

BUNDESAMT FÜR SEESCHIFFFAHRT UND HYDROGRAPHIE

# Eisbericht Nr. 20 Amtsblatt des BSH

Jahrgang 95	Nr. 20	Friday, 24.12.2021	1

#### Übersicht

In der nördlichen Bottenwiek liegt in den Schären 15-30cm dickes Festeis und weiter außerhalb treibt meist dünnes Eis. In der südlichen Bottenwiek und Norra Kvarken liegt in den Schären bis zu 25cm dickes Festeis. Entlang der Küsten der Bottensee, dem Schärenmeer und der Ålandsee liegt dünnes ebenes Eis oder Neueis. Im Finnischen Meerbusen liegt entlang der Nordküste dünnes, ebenes Eis und im Osten kommt bis zu 20cm dickes Festeis vor. Im Rigaischen Meerbusen befindet sich Neueis und bis zu 15cm dickes Eis im Moonsund und in der Pärnubucht. Neueis und dünnes, ebenes Eis kommt örtlich in der nördlichen Ostsee, den Haffgebieten der südöstlichen Ostsee und dem Vänern vor.

#### **Overview**

In the northern Bay of Bothnia, there is 15-30cm thick fast ice in the archipelagos, and mostly thin ice further out. In the southern Bay of Bothnia and Norra Kvarken, there is up to 25cm thick fast ice in the archipelagos. Along the coasts of the Sea of Bothnia, the Archipelago Sea and Åland Sea, there is thin level ice or new ice. In the Gulf of Finland, thin level ice is present along the northern coast and up to 20cm thick fast ice is present in the eastern part. In the Gulf of Riga, there is new ice and up to 15cm thick ice in Moonsund and Pärnu Bay. New ice and thin level ice occurs at places in the northern Baltic, in the lagoons of the southeastern Baltic and Lake Vänern.

#### **Bay of Bothnia**

In the archipelagos of the northern Bay of Bothnia, there is 15–30 cm thick fast ice, from the Finnish coast reaching out to Kemi-3 and Kattilankalla. Adjacent to the fast ice in the east and northeast, there is a area with 10-25cm thick, very close ice; followed by level ice and later new ice. Off the fast

#### Norra Kvarken

In the archipelagoes off Vaasa, there is 10–25 cm thick fast ice out to Storhsten with thin ice outside out to Norra Globsten. Along the Swedish coast

# Sea of Bothnia

On Ångermanälven, there is 10–25 cm thick fast ice in the upper part and open ice in the lower part,

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© BSH - Alle Rechte vorbehalten Nachdruck, auch auszugsweise, verboten ice in the west, there first some level ice and later new ice out to east of Norströmgrund. In the southern Bay of Bothnia, there is 10–20 cm thick fast ice in the archipelagos, farther out new ice. New ice formation and ice growth will occur with a southerly ice drift.

there is 5-20cm thick fast or level ice in the inner archipelago and new ice out to Holmögadd. Ice formation will continue with southerly ice drift.

else 5-10cm thick level ice in sheltered bays along the Swedish coast. Along the Finnish coast there is

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© BSH - All rights reserved Reproduction in whole or in part prohibited 5-15cm thick level ice with new ice outside. Some

#### Archipelago and Åland Sea

Thin ice and ice formation occur in the inner Archipelago and in sheltered places in the Åland Sea.

#### **Gulf of Finland**

From St. Petersburg up to the dike there is 10–20 cm thick compact ice. Farther out to the longitude of lighthouse Tolbuchin there is close light nilas followed by open nilas and new ice to about 29°'E. In the Bay of Vyborg, there is 10–20 cm fast ice, with very open new ice in the entrance. 5-15cm very close is present in the Bjerkesund. In the ar-

#### **Gulf of Riga**

In Moonsund there is nilas and very close, 5–15 cm thick ice near the coasts; on the fairways there is new ice. In Pärnu Bay, there is very close, 5-20 cm thick ice in the east and new ice is present in

#### **Northern Baltic**

In Lake Mälaren, 5-15cm thick level ice is present in the western part and else new ice is present in some sheltered bays. Along the Swedish coast

#### **Southeastern Baltic**

The Curonian Lagoon is covered by new ice and in the Vistula there are areas with new ice.

