



Eisbericht Nr. 37

Amtsblatt des BSH

Jahrgang 97

Nr. 37

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Übersicht

In der Bottenwiek befindet sich in den nördlichen Schären bis 55 cm dickes, in den südlichen bis 40 cm dickes Festeis. Auf See treibt zumeist sehr dichtes, übereinandergeschobenes 5–20 cm dickes Eis, welches im Nordwesten bis zu 40 cm dick und aufgepresst ist. An den Küsten von Norra Kvarken liegt bis 35 cm dickes Festeis und auf See treibt bis 30 cm dickes, sehr dichtes Eis. An den Küsten der Bottensee kommt im Osten bis 30 cm und im Westen bis 20 cm dickes Festeis vor. Davor treibt im Osten ein schmaler Streifen sehr dichtes Eis und im Westen kommt in einem breiteren Gebiet Neueis oder sehr lockeres Eis vor. Das Schärenmeer ist mit dünnem, ebenen Eis bedeckt. Im Osten und Norden des Finnischen Meerbusens liegt bis 35 cm dickes Festeis und davor treibt sehr lockeres bis sehr dichtes, dünnes Eis. Im Rigaischen Meerbusen kommt bis zu 30 cm dickes Festeis vor und vor den Küsten treibt Neueis. Neueis und örtlich dickeres Eis kommt im Vänern und in geschützten Teilen der zentralen und südöstlichen Ostsee wie auch im Skagerrak vor. Neueis kommt örtlich in der Nordsee und westlichen Ostsee vor.

Overview

In the Bay of Bothnia there is fast ice in the archipelagos, up to 55 cm thick in the north and up to 40 cm thick in the south. At sea there is mostly 10–25 cm thick, rafted and very close ice, but in the northwest the ice is up to 40 cm thick and ridged. In the Quark there is up to 35 cm thick fast ice at the coasts and at sea there is up to 30 cm thick, very close ice. At the coasts of the Sea of Bothnia there fast ice, up to 30 cm thick in the east and up to 20 cm thick in the west. Further out there is a small region with very close ice in the east and a broader region with new ice or very open ice in the west. Thin level ice covers the Archipelago Sea. There is up to 35 cm thick fast ice at the eastern and northern coast of the Gulf of Finland and further out there is very open to very close thin ice. In the Gulf of Riga there is up to 20 cm thick fast ice in the northeast and outside the coasts there is new ice. New ice and at places thicker ice is present in the Vänern and at sheltered places of the central and southeastern Baltic proper as well as in the Skagerrak. New ice occurs also in sheltered places in the North Sea and the Western Baltic.

Bay of Bothnia

In the archipelagos of the Bay of Bothnia there is fast ice; 20–40 cm thick in the northwest, 30–55 cm thick in the northeast and up to 25–40 cm thick in the southern part. At sea there is mostly 10–25 cm thick, rafted very close ice, but 25–40 cm thick, ridged, very close ice is present in the northwest.

Along the Swedish side runs a wide lead with new ice from about Farstugrunden past Holmöarna in the south.

With temperatures around 0 °C no larger changes, except an southeastward ice drift, are expected.

Herstellung und Vertrieb

Bundesamt für Seeschifffahrt und Hydrographie (BSH)

www.bsh.de/eis

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The Quark

There is 10–35 cm thick fast ice in the Vaasa archipelago and further out to about Vaasa lighthouse there is 15–25 cm thick, very close ice. Farther out thin level and new ice to about 5 NM southwest of Norrskär. Along the Swedish coast there is up to 20 cm thick fast ice in inner bays. At

Sea of Bothnia

Thin level ice or 5–30 cm thick fast ice is present in bays along both coasts. Further out on the Finnish side there is a 5–10 NM wide area with thin very close ice. Outside the Swedish coast new ice or thin very open ice out to up to 50 NM off the shore. Outside the southern coast there is also some

Archipelago Sea and Åland Sea

In the Archipelago Sea there is thin level ice reaching to the Åland Islands. In the Åland Sea there is 5–15 cm thick fast or level ice in bays and new ice is drifting close to the coast.

