



# Eisbericht Nr. 21

## Amtsblatt des BSH

Jahrgang 97

Nr. 21

Wednesday, 13.12.2023

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### Übersicht

In der nördlichen Bottenwiek befindet sich in den Schären bis 35 cm dickes Festeis und ebenes Eis. Weiter außerhalb treibt im Norden bis zu 25 cm dickes, sehr dichtes Eis. Weiter südlich bis Norra Kvarken liegt an den Küsten Festeis und weiter außerhalb dünnes, ebenes Eis und Neueis. An den Küsten der Bottensee, in den nördlichen Schären und östlichen Buchten des Finnischen Meerbusens und im nördlichen Teil des Rigaischen Meerbusens kommt Neueis und dünnes ebenes Eis sowie örtlich Festeis vor. In der südlichen Ostsee kommen örtlich noch Reste von Eis vor. Neueis und örtlich dickeres Eis kommt auch in einigen geschützten Fjorden im Skagerrak vor.

### Overview

In the northern Bay of Bothnia there is up to 35 cm thick fast ice and level ice in the archipelagos. Further out in the north, up to 25 cm thick, very close ice is drifting at sea. Further south to Norra Kvarken, there is fast ice along the coast and further out thin level ice or new ice. At the coasts of the Sea of Bothnia, in the northern archipelagos and the eastern bays of the Gulf of Finland and in the northernmost part of the Gulf of Riga there is new ice and thin level ice or fast ice at places. Remnants of ice can be found in some sheltered places of the southern Baltic region. New ice and at places thicker ice is present in sheltered fjords of the Skagerrak.

### Bay of Bothnia

In the archipelagos of the northern Bay of Bothnia there is up to 35 cm thick fast ice. Off the fast ice in the north, very close, 5–25 cm thick and partly rafted drift ice with minor brash ice barriers is present to about a line from Raahe to Luleå. Further south, there is up to 20 cm thick fast ice in the archipelagos along the coast and thin level ice further out from Hailuoto to Kokkola and out to

about Nahkiainen and Ulkokalla with new ice at the ice edge. Off the fast ice in the west, there is close, 5–10 cm thick ice and new ice along the coast further south.

With moderate to severe frost and a gentle breeze from the east/northeast, ice formation and growth will continue with the ice drifting to the west/southwest.

### The Quark

There is 5–20 cm thick fast ice in the Vaasa archipelago and from Vaasa to Storhåsten. Farther out there is drifting new ice and thin level ice to

Norrskär and Utgrynnan. Along the Swedish coast there is fast ice in inner bays and up to 10 cm thick very close ice or level ice further out to

### Herstellung und Vertrieb

Bundesamt für Seeschifffahrt und Hydrographie (BSH)

[www.bsh.de/eis](http://www.bsh.de/eis)

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### Eisankünfte / Ice Information

Telefon: +49 (0) 381 4563 -780

Telefax: +49 (0) 381 4563 -949

E-Mail: [ice@bsh.de](mailto:ice@bsh.de)

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Holmögadd. At sea there is very open thin ice and strings of shuga.

With moderate to severe frost at the coasts, ice

### Sea of Bothnia

Thin level ice or fast ice is present in bays along the whole Finnish coast with new ice and ice formation slightly further out. Along the Swedish coast, there is new ice, thin level or fast ice in bays along the coast. On Ångermanälven, there is 5–15

### Archipelago Sea and Åland Sea

In the inner archipelago there is thin level ice and new ice.

### Northern Baltic

In Lake Mälaren there is mostly 5–10 cm thick level ice in the west and new ice in the east with the central part being still ice free. New ice is present

### Gulf of Finland

In the top of Vyborg Bay there is 10–15 cm thick fast ice and new ice further out. In the northern part of the Bjerkesund there is close dark nilas. From St. Petersburg to Kotlin there is 10–20 cm thick compact ice with new ice further out to the longitude of Fort Krasnaya Gorka. Along the north-

### Gulf of Riga

In Väinameri there is up to 15 cm thick very close ice at sea and level or fast ice at the coasts. In the Bay of Pärnu there is 5–15 cm fast or level ice to about the line Manilaiu-Sorgu-Voiste. Further out to

### Southeastern Baltic

New ice or thin ice are present in the Curonian Lagoon and in the Vistula lagoon.

### Southwestern Baltic

Drifting ice remnants can still occur occasionally at the Peenestrom and few other sheltered places.

### Skagerrak and Kattegat

Ice formation and new ice is present in sheltered places of inner Norwegian Fjords. At places thicker ice is possible in inner bays. Along the Swedish coast, there is new ice in few sheltered areas.

