



# Eisbericht Nr. 69

## Amtsblatt des BSH

Jahrgang 96

Nr. 69

Friday, 03.03.2023

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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 bis zu 40 cm dickes zusammenhängendes oder sehr dichtes, örtlich aufgepresstes oder aufgeschobenes Eis. Im Westen verläuft eine Rinne mit sehr lockerem Eis im Norden und offenem Wasser im Süden. 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 ist zumeist offenes Wasser. 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 befindet sich dünnes zumeist sehr lockeres Eis. In den Schären und Buchten entlang der nördlichen Küste kommt Festeis vor. Im Nordosten des Rigaischen Meerbusen befindet sich 10–20 cm dickes Festeis oder sehr dichtes Eis in geschützten Gebieten und 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 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 mostly very open ice in the north and open water in the south. 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 mostly open water. 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, very open ice in the north. In the archipelagos and bays along the northern coast, there is fast ice. 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, up to 45 cm thick ice towards Malören and off the eastern fast ice. In the northwest, there is a lead with very open ice running from Malören to about Nygrån. Further out in the northeast, there is 20–40

cm thick, in places ridged very close ice to about Kemi-1 – Oulu-2 – Raahe. In the central northern part there is 15–40 cm thick very close ice with some ridges and cracks to about 65°10'N. At sea east of about 23°00'E, there is mostly 10–25 cm thick and partly rafted, very close ice with some

#### Herstellung und Vertrieb

Bundesamt für Seeschifffahrt und Hydrographie (BSH)  
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thicker ridged floes at places. In the west is mostly open water with some very open ice along the southwestern coast all the way to the Quark. In the southern Bay of Bothnia, there is 15–35 cm thick fast ice in the archipelagos. About 15 NM further

#### The Quark

There is 15–35 cm thick fast ice in the Vaasa archipelago out to Storhästen. Further out there is very close, 5–20 cm thick ice and new ice to Vaasa lighthouse. On the Swedish side, there is mostly up to 35 cm thick fast ice in inner bays. Further out,

#### Sea of Bothnia

In the archipelagos along the eastern coast, there is 10–25 cm thick fast ice and new ice at places 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

#### 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 somewhat further out. In the western and central part new ice is pre-

#### 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

#### Gulf of Finland

From St. Petersburg out to Kotlin and in the bay north of Kotlin, there is 20–45 cm thick fast ice or compact ice. In the Bay of Vyborg, there is 15–25 cm thick fast ice and in the Bjerkesund, there is 10–20 cm thick fast ice. From Kotlin to the Bjerkesund, there is open to close, 5–25 cm thick drift ice. At sea in the south, there is 5–25 cm thick, rafted, very close ice from Šepelevskij to about the line Moščnyj – Vigrund – Sillamäe. In the north, there is mostly 3–10 cm thick, very open ice to Gogland and Loviisa with close ice and thicker

#### Gulf of Riga

In Väinameri, there is 10–20 cm thick fast ice near the coasts. Somewhat further out, there is very close ice and on the fairway is mostly open water with thin ice at a few places. In the Bay of Pärnu, 5–15 cm thick, very close ice drifts along the eastern coast to Hädemeeste. Else, there is mostly

#### 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.

out, there is very close, 10–25 cm thick ice, partly rafted and with a brash ice barrier at the edge. Ice formation and ice growth continues over the weekend. The ice will mostly drift to the south and on Sunday more to the west.

there is open water and very open ice west of Holmöarna. At sea, there is open water. Ice growth and ice formation is expected over the weekend. The ice will drift to the south with slightly ceasing speeds in the course of the weekend.

bays in the north. On Ångermanälven, there is 20–40 cm thick fast or level ice. Ice formation and ice growth along the coasts is expected over the weekend with dropping temperatures.

sent along the coasts.

Some ice formation and ice growth is expected over the weekend.

sheltered places along the outer coast. Some ice formation and ice growth is possible at sheltered places over the weekend.

floes off the northern fast ice. Somewhat further west is open water. 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.

Ice formation and ice growth continues over the weekend with temperatures dropping below zero also in the western parts. The ice will mostly drift to the south with ceasing speed.

open water with 5–10 cm thick ice at few places out to the line southern point of Kihnu to Ainazi. Some ice formation and ice growth is expected over the weekend. The ice will drift to the south-east/south with ceasing speed in the course of the weekend.

