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BUNDESAMT FÜR SEESCHIFFFAHRT UND HYDROGRAPHIE

Eisbericht Nr. 87

Amtsblatt des BSH

Jahrgang 96	Nr. 87	Thursday, 30.03.2023	1

Übersicht

In den Schären der Bottenwiek befindet sich im Norden bis 70 cm dickes Festeis und im Süden bis 40 cm dickes Festeis. Außerhalb davon befindet sich im Nordosten ein breites Gebiet mit dünnen, ebenem Eis. Auf See treibt ansonsten zumeist sehr dichtes, aufgeschobenes und aufgepresstes Eis mit Spalten, welches im Norden bis 60 cm dick und im Süden bis 40 cm dick ist. In Kvarken liegt bis 45 cm dickes Festeis in den Schären und Buchten und auf See kommt 5–25 cm dickes, dichtes Eis und Neueis vor, was bis in die nördliche Bottensee hineinreicht. In der Bottensee und dem Schärenmeer kommt entlang der Küsten 5–40 cm dickes, ebenes Eis oder Festeis vor und außerhalb davon Neueis. Im Mälarsee liegt morsches Eis. Im Finnischen Meerbusen liegt in den östlichsten Buchten bis 35 cm dickes Festeis. Auf See treibt im Norden östlich von etwa 27°O meist sehr dichtes, 5–30 cm dickes Eis. In den Schären und Buchten entlang der nördlichen Küste kommt Festeis vor.

Overview

In the archipelagos of the Bay of Bothnia, there is up to 70 cm thick fast ice in the north and up to 40 cm thick fast ice in the south. Further out in the northeast there is a wide area of thin level ice. Else at sea, there is ridged and rafted, very close ice with cracks, which is up to 60 cm thick in the north and up 30 cm thick in the south. In the Quark, there is up to 45 cm thick fast ice in the archipelagos and bays and at sea, there is 2–25 cm thick, close ice and new ice reaching into the northernmost Sea of Bothnia. In the Sea of Bothnia and the Archipelago Sea, 5–40 cm thick fast ice or level ice is present at the coasts with new ice outside. In Lake Mälaren, there is rotten ice. In the Gulf of Finland, up to 35 cm thick fast ice is present in the easternmost bays. At sea, there is mostly very close, 5–30 cm thick ice in the north east of about 27°E. In the archipelagos and bays along the northern coast, there is fast ice.

Bay of Bothnia

In the archipelagos of the northern Bay of Bothnia, there is 45–70 cm thick fast ice and compact ice, out to Malören, Kemi-3 and Kattilankalla. Outside the fast ice in the north and northeast there is 10-30nm wide area with thin level ice and new ice. Along the western fast ice there is a very narrow lead with new ice. At sea there is 30–60 cm thick, ridged, very close ice around 65°N 23°E. Further south at sea, there is 20–40 cm thick very close ice, with some ridges in the east, down to the fast ice in the Vaasa archipelago. Locally there are leads and cracks in the ice field. The fast ice in the southern archipelagos is 20–40 cm thick.

With mostly moderate frost, ice growth and ice formation will continue. The ice will drift towards the northeast, slowly closing the lead there.

Herstellung und Vertrieb
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The Quark
There is 25–45 cm thick fast ice in the Vaasa archipelago out to Ensten. On the Swedish side, there is 30-50 cm thick fast ice in inner bays. At sea, there is 2–25 cm thick close to very close in the east and new ice in the west.
With mostly moderate frost, ice formation will continue and the ice drift towards the east/northeast.

Sea of Bothnia
In the archipelagos along the eastern coast, there is 10–30 cm thick fast ice. Along the western coast, there is thin level ice or thin ice in sheltered bays in the south and up to 40 cm thick fast ice in inner bays in the north. Outside there is mostly new ice. On Ångermanälven, there is 30–50 cm thick fast ice. At sea, in the northernmost part, there is open water, thin open ice and new ice.
With light to moderate frost, some new ice may form near the coast at night.

