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BUNDESAMT FÜR SEESCHIFFFAHRT UND HYDROGRAPHIE

Eisbericht Nr. 46

Amtsblatt des BSH

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Übersicht

In den Schären der Bottenwiek liegt im Norden 25–55 cm dickes Festeis und im Süden 20–55 cm dickes Festeis. Außerhalb des östlichen Festeises liegt 20–50 cm dickes, sehr dichtes und örtlich aufgepresstes Eis. Außerhalb des Festeises im Norden und Westen kommt zumeist Neueis vor. Im Süden treibt auf See dünnes Eis und in der zentralen Bottenwiek kommt ein eisfreies Gebiet vor. In Norra Kvarken liegt in den Schären bis zu 55 cm dickes Festeis und auf See treibt dünnes Eis. 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 20–55 cm thick fast ice in the south. Off the eastern fast ice, there a new ice covered lead followed by very close, 20–50 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 thin ice and in the central Bay of Bothnia an ice free area. In Norra Kvarken, there is up to 55 cm thick fast ice in the archipelagos and thin 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 25–55 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 20–50 cm thick consolidated ice to Kemi-2 – Oulu-1 – Raahe lighthouse. Farther out there is first a 5-20nm wide lead covered with new ice and then locally ridged 10–50 cm thick very close ice. Out of the fast ice in the west, there is mostly new ice and open ice north of Gasören. In the southern Bay of Bothnia, there is 20–40 cm thick fast ice along the Swedish coast and 25–55 cm thick fast ice in the eastern archipelagos. Further out on the Finnish side, there is a 10-15nm wide zone with new ice and 10–35 cm

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thick to very close ice and on the Swedish side a belt with close ice with very open ice further out. Centered around 64°20'N / 22°40'E there is an ice free area at sea.
New ice formation and a southwesterly ice drift are expected.

Norra Kvarken

In the archipelagoes off Vaasa, there is 25–55 cm thick fast ice to Ensten; further out to Norra Globsten, there is 10–30 cm thick very close ice. Along the Swedish coast, there is 15–25 cm thick fast in the inner archipelagos. At sea, there is mostly thin, very open to open ice; close ice outside the coast in the north and open water is found in the southwest and the far south.
New ice formation and a southwesterly ice drift are expected.

Sea of Bothnia

On Ångermanälven, there is 20–50 cm thick fast ice in the upper part and 10–35 cm fast or level ice in the lower part. Along the eastern coast, there is 10–30 cm fast ice in the inner archipelagos and a 5-10nm wide zone with thin open ice 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.
New ice formation and a southwesterly/southerly ice drift are expected.

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.
New ice formation and a weak southerly ice drift are expected.

Gulf of Finland

From St. Petersburg up to the longitude of Tolbuchin lighthouse there is 30–40 cm thick fast ice, followed by 15-25cm thick very open ice out to about 29°08'E. In the Bay of Vyborg, there is 25–35 cm fast ice, followed by 15-25cm thick close ice out to about 27°39'E. In the Bjerkesund, there is 20–40 cm thick fast ice or 10–20 cm thick very close ice. At sea east of about Seskar, there is very close, 15–25 cm thick ice and further west close ice up to Hogland. 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, outside very open ice is present east of 26°E. In Luga bay, 10–20 cm thick, open to close ice is present; in Narva Bay, there is fast ice near the coast and open ice further out. Else, there is new ice in some sheltered bays of the southern coast.
New ice formation and a mostly weak southerly ice drift are expected.

Gulf of Riga

In Moonsund, there is 10–20 cm thick fast ice near the coasts and on the fairways there is open ice; in Suur strait there is close ice. In Pärnu Bay, there is 15–25 cm thick fast or very close ice in the eastern part and in the western part there is a 2-4km wide fast ice fringe and open new ice further out. Very open ice is present at sea in the northeast. In the port of Riga there is 5-10cm tick very open ice.
New ice formation and an only weak ice drift are expected.

Northern Baltic

In Lake Mälaren, there is 5–30 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.
Some ice formation may occur, but overall no larger changes are expected.

Central Baltic

Thin very open ice or shuga occurs in few sheltered bays along the Swedish coast. Some ice formation may occur, but overall 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. Some ice formation but else no larger changes are expected.

Swedish Lakes
Thin level ice is present in some sheltered bays of Lake Vänern; along the northern coast, there is up to 20 cm thick fast ice.

Some ice formation may occur, but overall no larger changes are expected.

Dr. J.Holfort

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.
	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 icebreaking season has ended in Lake Saimaa and Saimaa Canal. The Saimaa Canal was closed for traffic on 30th of January.

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.

