ISSN 0013-2705

BUNDESAMT FÜR SEESCHIFFFAHRT UND HYDROGRAPHIE

# Eisbericht Nr. 32

## Amtsblatt des BSH

| Jahrgang 96 | Nr. 32 | Wednesday, 11.01.2023 | 1 |
|---|---|---|---|

### Übersicht

In den Schären der Bottenwiek befindet sich bis 40 cm dickes Festeis. Weiter außerhalb treibt im Nordosten 10–30 cm dickes, sehr dichtes Eis und im Westen liegt dünnes, ebenes Eis. Entlang der gesamten Eiskante befindet sich festgestampftes Eis. In der südlichen Bottenwiek befindet sich in den Buchten dünnes ebenes Eis oder Festeis und im Osten Neueis weiter außerhalb. In Norra Kvarken liegt bei Vaasa bis 25 cm dickes Festeis. Ansonsten kommt an den Küsten Neueis oder dünnes ebenes Eis vor. Auf See treibt Neueis. In der Bottensee, dem Schärenmeer und dem Mälarsee kommt entlang der Küsten dünnes, ebenes Eis oder Neueis vor. Im Finnischen Meerbusen liegt in den östlichsten Buchten bis 30 cm dickes Festeisvor. Östlich der Linie Kotka–Narva treibt 5–15 cm dickes Eis verschiedener Konzentration. In den Buchten entlang der Küsten kommt im Norden Festeis und im Süden örtlich Neueis vor. Im Nordosten des Rigaischen Meerbusen befindet sich 10–20 cm dickes Festeis in geschützten Buchten und Neueis. In der Bucht von Pärnu liegt Festeis entlang der Küste und sehr dichtes Eis treibt bis zur Insel Kihnu.

### Overview

In the archipelagos of the Bay of Bothnia, there is up to 40 cm thick fast ice. Further out in the northeast, there is 10–30 cm thick, very close ice and in the west, there is thin level ice. A brash ice barrier has formed along the entire ice edge. In the southern Bay of Bothnia, there is thin level ice or fast ice in the inner bays and new ice further out in the east. In the Quark, there is up to 25 cm thick fast ice near Vaasa and else new ice or thin level ice along the coasts. At sea, there is drifting new ice. In the Sea of Bothnia, the Archipelago Sea and Lake Mälaren, there is thin level ice und new ice along the coasts. In the Gulf of Finland, there is up to 30 cm thick fast ice in the easternmost bays. East of the line Kotka–Narva, there is 5–15 cm thick drift ice of varying concentration. In the bays along the coasts, there is fast ice in the north and new ice in places in the south. In the northeastern Gulf of Riga, there is 10–20 cm thick fast ice in sheltered bays and new ice. In the Bay of Pärnu, there is fast ice along the coast and very close drift ice to the south tip of Kihnu.

### Bay of Bothnia

In the archipelagos of the northern Bay of Bothnia, there is 15–40 cm thick fast ice. Further out in the west, there is thin level ice with a brash ice barrier to about Rödkallen and very open to open ice further out. In the northeast, there is very close, 10–30 cm thick ice to about Malören – Kemi-1 – Oulun portti. The ice is difficult to force in places and a brash ice barrier has formed along the ice edge. From Oulun portti to Raahe, there is close, 3–10 cm thick drift ice. In the southern Bay of Bothnia,

**Herstellung und Vertrieb**
Bundesamt für Seeschifffahrt und Hydrographie (BSH)
www.bsh.de/eis
www.bsh.de/ice

**Eisauskünfte / Ice Information**
Telefon: +49 (0) 381 4563 -780
Telefax: +49 (0) 381 4563 -949
E-Mail: ice@bsh.de

there is thin level ice or in places 5–15 cm thick fast ice in the inner bays. Further out in the east, there is new ice to about Nahkiainen–Ulkokalla–Kokkola.
No major changes and a northerly ice drift are expected the coming day.

**The Quark**
There is up to 25 cm thick fast in the Vaasa archipelago to Ensten. Further out, there is thin close ice and new ice to Norrskär. On the Swedish side, there is thin level ice or very close ice along the coast. New ice is present further out and west of Holmöarna. At sea in the central part, there is drifting new ice.
No major changes and a northerly ice drift are expected the coming day.

**Sea of Bothnia**
In the archipelagos along the eastern coast, there is fast ice, 5–15 cm thick and new ice further out. Along the western coast there is thin level ice in sheltered bays. On Ångermanälven, there is 10–20 cm thick fast or level ice.
No major changes are expected the coming day with a northerly ice drift.

