland, up to 40 cm thick fast ice is present in the easternmost bays. At sea in the east, there is close to very close ice in the south and mostly thin ice in the north. In the archipelagos and bays along the northern coast, there is fast ice and new ice further out. In the northeastern Gulf of Riga, there is 10–20 cm thick fast ice or very close ice in sheltered bays and new ice somewhat further out.

Bay of Bothnia

In the archipelagos of the northern Bay of Bothnia, there is 30–60 cm thick fast ice and compact ice, out to Malören, Kemi-3 and Kattilankalla. Further out in the northeast, there is 20–40 cm thick, ridged and very close ice to Kemi-2 and Oulu-1. A lead with new ice runs off the fast ice from about Gåsören past Rödkallen – Malören – southwest of Kemi-2 to west of Oulu-1. Further out at sea in the north, east of about 22°20'E, there is 10–-40 cm thick, very close ice, rafted and ridged in places;

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towards the western coast, there is thin level ice and new ice. In the southern Bay of Bothnia, there is 15–35 cm thick fast ice in the archipelagos, further out in the east there is 10–25 cm thick rafted, very close ice with some thicker floes and leads. Westwards towards the Swedish coast there is mostly new ice or thin close ice.
Continuing ice formation and ice growth and a southwesterly ice drift are expected the coming day.

The Quark

There is 15–40 cm thick fast ice in the Vaasa archipelago out to Ensten. Further out, there is very close, 5–25 cm thick ice to Norra Gloppsten. On the Swedish side, there is mostly up to 35 cm thick fast ice in inner bays. At sea, there is 3–10 cm thick, close ice in the central part north of about Norrskär and new ice and ice formation elsewhere.
Ice growth and ice formation is expected with ice drift in westerly directions.

Sea of Bothnia

In the archipelagos along the eastern coast, there is 15–25 cm thick fast ice and new ice somewhat further out. Along the western coast, there is thin level ice or new ice in sheltered bays in the south and up to 40 cm thick fast ice in inner bays in the north. Further out in the north, there is new ice. On Ångermanälven, there is 20–40 cm thick fast or level ice.
Ice formation and ice growth continues along the coasts.

Archipelago Sea and Åland Sea

At the eastern coast, there is 5–15 cm fast or level ice in the inner bays and new ice further out. In the western and central part new ice is present along the coasts.
Some ice formation and ice growth is expected.

Northern Baltic

In Lake Mälaren, there is 5–15 cm thick fast ice or thin level ice in the western part, with areas of open water. In the eastern part, there is thin ice in sheltered bays and open water. New ice occurs in sheltered places along the outer coast.
Some ice formation and ice growth is possible at sheltered places.

Gulf of Finland

From St. Petersburg out to Kotlin and in the bay north of Kotlin, there is 30–50 cm thick fast ice and 20–35 cm thick compact ice in the fairway. In the Bay of Vyborg, there is 20–35 cm thick fast ice and in the Bjerkesund, there is 10–20 cm thick fast ice At sea in the south, there is 10–25 cm thick, very close ice east of about a line Rondo – Moščnyj – along 27°30'E to the south coast. At sea in the north, there is mostly new ice with some areas of thicker, close ice to about Gogland. Further west is new ice to about a line Kalbådagrund – Vigrund. Along the northern coast, there is 15–30 cm thick fast ice in the eastern archipelagos. Further out, there is thin level ice or very close ice off Kotka and Hamina. In the western archipelagos, there is 5–15 cm thick fast ice and new ice further out. At the southern coast there is very open drift ice near the coast in Kunda bay.
Ice formation and ice growth continues the coming day. The ice will mostly drift to the west with increasing speed.

Gulf of Riga

In Väinameri, there is 10–20 cm thick fast ice near the coasts. Somewhat further out, there is close ice and on the fairway is open water. In the Bay of Pärnu, there is a belt of very close ice at the eastern coast and in the western part is new ice. In the port of Riga and in the fairway to Mersrags there is open water.
Some ice formation and ice growth is expected and the ice will drift to the northwest/north.

Skagerrak and Kattegat

Up to 15 cm thick ice or new ice is present in some inner Norwegian Fjords. At a few places thicker ice occurs.

Some ice formation is possible in sheltered places.

Swedish Lakes

Thin level ice or new ice is present in some sheltered bays in the northeast of Lake Vänern.

Some ice formation and ice is expected the coming day.

The next report will be issued on Thursday, 09.03.2023, due to public holidays.