### Swedish Lakes

Thin level ice and new ice is present in sheltered areas of Lake Vänern.

formation and growth will continue. With a fresh breeze from the north/northeast the ice will drift to the south/southwest.

cm thick fast and level ice on the upper part and new is present in the lower part.

With mostly moderate at the coasts, ice formation and ice growths continue.

With moderate frost in the east and slight frost in the west some ice growth is possible.

in sheltered places at the outer coast.

With slight to moderate frost and light winds some ice formation is expected.

ern coast there is thin level ice and new ice in the inner archipelagos. In Lake Saimaa there is level ice with varying concentration.

With mostly slight frost and light winds some ice growth is expected but else no larger changes.

the island Kihnu, there is new ice. In the port of Riga, there is open water.

With mostly slight frost and light winds, some ice formation but else no larger changes are expected.

With temperatures around 0°C no larger changes are expected.

Ice melt will continue the coming day.

In the northern Skagerrak, some new ice formation is possible with slight to moderate frost. Elsewhere no larger changes are expected.

With mostly slight to moderate frost, some ice formation but else no larger changes are expected.

## Restrictions to Navigation

|                    | Harbour/District  | At least<br>dwt/hp/kW | Ice Class | Begin         |
|--------------------|---|-----------------------|-----------|---------------|
| <b>Finland</b>     | Tornio, Kemi and Oulu   | 2000 dwt              | I         | 09.12.        |
|                    | <b>Tornio, Kemi and Oulu</b>  | <b>2000 dwt</b>       | <b>IB</b> | <b>17.12.</b> |
|                    | Raahe, Kalajoki, Kokkola, Pietarsaari and Vaasa   | 2000 dwt              | II        | 06.12.        |
|                    | <b>Vaasa</b>  | <b>2000 dwt</b>       | <b>I</b>  | <b>17.12.</b> |
|                    | <b>Kaskinen and Uusikaupunki</b>  | <b>2000 dwt</b>       | <b>II</b> | <b>17.12.</b> |
|                    | Taalintehdas, Förby, Koverhar, Lappohja, Inkoo, Kantvik, Helsinki, Sköldvik, Loviisa, Mussalo, Kotka and Hamina | 2000 dwt              | II        | 09.12.        |
| <b>Lake Saimaa</b> | <b>Saimaa Canal</b>   | <b>2000 dwt</b>       | <b>IB</b> | <b>13.12.</b> |
|                    |   | <b>2000 dwt</b>       | <b>IB</b> | <b>13.12.</b> |
| <b>Sweden</b>      | Haraholmen  | 2000 dwt              | IC        | 05.12.        |
|                    | Karlsborg and Lulea   | 2000 dwt              | IC        | 02.12.        |
|                    | Skelleftehamn   | 2000 dwt              | IC        | 05.12.        |
|                    | Holmsund  | 2000 dwt              | II        | 09.12.        |
|                    | Rundvik, Husum and Örnköldsvik  | 2000 dwt              | II        | 12.12.        |
|                    | Angermanälven   | 2000 dwt              | IC        | 12.12.        |
|                    | Köping  | 1300 dwt              | IC        | 05.12.        |
|                    | Västeras  | 1300/2000 dwt         | IC/II     | 05.12.        |
|                    | Trollhätte Canal and Göta Älv   | 1300/2000 dwt         | IC/II     | 05.12.        |
|                    | Vänern  | 1300/2000 dwt         | IC/II     | 05.12.        |

**Estonia**

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

**Finland/Sweden**

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:** ATLE, KONTIO, ALE, OTSO and YMER assist in the northern Bay of Bothnia.

**Russia**

There are restrictions for small crafts going to St. Petersburg, Vyborg, Vysotsk, Primorsk and Ust-Luga.

**Icebreakers:** Several icebreakers assist vessels to the port of St. Petersburg, Vyborg, Vysotsk, Primorsk and Ust-Luga.