**Archipelago Sea**
At the eastern coast, there is 3–10 cm fast ice in the inner bays and else new ice in sheltered places.
No major changes are expected the coming day.

**Northern Baltic**
In Lake Mälaren, 3–10 cm thick level ice is present in the western part. New ice occurs in sheltered places and along the coast.
No major changes are expected the coming day but some melting is possible.

**Gulf of Finland**
15–30 cm thick fast ice or very close ice is present east of the island Kotlin and in the bay north of Kotlin. Further west to about a line Kotka-Narva, there is thin drifting of varying concentration. In the Bay of Vyborg, there is up to 25 cm fast ice. Further out, there is thin level ice followed by rafted 5–15 cm thick, very close ice to Nerva and eastwards. Along the northern coast, there is 3–15 cm fast ice in the inner bays. Along the southern coast, there is new ice in few places.
No major changes are expected the coming day and the ice will drift to the north.

**Gulf of Riga**
In Väinameri, there is 10–25 cm thick fast ice in sheltered bays and open to very open ice between Hiiumaa and Saaremaa. On the fairway, there is thin drifting ice of varying concentration or new ice. In the Bay of Pärnu, there is 10–20 cm thick fast ice and further out to the line south tip of Kihnu – Rannametsa, there is 10–20 cm thick, very close ice. In the port of Riga and from Riga to Kolka, there is open water.
No major changes are expected the coming day. The ice drifts to the north.

**Central Baltic**
The area is mostly ice free.

**Southeastern Baltic**
In the Curonian Lagoon, there is 3–10 cm thick, very close drift ice in the northern part and Vistula Lagoon is mostly ice free.
No major changes are expected the coming day, but some melting is possible.

**Skagerrak and Kattegat**
Up to 10 cm thick ice or new ice is present in some Norwegian Fjords.
No major changes are expected the coming day, but some melting is possible.

**Swedish Lakes**
New ice and thin level ice is present in some sheltered bays of Lake Vänern.
No major changes are expected the coming day but some melting is possible.

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 | 2000 dwt | IB | 07.01. |
| | Raahe, Kalajoki, Kokkola, Pietarsaari and Vaasa | 2000 dwt | I | 07.01. |
| | Kaskinen, Inkoo, Kantvik, Helsinki, Sköldvik and Mussalo | 2000 dwt | II | 07.01. |
| | Loviisa, Kotka and Hamina | 2000 dwt | II | 24.12. |
| **Sweden** | Karlsborg and Lulea | 2000 dwt | IB | 08.01. |
| | Haraholmen and Skelleftehamn | 2000 dwt | IC | 25.12. |
| | Holmsund, Rundvik, Husum and Örnsköldvik | 2000 dwt | II | 21.12. |
| | Angermanälven | 2000 dwt | IB | 07.01. |
| | Köping | 2000 dwt | IC | 07.01. |
| | Västeras | 2000 dwt | IC | 07.01. |
| | Balsta | 1300/2000 dwt | IC/II | 22.12. |

