



# Eisbericht Nr. 16

## Amtsblatt des BSH

Jahrgang 97	Nr. 16	Wednesday, 06.12.2023	1
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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 bis zu 15 cm dickes, dichtes bis sehr dichtes Eis. Weiter südlich bis Norra Kvarken liegt an den Küsten ebenes Eis und weiter außerhalb treibt dünnes, dichtes 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 dünnes, ebenes Eis und Neueis vor. Im gesamten südlichen Bereich der Ostsee kommt an geschützten Stellen örtlich Neueis vor. Neueis kommt auch in einigen geschützten Fjords 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, up to 15 cm thick, close to very close ice is drifting at sea. Further south, up to Norra Kvarken, there is level ice along the coast and further out new ice and thin close 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. New ice can also be found in some sheltered places of the whole southern Baltic region. New ice is also 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 with adjacent level ice. Off the ice in the west, there is new ice and ice formation. At sea in the eastern part, close to very close, 5–15 cm thick drifting ice is present to about the line Farstugrunden– Ulkokalla. Off Raahe there is thin level ice and further out at sea

drifting new ice and ice formation to Ulkokalla. Further south there is up to 15cm thick level ice at the coast and new ice and up to 10cm thick, close ice farther out.

With moderate to severe frost and a gentle breeze from the southeast, ice formation and growth will continue with the ice drifting northwestwards.

### The Quark

There is thin level ice in the Vaasa archipelago and from Vaasa to Storhästen. Farther out there is drifting new ice to Norra Glopsten and new ice formation further out to Norrskär. Along the Swedish coast there is thin level ice and up to 10 cm

thick close to very close further out to Nordvalen. At sea there is new ice formation.

With moderate to severe frost ice formation and ice growth will continue. With a moderate southern breeze the ice will drift northwards.

### Herstellung und Vertrieb

Bundesamt für Seeschifffahrt und Hydrographie (BSH)  
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**Sea of Bothnia**

Thin level ice can be found in bays along the whole Finnish coast with new ice and ice formation slightly further out. Along the Swedish coast, there is new ice or thin level ice in bays. On Ångermanälven, there is 3–15 cm thick fast and level ice on the

upper part and new ice is present in the lower part. With severe frost at the western coast and moderate frost at the eastern coast, ice formation and ice growth will continue.

**Archipelago Sea and Åland Sea**

In sheltered bays there is level ice and new ice. With light frost in the east and colder temperatures

in the west ice formation and ice growth in coastal areas will continue.

**Northern Baltic**

In Lake Mälaren there is thin level and new ice in the western part. New ice is present in sheltered places at the outer coast.

With moderate to severe frost ice formation and ice growth continues the coming day.

**Gulf of Finland**

In the top of Vyborg Bay and from Kotlin to St. Petersburg as well as in sheltered places along the northern coast, there is thin level ice and new ice. In Lake Saimaa there is thin ice and new ice.

With severe frost in the east and slight frost in the west and a gentle breeze from the southeast, ice formation and ice growth will continue.

**Gulf of Riga**

In Väinameri there is thin close ice at sea and level or fast ice at the coasts. In the Bay of Pärnu there is thin level ice with new ice and thin open ice fur-

ther out. With slight to moderate frost and weak winds ice formation and ice growth will continue.

**Southeastern Baltic**

New ice is present in the Curonian Lagoon and in the Vistula lagoon.

With mostly slight frost some ice formation is expected but else no larger changes.

**Southwestern Baltic**

New ice is present at places in some sheltered places of inner waters like the Schlei and the Peenestrom.

With air temperatures around zero, but with water temperatures largely above 5°C at the outer coast, no larger ice formation is expected.

**Skagerrak and Kattegat**

Ice formation and new ice is present in sheltered places of inner Norwegian Fjords and in some sheltered areas along the Swedish coast.

With mostly slight to moderate frost, some ice formation is expected especially in the northern Fjords.

**Swedish Lakes**

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

With moderate to slight frost further new ice formation is expected.