Some ice formation is possible in sheltered places over the weekend.

### Swedish Lakes

Thin level ice or new ice is present in some sheltered bays in the northeast of Lake Vänern. With slightly dropping temperatures some ice for-

mation and ice growth is possible over the weekend.

Dr. W. Aldenhoff

### Restrictions to Navigation

|  | Harbour/District   | At least<br>dwt/hp/kW | Ice Class     | Begin         |
|--|--|-----------------------|---------------|---------------|
| <b>Estonia</b>   | Pärnu  | 1600 kW               | 1 C           | 23.12.        |
| <b>Finland</b>   | Tornio, Kemi and Oulu                                    | 4000 dwt              | IA            | 22.02.        |
|  | Raahe  | 2000 dwt              | IA            | 02.03.        |
|  | <b>Raahe</b>   | <b>4000 dwt</b>       | <b>IA</b>     | <b>08.03.</b> |
|  | Kalajoki, Kokkola  | 2000 dwt              | IB            | 02.03.        |
|  | <b>Kalajoki, Kokkola, Pietarsaari</b>                    | <b>2000 dwt</b>       | <b>IA</b>     | <b>08.03.</b> |
|  | Pietarsaari and Vaasa                                    | 2000 dwt              | I             | 07.01.        |
|  | <b>Vaasa</b>   | <b>2000 dwt</b>       | <b>IB</b>     | <b>08.03.</b> |
|  | Kaskinen, Inkoo, Kantvik, Helsinki, Sköldvik and Mussalo | 2000 dwt              | II            | 07.01.        |
|  | Loviisa, Kotka and Hamina                                | 2000 dwt              | II            | 24.12.        |
| <b>Loviisa, Kotka and Hamina</b>                                     | <b>2000 dwt</b>  | <b>I</b>              | <b>08.03.</b> |               |
| <b>Russia</b>  | Vyborg and Vysotsk                                       | -                     | Ice 1         | 08.02.        |
| <b>Sweden</b>  | Karlsborg  | 4000 dwt (2000 t)     | IA            | 28.02.        |
|  | Lulea  | 4000 dwt              | IA            | 28.02.        |
|  | Haraholmen and Skelleftehamn                             | 2000 dwt              | IB            | 28.02.        |
|  | <b>Haraholmen and Skelleftehamn</b>                      | <b>2000 dwt</b>       | <b>IA</b>     | <b>04.03.</b> |
|  | Holmsund   | 2000 dwt              | IC            | 07.02.        |
|  | Rundvik and Husum  | 2000 dwt              | II            | 21.12.        |
|  | <b>Rundvik and Husum</b>                                 | <b>2000 dwt</b>       | <b>IC</b>     | <b>04.03.</b> |
|  | Örnsköldsvik   | 2000 dwt              | IC            | 13.02.        |
|  | Angermanälven  | 2000 dwt              | IB            | 07.01.        |
|  | Söraker, Sundsvall and Söderhamn                         | 2000 dwt              | IC            | 13.02.        |
|  | Köping and Västerås                                      | 1300/2000 dwt         | IC/II         | 25.01.        |
|  | <b>Köping and Västerås</b>                               | <b>2000dwt</b>        | <b>IC</b>     | <b>06.03</b>  |
|  | Balsta   | 1300/2000 dwt         | IC/II         | 22.12.        |
| <b>Härnösand, Stocka, Hudiksvall, Iggesund, Orrrskär, Norrsundet</b> | <b>2000dwt</b>   | <b>IC</b>             | <b>06.03</b>  |               |

### 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 4<sup>th</sup> 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**

|  |  |
|--|--|
| <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, 03.03.2023**

|                                  |      |
|----------------------------------|------|
| Shipping route from Narva-Jõssuu | 5102 |
| Kunda, port and bay              | 3001 |
| Paernu, port and bay             | 42/5 |
| Moonsund                         | 2002 |