Northern Baltic

In Lake Mälaren there is 5–20 cm thick fast and level ice in the west and new ice and strings of shuga in the east. New ice or thin level ice is pre-

Gulf of Finland

From St. Petersburg to Kotlin there is 20–30 cm thick fast ice. In the Bjerkesund there is level ice and in the Vyborg Bay there is 10–25 cm thick fast ice. At sea, there is thin, open to very close ice east of about 28°E. Along the northern coast there fast ice in the archipelago, 5–20 cm thick in the

Gulf of Riga

In Väinameri there is 10–30 cm thick fast ice near the coasts. Farther out and on the fairway there is very close ice or level ice. In the Bay of Pärnu, there is fast ice at the coast followed by very close ice to a line from northern point of island Kihnu to Häädemeste. Further out is very open to close ice

Central Baltic

New ice is present along the Swedish coast. Very open thin ice is present in the harbors of Ventpils and Liepaja at the Latvian coast.

Southeastern Baltic

New ice and thin very close ice covers the Vistula Lagoon and the Curonian Lagoon.

Southern Baltic

New ice is present in the eastern archipelagos along the Swedish coast.

Western Baltic

New ice is present in sheltered coastal areas. With mostly light frost some new ice will form but

sea, there is close, 2–15 cm thick drift ice in the west and 5–20 cm thick, very close drift ice in the west to south of Sydostbrotten.

With temperatures mostly slightly above 0°C no larger changes are expected, but the ice will drift in easterly directions.

ridged, very close ice. On Ångermanälven, there is 10–20 cm thick fast ice on the upper part and new ice or thin level ice is present in the lower part.

With temperatures slightly above 0 °C no larger changes are expected. The ice will drift to the east/southeast.

With temperatures around or slightly above 0 °C no larger changes except an easterly ice drift are expected.

sent in sheltered places at the outer coast.

With temperatures around 0°C and a gentle breeze from the west no larger changes are expected.

west and up to 35 cm thick in the east. Further out is very open ice or new ice. At the southern shore there is new ice in places. In Lake Saimaa there is 15–40 cm thick fast ice.

With temperatures around 0°C no larger changes, except a southeastward ice drift, are expected.

to the longitude of Kihnu. Along the northern and western coast of the Gulf of Riga is new ice and in Irben Strait there is thin, very open drift ice.

With temperatures around 0°C no larger changes are expected. The ice will drift to the east/southeast.

With temperatures around or slightly above 0 °C no larger changes are expected.

With temperatures around 0 °C no larger changes are expected.

With light frost at night and day temperatures around 0°C no larger changes are expected.

overall no larger changes are expected.

Skagerrak, Kattegat, Belts and Sound

In the Svinesund there is 15–30cm thick open ice, in the Mossesundet there is a lead in very close, 15–30cm thick ice, in Vestfjorden at Tønsberg and the inner harbour there is 10–15 cm thick fast ice. Near Kragerø there is new ice and 10–15 cm thick

fast ice. New ice can also be found in other Norwegian Fjords. Along the Swedish and Danish coast, there is new ice in few sheltered areas.

With mostly light frost, some new ice may form, but overall no larger changes are expected.

Swedish Lakes

Thin level ice is present in sheltered bays and new ice is forming along the coasts of Lake Vänern.

With light frost some new ice will form but overall no larger changes are expected.

North Sea

New ice is present in the Limfjord. New ice is also present in some sheltered and shallow areas along the coast.

With light frost some new ice may form but overall no larger changes are expected.