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 , 01.02.2022

Shipping route from Narva-Jõssuu	72/2
Kunda, port and bay	30/0
Paernu, port and bay	73/5
Shipp. route from Paernu to Irben Strait	30/2
Moonsund	42/2

Finland , 01.02.2022

Roeyttae – Etukari	8446
Etukari – Ristinmatala	8846
Ajos – Ristinmatala	8846
Ristinmatala – Kemi 2	6876
Kemi 2 – Kemi 1	9146
Sea area SW of Kemi 1	9146
Kemi 2 – Ulkokrunni – Virpiniemi	8446
Oulu harbours – Kattilankalla	8446
Kattilankalla – Oulu 1	6876
Sea area SW of Oulu 1	9146
High Sea N of the latitude of Marjaniemi	5846
Raahe harbour – Heikinkari	8346

Heikinkari – Raahe lighthouse	6366
Raahe lighthouse – Nahkiainen	9746
Latitude Marjaniemi – Ulkokalla, Sea	4846
Rahja harbour – Välimatala	6366
Vaelimatala to line Ulkokalla – Ykskivi	4746
Sea betw. lat. of Ulkokalla –Pietarsaari	4746
Ykspihlaja – Repsaer	8846
Repskaer – Kokkola lighthouse	6366
Sea area off Kokkola lighthouse	5246
Pietarsaari – Kallan	7846
Sea area off Kallan	9226
Sea lat. Pietarsaari – NE Nordvalen	4746
Sea area ENE of Nordvalen	3126
Sea area Nordvalen to W of Norrskaer	2116
Vaskiluoto – Ensten	8846
Ensten – Vaasa lighthouse	5346
Kaskinen – Sälgrund	2726
Sea area off Sälgrund	3226
High sea from N to latitude Yttergrund	3226
Pori harb. to line Pori lighth. – Säppi	2115
Sea W of line Pori lighthouse – Säppi	2115
Rauma, Harbour – Kylmäpihlaja	7745
Kylmäpihlaja – Rauma lighthouse	4145
Uusikaupunki harbour – Kirsta	8745
Kirsta – Isokari	4145
Naantali and Turku – Rajakari	4045
Rajakari – Lövskär	1005
Lövskär – Korra	3005
Korra – Isokari	4145
Lövskär – Berghamn	1005
Lövskär – Grisselborg	1005
Hanko – Vitgrund	1005
Koverhar – Hästö Busö	1005
Inkoo a. Kantvik – sea area Porkkala	7206
Sea area at Porkkala	1005
Helsinki harbours – Harmaja	1005
Fairway Helsinki – Porkkala – Rönnskär	1005
Porvoo harbours – Varlax	1005
Varlax – Porvoo lighthouse	1115
Valko Harbour – Täktarn	7746
Archipelago fairway Boistö – Glosholm	1005
Archipelago fairway Glosholm–Helsinki	1005
Kotka – Viikari	2006
Viikari – Orrengrund	1005
Hamina – Suurmusta	7846
Suurmusta – Merikari	1716
Merikari – Kaunissaari	1006

Latvia , 01.02.2022

Port of Riga	1101

Russian Federation , 01.02.2022

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	2312
Lighthouse Šepelevskij – island Sescar	53/3
Island Sescar – Island Sommers	53/1
Island Sommers– S-point island Gogland	43/2
Vyborg, port and bay	84/3
Island Vichrevoj – Island Sommers	43/1
Strait Bjerkesund	53/3
E-point Bol'šoj Ber'ozovyj – –epelevskij	43/2
Luga bay	4313
Appr. Luga bay – line Mo–.-–epel.	3332

Sweden , 01.02.2022

Karlsborg – Maloeren	8546
Sea area off Maloeren	5046
Luleå – Bjoernklack	8546
Bjoernklack – Farstugrunden	4236
E and SE of Farstugrunden	4236
Sandgroenn fairway	8546
Roedkallen – Norstroemsgrund	5046
Haraholmen – Nygrån	8446
Sea area off Nygrån	5046
Skelleftehamn – Gåsoeren	3226
Sea area off Gåsoeren	3226
Sea area off Bjuroeklubb	4136
NE of Nordvalen	2126
SW of Nordvalen	2126
Western Quark (W of Holmoearna)	8346
Umeå – Vaektaren	1106
SE of Vaektaren	3126
NE and SE of Sydostbrotten	1106
Oernskoeldsvik – Hoernskaten	8346
Hoernskaten – Skagsudde	8346
Ångermanaelven north Sandoe Bridge	8444
Ångermanaelven south Sandoe Bridge	8444
Haernoesand – Haernoen	1204
Sundsvall – Draghaellan	8346
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	5041