**Finland, 03.03.2023**

|                        |      |
|------------------------|------|
| Röyttä – Etukari       | 8446 |
| Etukari – Ristinmatala | 6456 |

|  |      |
|--|------|
| Ajos – Ristinmatala                      | 6456 |
| Ristinmatala – Kemi 2                    | 5876 |
| Kemi 2 – Kemi 1                          | 5876 |
| Sea area SW of Kemi 1                    | 5876 |
| Kemi 2 – Ulkokrunni – Virpiniemi         | 6456 |
| Oulu harbours – Kattilankalla            | 7456 |
| Kattilankalla – Oulu 1                   | 6456 |
| Sea area SW of Oulu 1                    | 5356 |
| High Sea N of the latitude of Marjaniemi | 5856 |

|  |      |                              |      |
|--|------|------------------------------|------|
| Raahe harbour – Heikinkari               | 8346 | Draghällan – Åstholmsudde    | 1006 |
| Heikinkari – Raahe lighthouse            | 7756 | Hudiksvallfjärden            | 8346 |
| Raahe lighthouse – Nahkiainen            | 5356 | Iggesund – Agö               | 8346 |
| Latitude Marjaniemi – Ulkokalla, Sea     | 5356 | Sandarne – Hällgrund         | 8346 |
| Rahja harbour – Välimatala               | 5756 | Ljusnefjärden – Störjungfrun | 8346 |
| Vaelimatala to line Ulkokalla – Ykskivi  | 5756 | Gävle – Eggegrund            | 1101 |
| Sea betw. lat. of Ulkokalla –Pietarsaari | 5756 | Hallstavik – Svartklubben    | 5142 |
| Ykspihlaja – Repskär                     | 7756 | Köping – Kvikksund           | 8244 |
| Repskär – Kokkola lighthouse             | 5756 | Västerås – Grönsö            | 8244 |
| Sea area off Kokkola lighthouse          | 5756 | Grönsö – Södertälje          | 4044 |
| Pietarsaari – Kallan                     | 7756 | Stockholm – Södertälje       | 4044 |
| Sea area off Kallan                      | 5756 | Södertälje – Fifong          | 2024 |
| Sea lat. Pietarsaari – NE Nordvalen      | 5756 | Fairway to Karlstad          | 4041 |
| Sea area ENE of Nordvalen                | 2726 | Fairway to Kristinehamn      | 5142 |
| Sea area Nordvalen to W of Norrskär      | 2126 |                              |      |
| Vaskiluoto – Ensten                      | 7756 |                              |      |

**Latvia, 02.03.2023**

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

**Russian Federation, 03.03.2023**

|  |      |
|--|------|
| Port of St. Petersburg                   | 84/3 |
| St. Petersburg – E-point island Kotlin   | 54/3 |
| E-point Kotlin – long. lighth. Tolbuhkin | 4303 |
| Lighth. Tolbuhkin – lighth. –Šepelevskij | 52/2 |
| Lighthouse Šepelevskij – island Sescar   | 42/2 |
| Island Sescar – Island Sommers           | 42/2 |
| Island Sommers– S-point island Gogland   | 30/1 |
| Vyborg, port and bay                     | 83/3 |
| Island Vichrevoj – Island Sommers        | 40/3 |
| Strait Bjerkesund                        | 83/3 |
| E-point Bol'šoj Ber'ozovyj – Šepelevskij | 32/2 |
| Luga bay                                 | 51/2 |
| Appr. Luga bay – line Moš.-Šepel.        | 41/2 |

**Sweden, 03.03.2023**

|                                  |      |
|----------------------------------|------|
| Karlsborg – Malören              | 6456 |
| Sea area off Malören             | 5356 |
| Luleå – Björnklack               | 8546 |
| Björnklack – Farstugrunden       | 2326 |
| E and SE of Farstugrunden        | 2326 |
| Sandgrönn fairway                | 8546 |
| Rödkaullen – Norströmsgrund      | 2326 |
| Haraholmen – Nygrån              | 8346 |
| Sea area off Nygrån              | 2326 |
| Skelleftehamn – Gåsören          | 5336 |
| Sea area off Gåsören             | 5336 |
| Sea area off Bjuröklubb          | 5336 |
| NE of Nordvalen                  | 1106 |
| SW of Nordvalen                  | 1106 |
| Western Quark (W of Holmöarna)   | 5246 |
| Umeå – Väktaren                  | 5146 |
| SE of Väktaren                   | 1106 |
| Örnsköldsvik – Hörnskatan        | 8446 |
| Hörnskatan – Skagsudde           | 5146 |
| Ångermanälven north Sandö Bridge | 8444 |
| Ångermanälven south Sandö Bridge | 8444 |
| Härnösand – Härnön               | 5144 |
| Sundsvall – Draghällan           | 5146 |