Dr. W. Aldenhoff

Restrictions to Navigation

	Harbour/District	At least dwt/hp/kW	Ice Class	Begin
Estonia	Pärnu	1600 kW	1C (Lloyd's)	22.12.
Finland	Tornio, Kemi and Oulu	2000 dwt	IA	07.01.
	Tornio, Kemi and Oulu	2000/4000 dwt	IA Super/IA	13.01.
	Vaasa	2000 dwt	IB	02.01.
	Vaasa	2000 dwt	IA	10.01.
	Raahe, Kalajoki, Kokkola and Pietarsaari	2000 dwt	IA	07.01.
	Raahe, Kalajoki, Kokkola and Pietarsaari	4000 dwt	IA	13.01.
	Kristiinakaupunki, Pori and Rauma	2000 dwt	II	01.01.
	Pori and Rauma	2000 dwt	I	13.01.
	Kaskinen and Uusikaupunki	2000 dwt	II	17.12.
	Kaskinen, Kristiinakaupunki and Uusikaupunki	2000 dwt	I	10.01.
	Naantali, Turku, Eckerö, Maarianhamina and Langnäs	2000 dwt	II	13.01.
	Taalintehtas, Förby, Koverhar, Lappohja, Inkoo, Kantvik, Helsinki, Sköldvik and Mussalo	2000 dwt	II	09.12.
	Taalintehtas, Förby, Koverhar, Lappohja, Inkoo and Kantvik	2000 dwt	II	13.01.
Hanko	2000 dwt	II	13.01.	
Loviisa, Kotka and Hamina	2000 dwt	I	07.01.	
Lake Saimaa	2000 dwt	IA	08.01.	
Saimaa Canal	2000 dwt	IA	08.01.	
Russia	Vyborg	-	Ice 1	30.12.
	Vysotsk	-	Ice 1	30.12.
	Ust-Luga	-	Ice 1	29.12.
Sweden	Karlsborg and Lulea	2000 dwt	IA	09.01.
	Karlsborg	4000 dwt	IA (4000 t)	14.01.
	Lulea	4000 dwt	IA	14.01.
	Haraholmen and Skelleftehamn	2000 dwt	IA	09.01.
	Haraholmen and Skelleftehamn	4000 dwt	IA	14.01.
	Rundvik and Husum	2000 dwt	IC	04.01.
	Örnsköldsvik	2000 dwt	IC	18.12.
	Holmsund	2000 dwt	IB	04.01.

Angermanälven	2000 dwt	IB	18.12.
Härnösand, Söråker, Sundsvall, Stocka, Hudiksvall, Iggesund, Söderhamn, Orrskär and Norrsundet	2000 dwt	IC	04.01.
Gävle	2000/4000 dwt	IC/II	04.01.
Skutskär, Öregrund, Hargshamn, Hallstavik and Grisslehamn	2000 dwt	IC	04.01.
Kappelskär, Stockholm, Nynäshamn and Södertälje	2000 dwt	II	04.01.
Köping and Västerås	2000 dwt	IB	04.01.
Balsta	2000 dwt	IC	04.01.
Balsta	2000 dwt	IB	14.01.
Oxelösund, Norrköping, Västervik, Oskarshamn, Mönsterås, Kalmar, De- gerhamn, Berkvara and Karlskrona	2000 dwt	II	04.01.
Stenungsund and Uddevalla	2000 dwt	II	04.01.
Trollhätte Canal and Göta Älv	2000 dwt	IC	04.01.
Vänern	2000 dwt	IC	04.01.

Estonia

Icebreaker: EVA-316 assists to the port of Pärnu.

Finland/Sweden

The traffic separation schemes in the Quark are temporarily out of use from 20 December due to ice conditions.

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: YMER, ODEN, FREJ, KONTIO, OTSO, POLARIS and **URHO** assist in the Bay of Bothnia. ATLE and ZEUS assist in the Quark. VOIMA and CALYPSO the Gulf of Finland.