#### **Swedish Lakes**

New ice as well as 5-15cm thick level ice is present in sheltered bays of Lake Vänern.

Dr. J.Holfort

We wish all of you happy holidays.

ice growth is expected.

Ice formation will continue.

chipelagoes of the northern coast, there is 5-10cm thick level ice; further out there is some new ice in the east. At the southern coast, new ice is present in places near the shore. In Lake Saimaa and the Saimaa Canal, there is 10–25 cm thick ice. New ice formation will take place with a slow east to south-easterly ice drift.

the west and the fairway. In the port of Riga there is very open new ice with some grey ice. Some ice growth is expected.

there is new ice in some sheltered bays. In the port of Ventspils there is open water with some new ice. Some ice formation will occur.

Overall, no larger change is expected.

Some ice formation is expected.

# **Restrictions to Navigation**

	Harbour/District	At least dwt/hp/kW	Ice Class	Begin
Estonia	Pärnu	1600 kW	1C	17.12.
Finland	Tornio, Kemi, Oulu and Raahe	2000 dwt		11.12.
	Tornio, Kemi, Oulu and Raahe	2000 dwt	IB	25.12.
	Kalajoki and Pietarsaari	2000 dwt	II	08.12.
	Kokkola and Vaasa	2000 dwt	I	22.12.
	Kalajoki and Pietarsaari	2000 dwt	I	25.12.
	Loviisa, Kotka and Hamina	2000 dwt	II	22.12.
	Mussalo	2000 dwt	II	25.12.
	Lake Saimaa and Saimaa Canal	2000 dwt	I	22.12.
Sweden	Karlsborg and Luleå	2000 dwt	IC	11.12.
	Haraholmen and Skelleftehamn	2000 dwt	IC	22.12.
	Holmsund, Rundvik and Husum	2000 dwt	II	22.12.
	Örnsköldsvik	2000 dwt	II	22.12.
	Ångermanälven	2000 dwt	IC	22.12.
	Härnösand- Skutskär	2000 dwt	II	22.12.
	Köping and Västerås	1300/2000 dwt	IC/II	06.12.
	Köping and Västerås	2000 dwt	IC	27.12.
	Bålsta	1300/2000 dwt	IC/II	27.12.

## Information of the Icebreaker Services

#### 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 78. 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:

OTSO, KONTIO, FREJ and YMER assist in the Bay of Bothnia. VOIMA assists in the eastern Gulf of Finland. PROTECTOR and CALYPSO assist in the northern Lake Saimaa. METEOR assists in the southern Lake Saimaa and the Saimaa Canal.

## 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.

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# 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 9/10 to 9+/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 Third number:	Second number: <b>S</b> <sub>B</sub> 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 7 No information or unable to report Fourth number:
<ul> <li>T<sub>B</sub> Topography or form of ice</li> <li>Pancake ice, ice cakes, brash ice – less than 20 m across</li> <li>Small ice floes – 20 to 100 m across</li> <li>Medium ice floes – 100 to 500 m</li> <li>Big ice foes – 500 to 2000 m across</li> <li>Vast or giant ice floes – more than 2000 m across – or level ice</li> <li>Rafted ice</li> <li>Compact slush or shuga, or compacted brash ice</li> <li>Hummocked or ridged ice</li> <li>Thaw holes or many puddles on the ice</li> <li>Rotten ice</li> <li>No information or unable to report</li> </ul>	<ul> <li>K<sub>B</sub> Navigation conditions in ice</li> <li>0 Navigation unobscured</li> <li>1 Navigation difficult or dangerous for wooden vessels without ice sheathing</li> <li>2 Navigation difficult for unstrengthened or low-powered vessels built of iron or steel. Navigation for wooden vessels even with ice sheathing not advisable</li> <li>3 Navigation without icebreaker assistance possible only for high-powered vessels of strong construction and suitable for navigation in ice</li> <li>4 Navigation proceeds in lead or broken ice-channel without the assistance of an icebreaker</li> <li>5 Icebreaker assistance can only be given to vessels suitable for navigation in ice and of special size</li> <li>6 Icebreaker assistance can only be given to vessels of special ice class and of special size</li> <li>7 Icebreaker assistance can only be given to vessels after after special permission</li> <li>8 Navigation temporarily closed</li> <li>9 Navigation has ceased</li> <li>/ Unknown</li> </ul>