Dr. W. Aldenhoff

Restrictions to Navigation

	Harbour/District	At least dwt/hp/kW	Ice Class	Begin
Estonia	Pärnu	1600 kW	1 C	23.12.
Finland	Tornio, Kemi and Oulu	4000 dwt	IA	22.02.
	Raahe	2000 dwt	IA	02.03.
	Raahe	**4000 dwt**	**IA**	**08.03.**
	Kalajoki, Kokkola	2000 dwt	IB	02.03.
	Kalajoki, Kokkola, Pietarsaari	**2000 dwt**	**IA**	**08.03.**
	Pietarsaari and Vaasa	2000 dwt	I	07.01.
	Vaasa	**2000 dwt**	**IB**	**08.03.**
	Kristiinankaupunki, Pori, Rauma and Uusikaupunki	**2000 dwt**	**II**	**12.03.**
	Kaskinen, Inkoo, Kantvik, Helsinki, Sköldvik and Mussalo	2000 dwt	II	07.01.
	Loviisa, Kotka and Hamina	2000 dwt	II	24.12.
	Loviisa, Kotka and Hamina	**2000 dwt**	**I**	**08.03.**
Russia	Vyborg and Vysotsk	-	Ice 1	08.02.
Sweden	Karlsborg	4000 dwt (2000 t)	IA	28.02.
	Lulea	4000 dwt	IA	28.02.
	Haraholmen and Skelleftehamn	2000 dwt	IA	04.03.
	Holmsund	2000 dwt	IC	07.02.
	Rundvik and Husum	2000 dwt	IC	04.03.
	Örnsköldsvik	2000 dwt	IC	13.02.
	Angermanälven	2000 dwt	IB	07.01.
	Söraker, Sundsvall and Söderhamn	2000 dwt	IC	13.02.
	Köping and Västeras	2000dwt	IC	06.03
	Balsta	1300/2000 dwt	IC/II	22.12.
	Härnösand, Stocka, Hudiksvall, Iggesund,Orrrskär, Norrsundet	2000dwt	IC	06.03

Estonia

Icebreakers:
EVA-316 assists in the port of Pärnu. **BOTNICA** assists to the port of Sillamäe.

Finland/Sweden

The Saimaa Canal is closed for traffic since 4th January.

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.

The traffic separation schemes in the Quark are temporarily out of use from 7 February due to ice conditions.

Icebreakers:
POLARIS, KONTIO, OTSO, SISU, ATLE, YMER and FREJ assist in the Bay of Bothnia. ZEUS assists in the southern Bay of Bothnia and in the Quark. ALE assists in the Quark. CALYPSO assists in the region of Kotka and Hamina.

Norway

Husøysund and Vestfjorden (Tønsberg): Icebreaker assistance can only be given to vessels suitable for navigation in ice and of special size. 31.01.23
Tønsberg indre havn (Tønsberg): Navigation without icebreaker assistance possible only for high-powered vessels of strong construction and suitable for navigation in ice. 31.01.23

Russia

There are restrictions for small crafts going to Vysotsk, Vyborg, St. Petersburg, Ust-Luga and Primorsk. No sailing of barge by tug to Vyborg and Vysotsk.

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, 07.03.2023

Shipping route from Narva-Jõssuu	52/2
Kunda, port and bay	21/0
Paernu, port and bay	4002
Moonsund	1000

Finland, 07.03.2023

Röyttä – Etukari	8446
Etukari – Ristinmatala	6456
Ajos – Ristinmatala	6456
Ristinmatala – Kemi 2	5856
Kemi 2 – Kemi 1	5856
Sea area SW of Kemi 1	9046
Kemi 2 – Ulkokrunni – Virpiniemi	6456
Oulu harbours – Kattilankalla	7456
Kattilankalla – Oulu 1	6456
Sea area SW of Oulu 1	9046
High Sea N of the latitude of Marjaniemi	5856

