

# Eisbericht Nr. 9 Amtsblatt des BSH

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# Übersicht

In der nördlichen Bottenwiek liegt in den Schären Festeis und weiter außerhalb dünnes ebenes Eis und Neueis. In der südlichen Bottenwiek, Norra Kvarken und der Bottensee treibt Neueis und in Schären und geschützten Buchten liegt dünnes, ebenes Eis. Im Finnischen Meerbusen liegt dünnes, ebenes Eis ganz im Osten und Neueis tritt entlang der Küsten auf. Im Rigaischen Meerbusen befindet sich dünnes ebenes Eis und Neueis im Moonsund, und der Pärnubucht. Neueis kommt im Schärenmeer, der Ålandsee, dem Mälarsee, dem Vänern und vereinzelt entlang der schwedischen Küste in der nördlichen Ostsee und im Skagerrak vor.

# **Overview**

In the northern Bay of Bothnia, there is fast ice in the archipelagoes and thin level ice and new ice further out. In the southern Bay of Bothnia, Norra Kvarken and the Sea of Bothnia, there is new ice and thin level ice in the archipelagos and sheltered bays. In the Gulf of Finland, thin level ice is present in the easternmost part and new ice along the coasts. In the Gulf of Riga, there is thin level ice and new ice in Moonsund and Pärnu Bay. New ice is present in the Archipelago Sea, Åland Sea, Lake Mälaren, Lake Vänern and at places along the Swedish coast of the northern Baltic and in the Skagerrak.

# **Bay of Bothnia**

In the northern Bay of Bothnia, there is up to 20 cm thick fast ice in the archipelagoes from Piteå to Oulu. Further out in the east, there is thin level ice new ice that extends to 17nm southwest of Kemi, 15nm southwest of Oulun portii and out to ~5nm west of Nahkiainen. Of the fast ice in the west, there are bands with close to very close, 5–15 cm

thick ice and else first level ice and later new ice is present in an approximately 12nm wide area. In the southern Bay of Bothnia, there is thin level ice and new ice along the coasts. Further new ice formation and ice growth is expected, in the east stronger than in the west. The expected ice drift is towards northwest.

# Norra Kvarken

Up to 10cm thick, level ice is present in the inner archipelagoes at the Finnish coast and along the Swedish coast. Further out new ice occurs and in

the east extends out to 20nm distance from the level ice. Continued ice formation with some northwestward drift is expected the coming days.

# Herstellung und Vertrieb

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

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#### Sea of Bothnia

On upper Ångermanälven and at places in the northern Bay of Bothnia and along the Finnish coast, there is thin level ice. Else, there is new ice along the coast in the west and out ~5nm from the coast in the east. Ice formation and growth continues in the east and north.

# Archipelago and Aland Sea

New ice and thin level is present in sheltered places in the Archipelago and Åland Sea. Thin level ice

occurs at places along the Finnish coast. Some ice formation is expected, especially in the east.

#### **Gulf of Finland**

From St. Petersburg to Kotlin and north of Kotlin, there is 5–10 cm thick very close ice. Farther out there is first close thin ice to about 29°15'E, later close new ice to about 28°50'E. In the Bay of Vyborg there is 5-10 fast ice in the top and farther out first level ice and later open dark nilas. In the Bjerkesund there is very close dark nilas and in the entrance open new ice. In the archipelagoes of the

northern coast there is thin level ice and new ice somewhat further out. Along the southern coast, in the bays of Luga, Narva, Kunda und Tallin, there is new ice. In the northern lake Saimaa, there is 5-15cm thick level ice and new ice. In the southern Lake Saimaa and Saimaa Canal, 5-20cm thick broken ice occurs. Ice formation and ice growth will continue and slow north-westerly drift is expected.

#### **Gulf of Riga**

There is very close nilas in Moonsund and and nearby shallow bays, on the fairways there is close nilas. In Pärnu Bay there is very close nilas and new ice further out. Nilas and new ice is present

along the northern coast and the eastern coast down to about 57°30'N. No larger change is expected.

# **Northern Baltic**

In Lake Mälaren, thin level ice is present in the westernmost part and some sheltered bays. Else, there is some new ice in sheltered bays along the

Swedish coast. No larger change is expected.

#### **Southeastern Baltic**

In the Curonian Lagoon, new ice is present along the eastern coast. No larger change is expected.

# Swedish Lakes

New ice and level ice is present in sheltered bays of Lake Vänern. No larger change is expected.

# Skagerrak

New ice is present at sheltered areas in Norwegian fjords and some other sheltered areas. No larger

change is expected.

Dr. J.Holfort

# **Restrictions to Navigation**

	Harbour/District	At least	Ice Class	Begin
		dwt/hp/kW		
Estonia	Pärnu	1600 kW	IC	17.12.
Finland	Tornio, Kemi and Oulu	2000 dwt	II	04.12.
	Tornio, Kemi and Oulu	2000 dwt	I	11.12.
	Raahe, Kalajoki, Kokkola, Pietarsaari and	2000 dwt	II	08.12.
	Vaasa			
	Raahe	2000 dwt	I	11.12.
	Northern Lake Saimaa	2000 dwt	II	08.12.
	Southern Lake Saimaa and Saimaa Ca-	1300 dwt	II	04.12.
	nal			
	Southern Lake Saimaa and Saimaa	2000 dwt	II	11.12.
	Canal			
Sweden	Karlsborg, Luleå, Haraholmen and Skel-	2000 dwt	II	04.12.
	leftehamn			
	Karlsborg and Luleå	2000 dwt	IC	11.12.
	Ångermanälven	1300/2000 dwt	IC/II	04.12.
	Köping and Västerås	1300/2000 dwt	IC/II	06.12.