Archipelago Sea and Åland Sea
At the eastern coast, there is rotting or rotten ice in the inner bays, further out thin very open ice or open water in the archipelago. In the western and central part, thin level ice and new ice is present in inner bays.
Some freezing may occur over night, but overall no larger change is expected.

Northern Baltic
In Lake Mälaren, there is rotten ice in the western part and open water in the central part.

Overall no larger change is expected.

Gulf of Finland
15–35 cm thick fast ice is present along the shores of the Neva bay and 10-30cm thick, very close ice is present from St. Petersburg out to Kotlin; further west there is very open ice. In the Bay of Vyborg, there is 15–30 cm thick fast ice and in the entrance 2-10cm thick close ice. In the Bjerkesund, there is 10–25 cm thick fast ice and open ice in the entrance. At sea there is an area of 5-20cm thick, very close ice around 60°10'N/ 28°E surrounded by open to very open ice. Along the northern coast, there is 10–40 cm thick fast ice in the eastern archipelagos with thin ice outside; rotten ice is present in the western archipelagos.
With minimal ice drift and possible minor ice formation over night, no larger change is expected.

Gulf of Riga
Ice remnants can still be found in sheltered places.

The ice will slowly disappear.

Skagerrak and Kattegat
Remnants of thin ice and up to 30 cm thick, partly rotten fast are present in some inner Norwegian fjords
No larger change is expected.

Swedish Lakes
Thin, very open ice or open water is present in sheltered bays of Lake Vänern.

No larger change is expected.

Dr. J. Holfort

Restrictions to Navigation

	Harbour/District	At least dwt/hp/kW	Ice Class	Begin
Finland	Tornio, Kemi and Oulu	4000 dwt	IA	22.02.
	Raahe	4000 dwt	IA	08.03.
	Kalajoki, Kokkola and Pietarsaari	2000 dwt	IA	08.03.
	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 and Kotka	2000 dwt	II	28.03.
	Hamina	2000 dwt	I	08.03.
Sweden	Karlsborg	4000 dwt (2000 t)	IA	28.02.
	Lulea	4000 dwt	IA	28.02.
	Haraholmen and Skelleftehamn	4000 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	1300/2000 dwt	IC/II	23.03.
	Balsta	1300/2000 dwt	IC/II	22.12.
	Härnösand, Stocka, Hudiksvall, Iggesund,Orrskär and Norrsundet	2000 dwt	II	06.03.

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. URHO assists in the eastern Gulf of Finland.

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

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, 29.03.2023

Paernu, port and bay	1//0

Finland, 30.03.2023

Röyttä – Etukari	8546
Etukari – Ristinmatala	6456
Ajos – Ristinmatala	6456
Ristinmatala – Kemi 2	5476
Kemi 2 – Kemi 1	5476
Sea area SW of Kemi 1	5146
Kemi 2 – Ulkokrunni – Virpiniemi	6456
Oulu harbours – Kattilankalla	6456
Kattilankalla – Oulu 1	6456
Sea area SW of Oulu 1	5476
High Sea N of the latitude of Marjaniemi	5476
Raahe harbour – Heikinkari	8446
Heikinkari – Raahe lighthouse	7356
Raahe lighthouse – Nahkiainen	5146
Latitude Marjaniemi – Ulkokalla, Sea	5476
Rahja harbour – Välimatala	7856
Vaelimatala to line Ulkokalla – Ykskivi	5856
Sea betw. lat. of Ulkokalla –Pietarsaari	7856
Ykspihlaja – Repskär	7356
Repskär – Kokkola lighthouse	5856
Sea area off Kokkola lighthouse	5856
Pietarsaari – Kallan	7856
Sea area off Kallan	5856
Sea lat. Pietarsaari – NE Nordvalen	5856
Sea area ENE of Nordvalen	5856
Sea area Nordvalen to W of Norrskär	4756
Vaskiluoto – Ensten	7756
Ensten – Vaasa lighthouse	5146
Vaasa lighthouse – Norrskär	4756
Sea area SW of Norrskär	4756
Kaskinen – Sälgrund	4045
Sea area off Sälgrund	3015
High sea from N to latitude Yttergrund	3232
Pori harb. to line Pori lighth. – Säppi	3005
Rauma, Harbour – Kylmäpihlaja	3005
Uusikaupunki harbour – Kirsta	8795
Kirsta – Isokari	1005
Naantali and Turku – Rajakari	2001
Rajakari – Lövskär	2001
Lövskär – Korra	2001
Lövskär – Berghamn	1001
Lövskär – Grisselborg	1001
Hanko – Vitgrund	1001
Inkoo a. Kantvik – sea area Porkkala	1005
Helsinki harbours – Harmaja	1005
Vuosaari harbour – Eestiluoto	1205
Porvoo harbours – Varlax	1705
Varlax – Porvoo lighthouse	1705
Valko Harbour – Täktarn	2125
Archipelago fairway Boistö – Glosholm	3125
Archipelago fairway Glosholm–Helsinki	1105
Kotka – Viikari	8845
Viikari – Orrengrund	2125
Orrengrund – Tiiskeri	2125

