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UND
HYDROGRAPHIE

Changes in German Information System

14.06.2011

Danish Meteorological Institute, Copenhagen



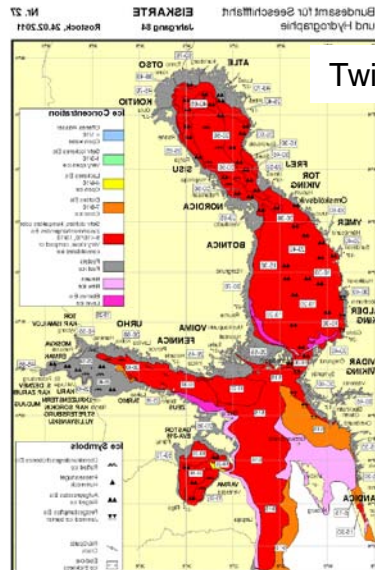
Changes in German Ice Information System

1st, and most important

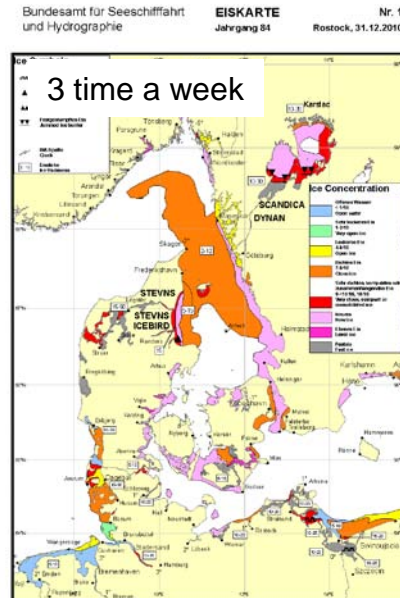
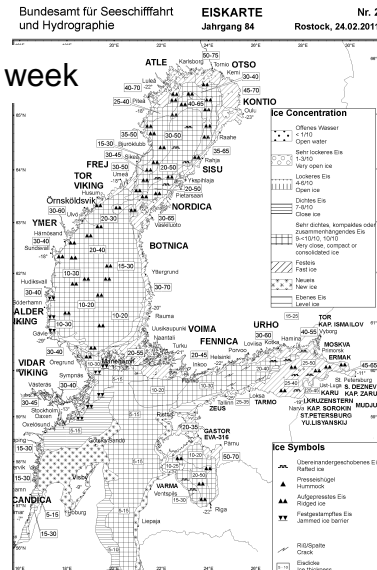
From the ice season 2010/11 the products of the German Ice Service are **free of charge** and are available in Internet under
http://www.bsh.de/en/Marine_data/Observations/Ice or
<http://bsis.eisdienst.de/products.shtml> or
<ftp://ftp.bsh.de/outgoing/Eisbericht> or
<http://www.bsis-ice.de/IcePortal/BalticSea.html>