Dr. W. Aldenhoff

## Restrictions to Navigation

	Harbour/District	At least dwt/hp/kW	Ice Class	Begin
<b>Finland</b>	Tornio, Kemi and Oulu	2000 dwt	II	22.11.
	<b>Tornio, Kemi and Oulu</b>	<b>2000 dwt</b>	<b>I</b>	<b>09.12.</b>
	<b>Raahe, Kalajoki, Kokkola, Pietarsaari and Vaasa</b>	<b>2000 dwt</b>	<b>II</b>	<b>06.12.</b>
	<b>Taalintehdas, Förby, Koverhar, Lap-pohja, Inkoo, Kantvik, Helsinki, Sköldvik, Loviisa, Mussalo, Kotka and Hamina</b>	<b>2000 dwt</b>	<b>II</b>	<b>09.12.</b>
	Lake Saimaa	2000 dwt	II	02.12.
	<b>Lake Saimaa</b>	<b>2000 dwt</b>	<b>I</b>	<b>08.12.</b>
	Saimaa Canal	2000 dwt	II	02.12.
	<b>Saimaa Canal</b>	<b>2000 dwt</b>	<b>I</b>	<b>08.12.</b>
<b>Sweden</b>	Haraholmen	2000 dwt	IC	05.12.
	Karlsborg and Lulea	2000 dwt	IC	02.12.
	Skelleftehamn	2000 dwt	IC	05.12.
	<b>Holmsund</b>	<b>2000 dwt</b>	<b>II</b>	<b>09.12.</b>
	Angermanälven	1300/2000 dwt	IC/II	29.11.
	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.

**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:** KONTIO, ALE and YMER assist in the northern Bay of Bothnia. **OTSO** is heading for the 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>
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**Estonia, 05.12.2023**

Paernu, port and bay	20/0
Moonsund	30/0

**Finland, 05.12.2023**

Röyttä – Etukari	8345
Etukari – Ristinmatala	8345
Ajos – Ristinmatala	5755
Ristinmatala – Kemi 2	5145
Kemi 2 – Kemi 1	5145
Sea area SW of Kemi 1	5145
Kemi 2 – Ulkokrunni – Virpiniemi	7745
Oulu harbours – Kattilankalla	8345
Kattilankalla – Oulu 1	5155
Sea area SW of Oulu 1	5255
High Sea N of the latitude of Marjaniemi	5145
Raahe harbour – Heikinkari	5142
Heikinkari – Raahe lighthouse	5142
Raahe lighthouse – Nahkiainen	5152
Latitude Marjaniemi – Ulkokalla, Sea	5152
Rahja harbour – Välimatala	5242
Vaelimatala to line Ulkokalla – Ykskivi	4142
Sea betw. lat. of Ulkokalla – Pietarsaari	4142
Ykspihlaja – Repskär	4142
Repskär – Kokkola lighthouse	4142
Pietarsaari – Kallan	3121
Sea area ENE of Nordvalen	4152
Sea area Nordvalen to W of Norrskär	4152
Vaskiluoto – Ensten	5242

Ensten – Vaasa lighthouse	3121
Kaskinen – Sälgrund	4041
Sea area off Sälgrund	2001
Pori harb. to line Pori lighth. – Säppi	4142
Rauma, Harbour – Kymäpihlaja	4041
Kymäpihlaja – Rauma lighthouse	3001
Uusikaupunki harbour – Kirsta	4041
Inkoo a. Kantvik – sea area Porkkala	5142
Kotka – Viikari	4041
Hamina – Suurmusta	4041

**Russian Federation, 05.12.2023**

Port of St. Petersburg	500/
St. Petersburg – E-point island Kotlin	500/
E-point Kotlin – long. lighth. Tolbukhin	500/
Vyborg, port and bay	600/

**Sweden, 04.12.2023**

Karlsborg – Malören	8346
Sea area off Malören	3126
Luleå – Björnklack	8346
Björnklack – Farstugrunden	5046
Sandgrönn fairway	5256
Rödskallen – Norströmsgrund	5046
Haraholmen – Nygrån	5146
Sea area off Nygrån	5046
Skelleftehamn – Gåsören	6156
Sea area off Gåsören	6156
Sea area off Bjuröklubb	6152

NE of Nordvalen	3122
SW of Nordvalen	3122
Western Quark (W of Holmöarna)	4041
Umeå – Väktaren	4041
SE of Väktaren	4041
Örnsköldsvik – Hörnskatan	5142
Ångermanälven north Sandö Bridge	5144
Ångermanälven south Sandö Bridge	4044
Hudiksvallfjärden	5142
Gävle – Eggegrund	4041
Hallstavik – Svartklubben	4041
Köping – Kvicksund	5044
Västerås – Grönsö	5041
Uddevalla – Stenungsund	4041
Stenungsund – Hätteberget	4041
Brofjorden – Dynabrott	4041
Vänernborgsviken	4041
Fairway to Karlstad	5142
Fairway to Kristinehamn	4041