# 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 and ALE assist in the Bay of Bothnia. **KONTIO** is heading for the Bay of Bothnia. CALYPSO assists 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.

# **Baltic Sea Ice Code**

First number: AB 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 Fast ice with drift ice outside Fast ice Lead in very close or compact drift ice or along the fast Ice edge 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 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 Rafted ice Compact slush or shuga, or compacted brash ice Hummocked or ridged ice Thaw holes or many puddles on the ice Rotten ice No information or unable to report

Second number:

S<sub>B</sub> 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 with second stage)

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

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 vessels 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

4 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
lebreaker assistance can only be given to vessels of special ice class and of special size
lebreaker assistance can only be given to vessels after

after special permission
Navigation temporarily closed
Navigation has ceased

Unknown

Estonia , 09.12.2021		Ensten – Vaasa lighthouse	3015
Shipping route from Narva-Jõssuu	3000	Kaskinen – Sälgrund	3001
Kunda, port and bay	3000	Sea area off Sälgrund	3001
Paernu, port and bay	5122	Rauma, Harbour – Kylmäpihlaja	3001
Moonsund	4111	Kylmäpihlaja – Rauma lighthouse	1000
		Uusikaupunki harbour – Kirsta	3001
Finland , 09.12.2021		Kirsta – Isokari	2001
Roeyttae – Etukari	8745	Naantali and Turku – Rajakari	2000
Etukari – Ristinmatala	5245	Inkoo a. Kantvik – sea area Porkkala	3001
Ajos – Ristinmatala	5245	Helsinki harbours – Harmaja	3001
Ristinmatala – Kemi 2	5245	Valko Harbour – Täktarn	3001
Kemi 2 – Kemi 1	5245	Kotka – Viikari	4001
Sea area SW of Kemi 1	5245	Hamina – Suurmusta	4001
Kemi 2 – Ulkokrunni – Virpiniemi	8245	Suurmusta – Merikari	3001
Oulu harbours – Kattilankalla	8745		
Kattilankalla – Oulu 1	5245	Russian Federation , 09.12.2021	
Sea area SW of Oulu 1	5245	Port of St. Petersburg	51/2
High Sea N of the latitude of Marjaniemi	5245	St. Petersburg – E-point island Kotlin	51/2
Raahe harbour – Heikinkari	5245	E-point Kotlin – long. lighth. Tolbuhkin	50/1
Heikinkari – Raahe lighthouse	5145	Lighth. Tolbuhkin – lighth. –Šepelevskij	40/1
Raahe lighthouse – Nahkiainen	5145	Lighthouse –epelevskij – island Sescar	3000
Latitude Marjaniemi – Ulkokalla, Sea	3015	Vyborg, port and bay	81/2
Rahja harbour – Välimatala	3015	Island Vichrevoj – Island Sommers	3001
Vaelimatala to line Ulkokalla – Ykskivi	3015	Strait Bjerkesund	50/2
Ykspihlaja – Repsaer	5245	E-point Bol'–oj Ber'ozovyj – –epelevskij	3001
Repskaer – Kokkola lighthouse	5145	Luga bay	1000
Sea area off Kokkola lighthouse	2025		
Pietarsaari – Kallan	5145	Sweden , 09.12.2021	
Vaskiluoto – Ensten	5245	Karlsborg – Maloeren	8346

Sea area off Maloeren	5246
Luleå – Bjoernklack	8346
Bjoernklack – Farstugrunden	5246
E and SE of Farstugrunden	5246
Sandgroenn fairway	5236
Roedkallen – Norstroemsgrund	5246
Haraholmen – Nygrån	8346
Sea area off Nygrån	5246
Skelleftehamn – Gåsoeren	5046
Sea area off Gåsoeren	5136
Sea area off Bjuroeklubb	5132
Western Quark (W of Holmoearna)	5142
Umeå – Vaektaren	5041
Oernskoeldsvik – Hoernskaten	5041
Ångermanaelven north Sandoe Bridge	5244
Ångermanaelven south Sandoe Bridge	5244
Haernoesand – Haernoen	5244
Sundsvall – Draghaellan	5142
Draghaellan – Åstholmsudde	4041
Hudiksvallfjaerden	4041
Iggesund – Agoe	5041
Gaevle – Eggegrund	4041
Hallstavik – Svartklubben	4041
Stockholm - Traelhavet - Kloevholmen	4041
Koeping – Kvicksund	5144
Västerås – Grönsö	5144
Stockholm – Södertälje	5144
Södertälje – Fifong	4044
Fairway to Karlstad	5142
Fairway to Kristinehamn	5041