## Baltic Sea Ice Code

|  |  |
|--|--|
| <p>First number:</p> <p><b>A<sub>B</sub> Amount and arrangements of sea ice</b></p> <p>0 Ice free</p> <p>1 Open water – concentration less than 1/10</p> <p>2 Very open ice - concentration 1/10 to 3/10</p> <p>3 Open ice – concentration 4/10 to 6/10</p> <p>4 Close ice – concentration 7/10 to 8/10</p> <p>5 Very close ice – concentration 9/10 to 9+/10</p> <p>6 Compact ice, including consolidated ice – concentration 10/10</p> <p>7 Fast ice with drift ice outside</p> <p>8 Fast ice</p> <p>9 Lead in very close or compact drift ice or along the fast ice edge</p> <p>/ Unable to report</p> <p>Third number:</p> <p><b>T<sub>B</sub> Topography or form of ice</b></p> <p>0 Pancake ice, ice cakes, brash ice – less than 20 m across</p> <p>1 Small ice floes – 20 to 100 m across</p> <p>2 Medium ice floes – 100 to 500 m</p> <p>3 Big ice floes – 500 to 2000 m across</p> <p>4 Vast or giant ice floes – more than 2000 m across – or level ice</p> <p>5 Rafted ice</p> <p>6 Compact slush or shuga, or compacted brash ice</p> <p>7 Hummocked or ridged ice</p> <p>8 Thaw holes or many puddles on the ice</p> <p>9 Rotten ice</p> <p>/ No information or unable to report</p> | <p>Second number:</p> <p><b>S<sub>B</sub> Stage of ice development</b></p> <p>0 New ice or dark nilas (less than 5 cm thick)</p> <p>1 Light nilas (5 - 10 cm thick) or ice rind</p> <p>2 Grey ice (10 - 15 cm thick)</p> <p>3 Grey-white ice (15 - 30 cm thick)</p> <p>4 White ice, first stage (30 - 50 cm thick)</p> <p>5 White ice, second stage (50 - 70 cm thick)</p> <p>6 Medium first year ice (70 - 120 cm thick)</p> <p>7 Ice predominantly thinner than 15 cm with some thicker ice</p> <p>8 Ice predominantly grey-white ice (15 – 30 cm) with some thicker ice</p> <p>9 Ice predominantly thicker than 30 cm with some thinner ice</p> <p>/ No information or unable to report</p> <p>Fourth number:</p> <p><b>K<sub>B</sub> Navigation conditions in ice</b></p> <p>0 Navigation unobscured</p> <p>1 Navigation difficult or dangerous for wooden vessels without ice sheathing</p> <p>2 Navigation difficult for unstrengthened or low-powered vessels built of iron or steel. Navigation for wooden vessels even with ice sheathing not advisable</p> <p>3 Navigation without icebreaker assistance possible only for high-powered vessels of strong construction and suitable for navigation in ice</p> <p>4 Navigation proceeds in lead or broken ice-channel without the assistance of an icebreaker</p> <p>5 Icebreaker assistance can only be given to vessels suitable for navigation in ice and of special size</p> <p>6 Icebreaker assistance can only be given to vessels of special ice class and of special size</p> <p>7 Icebreaker assistance can only be given to vessels after special permission</p> <p>8 Navigation temporarily closed</p> <p>9 Navigation has ceased</p> <p>/ Unknown</p> |
|--|--|

**Estonia, 12.12.2023**

|                      |      |
|----------------------|------|
| Paernu, port and bay | 5243 |
| Moonsund             | 5243 |

**Finland, 13.12.2023**

|  |      |
|--|------|
| Röyttä – Etukari                         | 8346 |
| Etukari – Ristinmatala                   | 7346 |
| Ajos – Ristinmatala                      | 5346 |
| Ristinmatala – Kemi 2                    | 5356 |
| Kemi 2 – Kemi 1                          | 5356 |
| Sea area SW of Kemi 1                    | 5376 |
| Kemi 2 – Ulkokrunni – Virpiniemi         | 7356 |
| Oulu harbours – Kattilankalla            | 7346 |
| Kattilankalla – Oulu 1                   | 5356 |
| Sea area SW of Oulu 1                    | 5356 |
| High Sea N of the latitude of Marjaniemi | 5376 |
| Raahе harbour – Heikinkari               | 8145 |
| Heikinkari – Raahе lighthouse            | 5145 |
| Raahе lighthouse – Nahkiainen            | 5145 |
| Latitude Marjaniemi – Ulkokalla, Sea     | 5355 |
| Rahja harbour – Välimatala               | 7145 |
| Vaelimatala to line Ulkokalla – Ykskivi  | 5145 |
| Sea betw. lat. of Ulkokalla –Pietarsaari | 5045 |
| Ykspihlaja – Repskär                     | 8745 |
| Repskär – Kokkola lighthouse             | 4145 |
| Sea area off Kokkola lighthouse          | 4045 |
| Pietarsaari – Kallan                     | 4045 |
| Sea area off Kallan                      | 2025 |