Raahe harbour – Heikinkari	8346
Heikinkari – Raahe lighthouse	7756
Raahe lighthouse – Nahkiainen	5756
Latitude Marjaniemi – Ulkokalla, Sea	5856
Rahja harbour – Välimatala	5756
Vaelimatala to line Ulkokalla – Ykskivi	5756
Sea betw. lat. of Ulkokalla –Pietarsaari	5756
Ykspihlaja – Repskär	7756
Repskär – Kokkola lighthouse	5756
Sea area off Kokkola lighthouse	5756
Pietarsaari – Kallan	7756
Sea area off Kallan	5756
Sea lat. Pietarsaari – NE Nordvalen	5756
Sea area ENE of Nordvalen	5756
Sea area Nordvalen to W of Norrskär	4146
Vaskiluoto – Ensten	7756
Ensten – Vaasa lighthouse	5756
Vaasa lighthouse – Norrskär	4146
Sea area SW of Norrskär	3006
Kaskinen – Sälgrund	4045
Sea area off Sälgrund	4045
High sea from N to latitude Yttergrund	2000
Pori harb. to line Pori lighth. – Säppi	8742
Rauma, Harbour – Kylmäpihlaja	4041
Uusikaupunki harbour – Kirsta	8142
Naantali and Turku – Rajakari	5142
Rajakari – Lövskär	2000
Lövskär – Korra	3001
Hanko – Vitgrund	5041
Koverhar – Hästö Busö	4041
Hästö Busö – Ajax	3001
Inkoo a. Kantvik – sea area Porkkala	8145
Helsinki harbours – Harmaja	4045
Fairway Helsinki – Porkkala – Rönnskär	2005
Vuosaari harbour – Eestiluoto	3005
Porvoo harbours – Varlax	5045
Varlax – Porvoo lighthouse	5045
Porvoo lighthouse – Kalbådagrund	3005
Valko Harbour – Täktarn	5145
Archipelago fairway Boistö – Glosholm	5045
Archipelago fairway Glosholm–Helsinki	5045
Kotka – Viikari	8345
Viikari – Orrengrund	5145
Orrengrund – Tiiskeri	5045
Tiiskeri – Kalbådagrund	4041
Hamina – Suurmusta	5245
Suurmusta – Merikari	4145
Merikari – Kaunissaari	4045

Latvia, 07.03.2023

Port of Riga	1000
Riga to the Cape of Mersrags, fairway	1000
Mersrags to Irben Strait, fairway	1000

Norway, 07.03.2023

Svinesund – Halden	31//
Drammensfjord	1101
Husøysund – Tønsberg channel	8345
Tønsberg, inner harbour	8353
Vestfjord (Tønsberg)	8555
Langårsund (Kragerø)	8144

Russian Federation, 07.03.2023

Port of St. Petersburg	84/3
St. Petersburg – E-point island Kotlin	54/3
E-point Kotlin – long. lighth. Tolbuhkin	5303
Lighth. Tolbuhkin – lighth. –Šepelevskij	52/2
Lighthouse Šepelevskij – island Sescar	42/2
Island Sescar – Island Sommers	22/2
Island Sommers– S-point island Gogland	22/1
Vyborg, port and bay	83/3
Island Vichrevoj – Island Sommers	32/3
Strait Bjerkesund	83/3
E-point Bol'šoj Ber'ozovyj – Šepelevskij	32/2
Luga bay	52/2
Appr. Luga bay – line Moš.-Šepel.	52/2

Sweden, 07.03.2023

Karlsborg – Malören	6456
Sea area off Malören	5356
Luleå – Björnklack	8546
Björnklack – Farstugrunden	5146
E and SE of Farstugrunden	5146
Sandgrönn fairway	8546
Rödkallen – Norströmsgrund	5146
Haraholmen – Nygrån	8346
Sea area off Nygrån	5146
Skelleftehamn – Gåsören	5336
Sea area off Gåsören	5336
Sea area off Bjuröklubb	5336
NE of Nordvalen	5046
SW of Nordvalen	5046
Western Quark (W of Holmöarna)	5236
Umeå – Väktaren	5146
SE of Väktaren	5046
NE and SE of Sydostbrotten	4046
Fairway to Husum	4046
Örnsköldsvik – Hörnskaten	8446
Hörnskaten – Skagsudde	4046
Sea area off Skagsudde	4046
Fairway W of Ulvöarna	4046
Sea area E of Ulvöarna	4046
Ångermanälven north Sandö Bridge	8444
Ångermanälven south Sandö Bridge	4044
Härnösand – Härnön	4044
Sundsvall – Draghällan	4046
Hudiksvallfjärden	8346
Iggesund – Agö	8346
Sandarne – Hällgrund	8346
Ljusnefjärden – Storjungfrun	8346
Gävle – Eggegrund	4046
Hallstavik – Svartklubben	5142
Köping – Kvicksund	8244
Västerås – Grönsö	4134
Grönsö – Södertälje	1004
Stockholm – Södertälje	4044
Fairway to Karlstad	4041
Fairway to Kristinehamn	5142