<b>Estonia , 24.12.2021</b> Shipping route from Narva-Jõssuu Paernu, port and bay Moonsund	2000 52/5 40/2
Finland , 24.12.2021 Roeyttae – Etukari Etukari – Ristinmatala Ajos – Ristinmatala Ristinmatala – Kemi 2 Kemi 2 – Kemi 1 Sea area SW of Kemi 1 Kemi 2 – Ulkokrunni – Virpiniemi Oulu harbours – Kattilankalla Kattilankalla – Oulu 1 Sea area SW of Oulu 1 High Sea N of the latitude of Marjaniemi Raahe harbour – Heikinkari Heikinkari – Raahe lighthouse Raahe lighthouse – Nahkiainen Rahja harbour – Välimatala Ykspihlaja – Repsaer Repskaer – Kokkola lighthouse Pietarsaari – Kallan Vaskiluoto – Ensten Ensten – Vaasa lighthouse Vaasa lighthouse – Norrskaer Kaskinen – Sälgrund Pori harb. to line Pori lighth. – Säppi	8346 7346 7346 5046 5046 5046 5346 5346 5246 3026 7246 5766 5246 5745 7746 5046 5745 7246 5046 0//6 3022 3001

Rauma, Harbour – Kylmäpihlaja Uusikaupunki harbour – Kirsta Koverhar – Hästö Busö Helsinki harbours – Harmaja Valko Harbour – Täktarn Kotka – Viikari Hamina – Suurmusta Suurmusta – Merikari	3102 4002 2000 2000 2125 3005 8245 2005
<b>Latvia , 24.12.2021</b> Port of Riga Port of Ventspils	2202 1000
Russian Federation , 24.12.2021 Port of St. Petersburg St. Petersburg – E-point island Kotlin E-point Kotlin – long. lighth. Tolbuhkin Lighth. Tolbuhkin – lighth. –Šepelevskij Vyborg, port and bay Island Vichrevoj – Island Sommers	63/3 63/3 52/3 1111 83/3 1000
<b>Sweden , 24.12.2021</b> Karlsborg – Maloeren Luleå – Bjoernklack Bjoernklack – Farstugrunden E and SE of Farstugrunden Sandgroenn fairway Roedkallen – Norstroemsgrund Haraholmen – Nygrån	8346 8346 4046 8346 4046 8346 8346

Sea area off Nygrån	4046
Skelleftehamn – Gåsoeren	4046
Sea area off Gåsoeren	4046
Sea area off Bjuroeklubb	4046
Western Quark (W of Holmoearna)	8246
Oernskoeldsvik – Hoernskaten	5146
Ångermanaelven north Sandoe Bridge	8346
Ångermanaelven south Sandoe Bridge	8346
Sundsvall – Draghaellan	5146
Hudiksvallfjaerden	5146
Iggesund – Agoe	4046
Gaevle – Eggegrund	5146
Hallstavik – Svartklubben	4041
Koeping – Kvicksund	5246
Västerås – Grönsö	5246
Grönsö – Södertälje	5144
Stockholm – Södertälje	5144
Norrköping – Hargökalv	4041
Uddevalla – Stenungsund	5041
Fairway to Karlstad	5242
Fairway to Kristinehamn	5242