Norway

Mossesundet (Moss): Icebreaker assistance can only be given to vessels of special ice class and of special size. (05.01.24)

Drammensfjorden (Drammen), Skåtøysund (Kragerø), Kilsfjorden (Kragerø) and Hellefjorden (Kragerø): Icebreaker assistance can only be given to vessels suitable for navigation in ice and of special size. (08.01.24)

Langårsund (Kragerø): Navigation temporarily closed. (08.01.24)

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>A_B Amount and arrangements of sea ice</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>T_B Topography or form of ice</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>S_B Stage of ice development</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>K_B Navigation conditions in ice</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, 09.01.2024

Shipping route from Narva-Jõssuu	4012
Kunda, port and bay	3010
Paernu, port and bay	7345
Shipp. route from Paernu to Irben Strait	4000
Irben Strait	2000
Moonsund	5353

Finland, 09.01.2024

Röyttä – Etukari	8446
Etukari – Ristinmatala	6856
Ajos – Ristinmatala	6356
Ristinmatala – Kemi 2	5756
Kemi 2 – Kemi 1	5876
Sea area SW of Kemi 1	5876
Kemi 2 – Ulkokrunni – Virpiniemi	7356
Oulu harbours – Kattilankalla	8446
Kattilankalla – Oulu 1	7756
Sea area SW of Oulu 1	5756
High Sea N of the latitude of Marjaniemi	5876
Raahe harbour – Heikinkari	7346
Heikinkari – Raahe lighthouse	5346
Raahe lighthouse – Nahkiainen	5756
Latitude Marjaniemi – Ulkokalla, Sea	5376
Rahja harbour – Välimatala	7756
Vaelimatala to line Ulkokalla – Ykskivi	5756
Sea betw. lat. of Ulkokalla –Pietarsaari	5376
Ykspihlaja – Repskär	8346

Repskär – Kokkola lighthouse	7756
Sea area off Kokkola lighthouse	5756
Pietarsaari – Kallan	8346
Sea area off Kallan	5756
Sea lat. Pietarsaari – NE Nordvalen	5756
Sea area ENE of Nordvalen	5746
Sea area Nordvalen to W of Norrskär	5746
Vaskiluoto – Ensten	8346
Ensten – Vaasa lighthouse	7346
Vaasa lighthouse – Norrskär	5746
Sea area SW of Norrskär	4146
Kaskinen – Sälgrund	8345
Sea area off Sälgrund	5245
High sea from N to latitude Yttergrund	3035
Pori harb. to line Pori lighth. – Säppi	5745
Sea W of line Pori lighthouse – Säppi	2125
High sea betw. lat. Yttergrund a. Rauma	0//5
Rauma, Harbour – Kylmäpihlaja	8745
Kylmäpihlaja – Rauma lighthouse	5145
Sea area W of Rauma lighthouse	0//5
The high sea S of the latitude of Rauma	0//5
Uusikaupunki harbour – Kirsta	8745
Kirsta – Isokari	5145
Isokari – Sandbäck	5145
Sea area off Sandbäck	0//5
Maarianhamina – Marhällan	5142
Naantali and Turku – Rajakari	5142
Rajakari – Lövskär	5142

