

# Eisbericht Nr. 20 Amtsblatt des BSH

Jahrgang 97	Nr. 20	Tuesday, 12.12.2023	1

#### 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 ebenes Eis oder 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 Meerbusen 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 level ice or fast ice along the coast and further out 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 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. Off the fast ice in the north, very close, 5–25 cm thick drifting ice with minor brash ice barriers is present to about a line from Raahe to Luleå. Further south, there is up to 15 cm thick fast ice in the archipelagos and thin level ice further out from Hailuoto to Kokkola and out to Nahkiainen and Ulkokalla with new ice at the

ice edge. Off the fast ice in the west, there is close, 3–10 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 Storhästen. Farther out there is drifting new ice to Norrskär and Utgrynnan. Along the Swedish coast there is thin level ice and

up to 10 cm thick very close ice further out to Holmögadd. At sea there is very open new ice and strings of shuga.

With moderate to severe frost at the coasts, ice

#### Herstellung und Vertrieb

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

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© BSH - All rights reserved Reproduction in whole or in part prohibited formation and growth will continue. With a fresh breeze from the northeast the ice will drift to the

Nr. 20

southwest.

#### 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 Angermanälven, there is 5–15 cm thick fast and level ice on the upper part and new is present in the lower part.

With moderate and slight frost at the eastern and western coast respectively, ice formation and ice growths continue.

# Archipelago Sea and Aland Sea

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

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

#### **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 in sheltered places at the outer coast.

With slight frost and light winds some ice formation is possible.

#### **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-

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 a moderate breeze from the east, some ice growth is expected.

#### 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 the north tip of the island Kihnu, there is thin open ice. In the port s of Riga, there is open water. With mostly slight frost and light winds, some ice formation but else no larger changes are expected.

#### Southeastern Baltic

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

With temperatures slightly above 0°C slow ice melt but else no larger changes are expected.

# **Southwestern Baltic**

Drifting ice remnants are still present in the Peenestrom and few other sheltered places.

Ice melt will continue the coming day.

# **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.

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

#### Swedish Lakes

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

With mostly slight frost, no larger changes are expected.

Dr. W. Aldenhoff

# **Restrictions to Navigation**

	Harbour/District	At least dwt/hp/kW	Ice Class	Begin
Finland	Tornio, Kemi and Oulu	2000 dwt	I	09.12.
	Tornio, Kemi and Oulu	2000 dwt	IB	17.12.
	Raahe, Kalajoki, Kokkola, Pietarsaari and Vaasa	2000 dwt	II	06.12.
	Vaasa	2000 dwt	I	17.12.
	Kaskinen and Uusikaupunki	2000 dwt	II	17.12.
	Taalintehdas, Förby, Koverhar, Lap- pohja, Inkoo, Kantvik, Helsinki, Sköldvik, Loviisa, Mussalo, Kotka and Hamina Lake Saimaa	2000 dwt	II	09.12.
	Lake Saimaa	2000 dwt	I	08.12.
	Saimaa Canal	2000 dwt	IB	13.12.
	Saimaa Canal	2000 dwt	I	08.12.
		2000 dwt	IB	13.12.
Sweden	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 Örnsköldsvik	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.

# 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**

First number:  A <sub>B</sub> 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:  SB Stage of ice development  New ice or dark nilas (less than 5 cm thick)  Light nilas (5 - 10 cm thick) or ice rind  Grey ice (10 - 15 cm thick)  Grey-white ice (15 - 30 cm thick)  White ice, first stage (30 - 50 cm thick)  White ice, second stage (50 - 70 cm thick)  Medium first year ice (70 - 120 cm thick)  loe predominantly thinner than 15 cm with some thicker ice  loe predominantly grey-white ice (15 - 30 cm) with some thicker ice  loe predominantly thicker than 30 cm with some thinner ice  No information or unable to report
Third number:  T <sub>B</sub> 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 <sub>B</sub> Navigation conditions in ice  Navigation unobscured  Navigation difficult or dangerous for wooden vessels without ice sheathing  Navigation difficult for unstrengthened or low-powered vessels built of iron or steel. Navigation for wooden vessel even with ice sheathing not advisable  Navigation without icebreaker assistance possible only for high-powered vessels of strong construction and suitable for navigation in ice  Navigation proceeds in lead or broken ice-channel without the assistance of an icebreaker  Icebreaker assistance can only be given to vessels suitable for navigation in ice and of special size  Icebreaker assistance can only be given to vessels of special ice class and of special size  Icebreaker assistance can only be given to vessels after after special permission  Navigation temporarily closed  Navigation has ceased