|   |      |
|---|------|
| Sea lat. Pietarsaari – NE Nordvalen     | 5165 |
| Sea area ENE of Nordvalen               | 3015 |
| Sea area Nordvalen to W of Norrskär     | 2025 |
| Vaskiluoto – Ensten                     | 8745 |
| Ensten – Vaasa lighthouse               | 4045 |
| Vaasa lighthouse – Norrskär             | 4045 |
| Sea area SW of Norrskär                 | 2025 |
| Kaskinen – Sälgrund                     | 8142 |
| Sea area off Sälgrund                   | 4041 |
| High sea from N to latitude Yttergrund  | 2021 |
| Pori harb. to line Pori lighth. – Säppi | 2001 |
| Sea W of line Pori lighthouse – Säppi   | 2021 |
| Rauma, Harbour – Kylmäpihlaja           | 4041 |
| Uusikaupunki harbour – Kirsta           | 8142 |
| Kirsta – Isokari                        | 4041 |
| Koverhar – Hästö Busö                   | 5145 |
| Inkoo a. Kantvik – sea area Porkkala    | 5145 |
| Helsinki harbours – Harmaja             | 3005 |
| Valko Harbour – Täktarn                 | 5145 |
| Kotka – Viikari                         | 5145 |
| Hamina – Suurmusta                      | 5145 |
| Suurmusta – Merikari                    | 4045 |

**Latvia, 13.12.2023**

|              |      |
|--------------|------|
| Port of Riga | 1000 |
|--------------|------|

**Russian Federation, 13.12.2023**

|                        |      |
|------------------------|------|
| Port of St. Petersburg | 62// |
|------------------------|------|

|  |      |
|--|------|
| St. Petersburg – E-point island Kotlin   | 63// |
| E-point Kotlin – long. lighth. Tolbukhin | 51// |
| Lighth. Tolbukhin – lighth. –Šepelevskij | 30// |
| Vyborg, port and bay                     | 82// |
| Strait Bjerkesund                        | 51// |
| E-point Bol'šoj Ber'ozovyj – Šepelevskij | 50// |

**Sweden, 12.12.2023**

|                                     |      |
|-------------------------------------|------|
| Karlsborg – Malören                 | 8346 |
| Sea area off Malören                | 5356 |
| Luleå – Björnklack                  | 8346 |
| Björnklack – Farstugrunden          | 5256 |
| E and SE of Farstugrunden           | 4046 |
| Sandgrönn fairway                   | 8346 |
| Rödkaullen – Norströmsgrund         | 5266 |
| Haraholmen – Nygrån                 | 5336 |
| Sea area off Nygrån                 | 4136 |
| Skelleftehamn – Gåsören             | 5236 |
| Sea area off Gåsören                | 4136 |
| Sea area off Bjuröklubb             | 4136 |
| NE of Nordvalen                     | 4046 |
| SW of Nordvalen                     | 4046 |
| Western Quark (W of Holmöarna)      | 8146 |
| Umeå – Väktaren                     | 5146 |
| SE of Väktaren                      | 3026 |
| Fairway to Husum                    | 5146 |
| Örnsköldsvik – Hörnskatan           | 5146 |
| Hörnskatan – Skagsudde              | 2126 |
| Fairway W of Ulvöarna               | 2126 |
| Ångermanälven north Sandö Bridge    | 5144 |
| Ångermanälven south Sandö Bridge    | 5144 |
| Härnösand – Härnön                  | 4041 |
| Sundsvall – Draghallan              | 5142 |
| Hudiksvallfjärden                   | 5142 |
| Iggesund – Agö                      | 5142 |
| Sandarne – Hällgrund                | 5142 |
| Ljusnefjärden – Storjungfrun        | 5142 |
| Gävle – Eggegrund                   | 5142 |
| Öregrundsgrepen                     | 4041 |
| Hallstavik – Svartklubben           | 4041 |
| Stockholm – Trälhavet – Klövholmen  | 4041 |
| Köping – Kvicksund                  | 5144 |
| Västerås – Grönsö                   | 5144 |
| Stockholm – Södertälje              | 4041 |
| Södertälje – Fifong                 | 4041 |
| Norrköping – Hargökalv              | 5142 |
| Järnverket-Lillhammaren – N Kränkan | 4041 |
| Uddevalla – Stenungsund             | 4041 |
| Brofjorden – Dynabrott              | 4041 |
| Vänersborgsviken                    | 5146 |
| Fairway to Karlstad                 | 5146 |
| Fairway to Kristinehamn             | 5146 |
| Fairway to Lidköping                | 5146 |