Lövskär – Korra	5142	Luga bay	51//
Korra – Isokari	5142	Appr. Luga bay – line Moš.-Šepel.	31//
Lövskär – Berghamn	3002		
Stora Sottunga – Ledskär	5142	Sweden, 08.01.2024	
Sea area at Rödhamn	2001	Karlsborg – Malören	8546
Lövskär – Grisselborg	5142	Sea area off Malören	6456
Hanko – Vitgrund	5142	Luleå – Björnklack	8446
Koverhar – Hästö Busö	5145	Björnklack – Farstugrunden	5476
Hästö Busö – Ajax	2005	E and SE of Farstugrunden	5476
Inkoo a. Kantvik – sea area Porkkala	8745	Sandgrönn fairway	8446
Sea area at Porkkala	2125	Rödkaullen – Norströmsgrund	5476
Sea area S of Porkkala lighthouse	0//5	Haraholmen – Nygrån	8446
Helsinki harbours – Harmaja	8145	Sea area off Nygrån	5476
Harmaja – Helsinki lighthouse	2125	Skelleftehamn – Gåsören	8346
Fairway Helsinki – Porkkala – Rönnskär	5145	Sea area off Gåsören	5476
Vuosaari harbour – Eestiluoto	8145	Sea area off Bjuröklubb	5476
Eestiluoto – Helsinki lighthouse	2125	NE of Nordvalen	4046
Porvoo harbours – Varlax	8145	SW of Nordvalen	4236
Varlax – Porvoo lighthouse	2125	Western Quark (W of Holmöarna)	5356
Porvoo lighthouse – Kalbådagrund	2125	Umeå – Väktaren	5356
Valko Harbour – Täktarn	8746	SE of Väktaren	4236
Archipelago fairway Boistö – Glosholm	5146	NE and SE of Sydostbrotten	4046
Archipelago fairway Glosholm–Helsinki	8145	Fairway to Husum	5146
Kotka – Viikari	8745	Örnsköldsvik – Hörnskatan	8346
Viikari – Orrengrund	2125	Hörnskatan – Skagsudde	8346
Orrengrund – Tiiskeri	2126	Sea area off Skagsudde	1006
Hamina – Suurmusta	8746	Fairway W of Ulvöarna	5146
Suurmusta – Merikari	8746	Sea area E of Ulvöarna	1006
Merikari – Kaunissaari	5146	Ångermanälven north Sandö Bridge	8344
		Ångermanälven south Sandö Bridge	8344
Latvia, 09.01.2024		Härnösand – Härnön	8344
Port of Riga	5112	Sea area off Härnö	1006
Riga to the Cape of Mersrags, fairway	1000	Sundsvall – Draghällan	8346
Mersrags to Irben Strait, fairway	1000	Draghällan – Åstholmsudde	8346
Irben Strait, fairway	2000	Off Åstholmsudde and Brämön	1006
Port of Ventspils	2100	Hudiksvallfjärden	8246
Irben Strait to the port of Ventspils	1000	Iggesund – Agö	8246
Port of Liepaya	2000	Sea area off Agö	1006
		Sandarne – Hällgrund	8146
Norway, 09.01.2024		Sea area off Hällgrund	1006
Svinesund – Halden	33//	Ljusnefjärden – Storjungfrun	8146
Mossesund	9856	Sea area off Storjungfrun	1006
Drammensfjord	6315	Gävle – Eggegrund	5236
Tønsberg, inner harbour	82/3	Sea area off Eggegrund	4046
Vestfjord (Tønsberg)	82/3	Sea area off Orskär	4046
Jomfrulandsrenna	3021	Öregrundsgrepen	4046
Skåtøysund (Kragerø)	8145	Sea area off Svartklubben	4046
Langårsund (Kragerø)	8148	Hallstavik – Svartklubben	8246
Kragerøfjord	3021	Trälhavet – Furusund – Kapellskär	4046
		Stockholm – Trälhavet – Klövholmen	4046
Russian Federation, 09.01.2024		Klövholmen – Sandhamn	4046
Port of St. Petersburg	88//	Köping – Kvicksund	8344
St. Petersburg – E-point island Kotlin	88//	Västerås – Grönsö	5244
E-point Kotlin – long. lighth. Tolbuhkin	63//	Grönsö – Södertälje	4044
Lighth. Tolbuhkin – lighth. –Šepelevskij	42//	Stockholm – Södertälje	4044
Lighthouse Šepelevskij – island Sescar	42//	Södertälje – Fifong	4044
Vyborg, port and bay	83//	Norrköping – Hargökalv	5146
Island Vichrevoj – Island Sommers	42//	Järnverket-Lillhammaren – N Kränkan	4046
Strait Bjerkesund	82//	Blå Jungfrun – Kalmar	4046
E-point Bol'šoj Ber'ozovyj – Šepelevskij	42//	Kalmar – Utgrunden	4046

SE of Ölands Södra Udde	4046
Karlskrona – Aspö	4046
Uddevalla – Stenungsund	4046
Vänersborgsviken	5146
Fairway through Lurö archipelago	4046
Fairway to Gruvön	5146
Fairway to Karlstad	5146
Fairway to Kristinehamn	5146
Fairway to Otterbäcken	4046
Fairway to Lidköping	4046