### Estonia

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

### 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.

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

### 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, 11.01.2023**

| | |
|---|---|
| Paernu, port and bay | 7335 |
| Moonsund | 4112 |

**Finland, 11.01.2023**

| | |
|---|---|
| Röyttä – Etukari | 8846 |
| Etukari – Ristinmatala | 7356 |
| Ajos – Ristinmatala | 7356 |
| Ristinmatala – Kemi 2 | 5356 |
| Kemi 2 – Kemi 1 | 5356 |
| Sea area SW of Kemi 1 | 4766 |
| Kemi 2 – Ulkokrunni – Virpiniemi | 7356 |
| Oulu harbours – Kattilankalla | 8356 |
| Kattilankalla – Oulu 1 | 3126 |
| Sea area SW of Oulu 1 | 4746 |
| High Sea N of the latitude of Marjaniemi | 2106 |
| Raahe harbour – Heikinkari | 5146 |
| Heikinkari – Raahe lighthouse | 4046 |
| Raahe lighthouse – Nahkiainen | 4046 |
| Latitude Marjaniemi – Ulkokalla, Sea | 2006 |
| Rahja harbour – Välimatala | 5146 |
| Vaelimatala to line Ulkokalla – Ykskivi | 2006 |
| Sea betw. lat. of Ulkokalla –Pietarsaari | 2006 |
| Ykspihlaja – Repskär | 5146 |
| Repskär – Kokkola lighthouse | 4046 |
| Sea area off Kokkola lighthouse | 0//6 |
| Pietarsaari – Kallan | 5146 |
| Sea area off Kallan | 3006 |
| Sea lat. Pietarsaari – NE Nordvalen | 2006 |
| Sea area ENE of Nordvalen | 3016 |
| Sea area Nordvalen to W of Norrskär | 3016 |
| Vaskiluoto – Ensten | 8746 |
| Ensten – Vaasa lighthouse | 4046 |
| Vaasa lighthouse – Norrskär | 3006 |
| Kaskinen – Sälgrund | 5145 |
| Sea area off Sälgrund | 3005 |
| Pori harb. to line Pori lighth. – Säppi | 3001 |
| Rauma, Harbour – Kylmäpihlaja | 5142 |
| Kylmäpihlaja – Rauma lighthouse | 2000 |
| Uusikaupunki harbour – Kirsta | 8142 |
| Naantali and Turku – Rajakari | 2001 |
| Inkoo a. Kantvik – sea area Porkkala | 5145 |
| Helsinki harbours – Harmaja | 5145 |
| Vuosaari harbour – Eestiluoto | 5145 |
| Porvoo harbours – Varlax | 1005 |
| Valko Harbour – Täktarn | 5145 |
| Kotka – Viikari | 5165 |
| Viikari – Orrengrund | 1005 |
| Hamina – Suurmusta | 5245 |
| Suurmusta – Merikari | 2005 |

**Latvia, 11.01.2023**

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

**Norway, 09.01.2023**

| | |
|---|---|
| Svinesund – Halden | 31// |

| | |
|---|---|
| Drammensfjord | 4212 |
| Tønsberg, inner harbour | 8101 |
| Langårsund (Kragerø) | 8144 |

**Russian Federation, 11.01.2023**

| | |
|---|---|
| Port of St. Petersburg | 83/3 |
| St. Petersburg – E-point island Kotlin | 53/2 |
| E-point Kotlin – long. lighth. Tolbuhkin | 5102 |
| Lighth. Tolbuhkin – lighth. –Šepelevskij | 2001 |
| Lighthouse Šepelevskij – island Sescar | 2001 |
| Island Sescar – Island Sommers | 2001 |
| Vyborg, port and bay | 83/3 |
| Island Vichrevoj – Island Sommers | 4002 |
| Strait Bjerkesund | 81/2 |
| E-point Bol'šoj Ber'ozovyj – Šepelevskij | 50/2 |
| Luga bay | 2001 |
| Appr. Luga bay – line Moš.-Šepel. | 2001 |

**Sweden, 11.01.2023**

| | |
|---|---|
| Karlsborg – Malören | 8346 |
| Sea area off Malören | 5366 |
| Luleå – Björnklack | 8346 |
| Björnklack – Farstugrunden | 5366 |
| E and SE of Farstugrunden | 3126 |
| Sandgrönn fairway | 8346 |
| Rödkallen – Norströmsgrund | 3126 |
| Haraholmen – Nygrån | 8346 |
| Sea area off Nygrån | 3126 |
| Skelleftehamn – Gåsören | 5236 |
| Sea area off Gåsören | 2026 |
| Sea area off Bjuröklubb | 5246 |
| NE of Nordvalen | 4046 |
| SW of Nordvalen | 4046 |
| Western Quark (W of Holmöarna) | 4046 |
| Umeå – Väktaren | 5136 |
| SE of Väktaren | 4046 |
| Örnsköldsvik – Hörnskaten | 5146 |
| Ångermanälven north Sandö Bridge | 8344 |
| Ångermanälven south Sandö Bridge | 8344 |
| Sundsvall – Draghällan | 5242 |
| Hudiksvallfjärden | 5242 |
| Iggesund – Agö | 5242 |
| Sandarne – Hällgrund | 4041 |
| Ljusnefjärden – Storjungfrun | 4041 |
| Gävle – Eggegrund | 5142 |
| Hallstavik – Svartklubben | 4041 |
| Köping – Kvicksund | 5144 |
| Västerås – Grönsö | 5144 |
| Grönsö – Södertälje | 2024 |
| Stockholm – Södertälje | 4044 |
| Norrköping – Hargökalv | 4041 |
| Fairway to Karlstad | 5142 |
| Fairway to Kristinehamn | 5142 |