	Estonia, 12.12.2023		Sea lat. Pietarsaari – NE Nordvalen	5165
	Paernu, port and bay	5243	Sea area ENE of Nordvalen	3015
Moonsund		5243	Sea area Nordvalen to W of Norrskär	4045
			Vaskiluoto – Ensten	8745
	Finland, 12.12.2023		Ensten – Vaasa lighthouse	4045
	Röyttä – Etukari	8346	Vaasa lighthouse – Norrskär	4045
	Etukari – Ristinmatala	7346	Sea area SW of Norrskär	4045
	Ajos – Ristinmatala	5346	Kaskinen – Sälgrund	8142
	Ristinmatala – Kemi 2	5746	Sea area off Sälgrund	4041
	Kemi 2 – Kemi 1	5366	Pori harb. to line Pori lighth. – Säppi	2001
	Sea area SW of Kemi 1	5756	Rauma, Harbour – Kylmäpihlaja	4041
	Kemi 2 – Ulkokrunni – Virpiniemi	7746	Uusikaupunki harbour – Kirsta	8142
	Oulu harbours – Kattilankalla	8346	Kirsta – Isokari	4041
	Kattilankalla – Oulu 1	5756	Koverhar – Hästö Busö	5145
	Sea area SW of Oulu 1	5146	Inkoo a. Kantvik – sea area Porkkala	5145
	High Sea N of the latitude of Marjaniemi	5156	Helsinki harbours – Harmaja	2005
	Raahe harbour – Heikinkari	8045	Valko Harbour – Täktarn	5145
	Heikinkari – Raahe lighthouse	5145	Kotka – Viikari	5145
	Raahe lighthouse – Nahkiainen	5145	Hamina – Suurmusta	5145
	Latitude Marjaniemi – Ulkokalla, Sea	5155		
	Rahja harbour – Välimatala	7145	Latvia, 12.12.2023	
	Vaelimatala to line Ulkokalla – Ykskivi	5145	Port of Riga	1000
	Sea betw. lat. of Ulkokalla –Pietarsaari	2005	Port of Ventspils	1000
	Ykspihlaja – Repskär	8745	Port of Liepaya	1000
	Repskär – Kokkola lighthouse	4145		
	Sea area off Kokkola lighthouse	4045	Russian Federation, 12.12.2023	
	Pietarsaari – Kallan	4045	Port of St. Petersburg	62//
	Sea area off Kallan	2015	St. Petersburg – E-point island Kotlin	63//

E-point Kotlin – long. lighth. Tolbuhkin Lighth. Tolbuhkin – lighth. –Šepelevskij Vyborg, port and bay Strait Bjerkesund E-point Bol'šoj Ber'ozovyj – Šepelevskij	51// 30// 82// 51// 50//
Sweden, 12.12.2023 Karlsborg – Malören Sea area off Malören Luleå – Björnklack Björnklack – Farstugrunden E and SE of Farstugrunden Sandgrönn fairway Rödkallen – Norströmsgrund Haraholmen – Nygrån Sea area off Nygrån Skelleftehamn – Gåsören Sea area off Gåsören Sea area off Bjuröklubb NE of Nordvalen SW of Nordvalen Western Quark (W of Holmöarna) Umeå – Väktaren SE of Väktaren Fairway to Husum Örnsköldsvik – Hörnskaten Hörnskaten – Skagsudde Fairway W of Ulvöarna Ångermanälven north Sandö Bridge Ängermanälven south Sandö Bridge Härnösand – Härnön Sundsvall – Draghällan Hudiksvallfjärden Iggesund – Agö Sandarne – Hällgrund Ljusnefjärden – Storjungfrun Gövle – Eggegrund Öregrundsgrepen Hallstavik – Svartklubben Stockholm – Trälhavet – Klövholmen Köping – Kvicksund Västerås – Grönsö Stockholm – Södertälje Södertälje – Fifong Norrköping – Hargökalv Järnverket-Lillhammaren – N Kränkan Uddevalla – Stenungsund Brofjorden – Dynabrott Vänersborgsviken Fairway to Karlstad Fairway to Kristinehamn	50// 8346 5356 4046 8346 5256 4136 4046 8146 5146 5146 5142 5142 5142 5142 5144 4041 4041 4041 5144 4041 4041 4041
Fairway to Lidköping	5146