Tiiskeri – Kalbådagrund	1102
Hamina – Suurmusta	5756
Suurmusta – Merikari	4756
Merikari – Kaunissaari	2726

Norway, 30.03.2023

Svinesund – Halden	31//
Drammensfjord	1001
Husøysund – Tønsberg channel	8345
Tønsberg, inner harbour	8353
Vestfjord (Tønsberg)	8555
Langårsund (Kragerø)	8144

Russian Federation, 30.03.2023

Port of St. Petersburg	84/2
St. Petersburg – E-point island Kotlin	53/2
E-point Kotlin – long. lighth. Tolbuhkin	3302
Lighth. Tolbuhkin – lighth. –Šepelevskij	22/2
Lighthouse Šepelevskij – island Sescar	53/2
Island Sescar – Island Sommers	53/2
Island Sommers– S-point island Gogland	12/1
Vyborg, port and bay	83/3
Island Vichrevoj – Island Sommers	53/3
Strait Bjerkesund	83/3
E-point Bol'šoj Ber'ozovyj – Šepelevskij	32/2

Sweden, 29.03.2023

Karlsborg – Malören	6456
Sea area off Malören	5576
Luleå – Björnklack	6356
Björnklack – Farstugrunden	6356
E and SE of Farstugrunden	5356
Sandgrönn fairway	6356
Rödkallen – Norströmsgrund	6356
Haraholmen – Nygrån	6356
Sea area off Nygrån	5246
Skelleftehamn – Gåsören	6356
Sea area off Gåsören	6356
Sea area off Bjuröklubb	6356
NE of Nordvalen	5356
SW of Nordvalen	5356
Western Quark (W of Holmöarna)	3256
Umeå – Väktaren	8446
SE of Väktaren	3256
NE and SE of Sydostbrotten	3256
Fairway to Husum	5246
Örnsköldsvik – Hörnskaten	8446
Hörnskaten – Skagsudde	8446
Sea area off Skagsudde	3256
Fairway W of Ulvöarna	3256
Sea area E of Ulvöarna	3256
Ångermanälven north Sandö Bridge	8444
Ångermanälven south Sandö Bridge	8444
Härnösand – Härnön	5144
Sundsvall – Draghällan	5146
Draghällan – Åstholmsudde	1006
Hudiksvallfjärden	8346
Iggesund – Agö	8346
Sandarne – Hällgrund	8346
Ljusnefjärden – Storjungfrun	8346
Gävle – Eggegrund	1000
Hallstavik – Svartklubben	5142
Köping – Kvicksund	1204
Västerås – Grönsö	8294
Grönsö – Södertälje	1004
Stockholm – Södertälje	3124
Fairway to Karlstad	1101
Fairway to Kristinehamn	1000
Fairway to Otterbäcken	1000