Changes in German Ice Information System

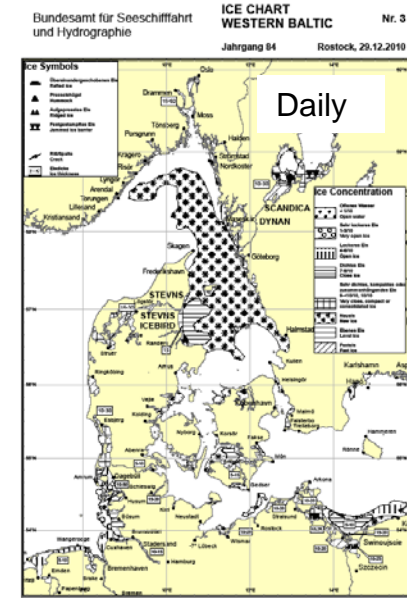
2nd, and very important



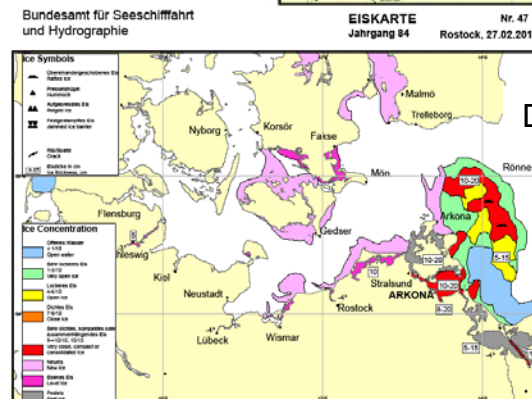
Twice a week



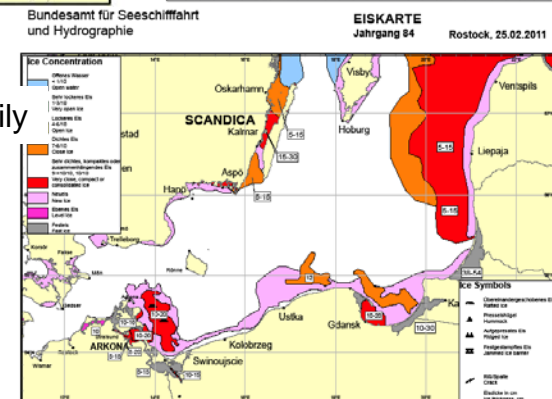
3 time a week



Daily



Daily



Operational ice charts drawn by German Ice Service in the winter of 2010/11

Changes in German Ice Information System

J. Holfort
2010:12:20
10:12:06



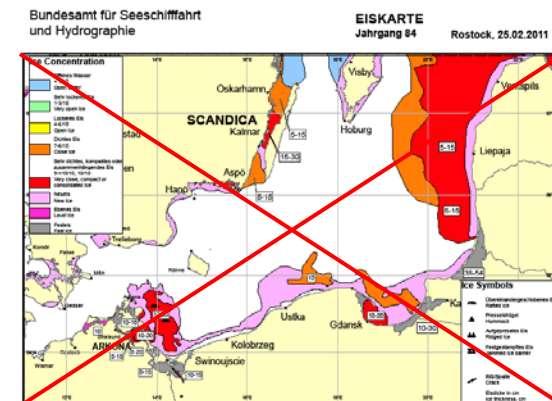
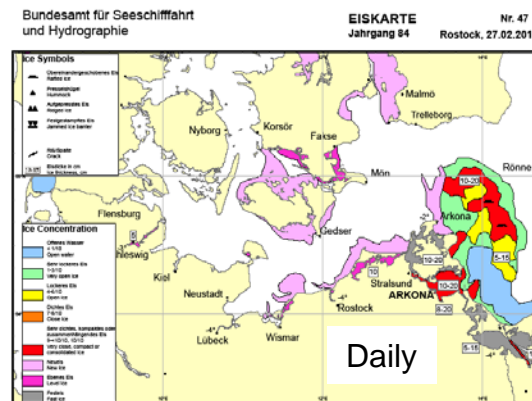
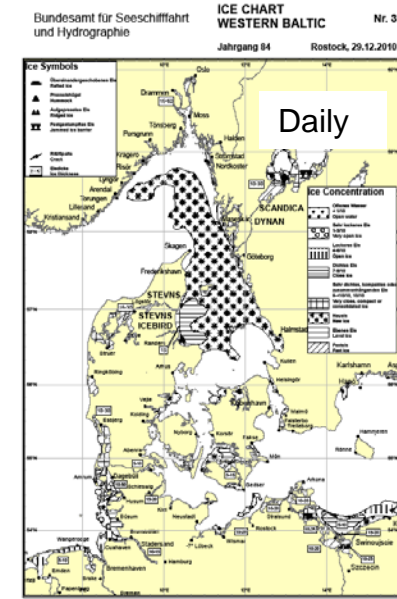
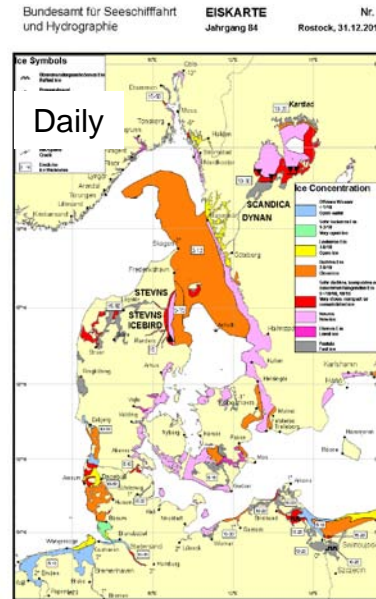
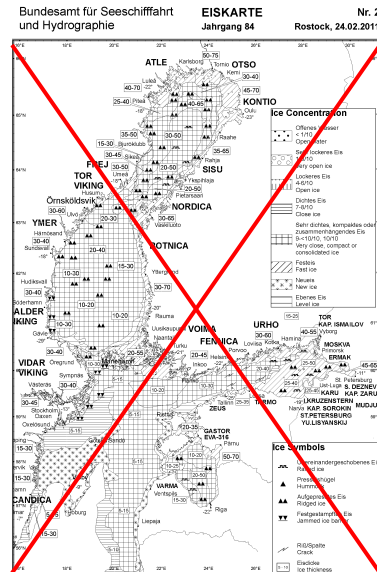
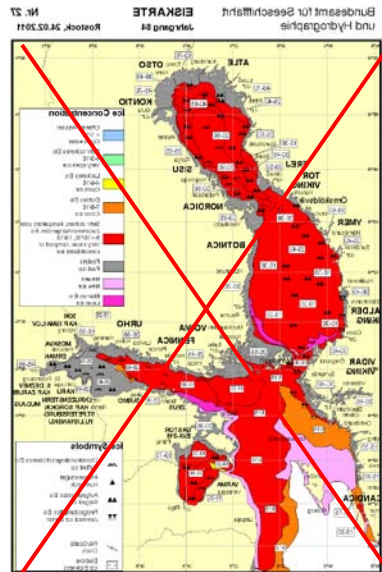
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User's

- navigation, shipping companies, off-shore companies, etc.
- Ice Services
- Sea state (waves) forecast model of DWD
- Different weather forecast models of DWD
- Ice forecast model of BSH

Changes in German Ice Information System

2nd, and very important

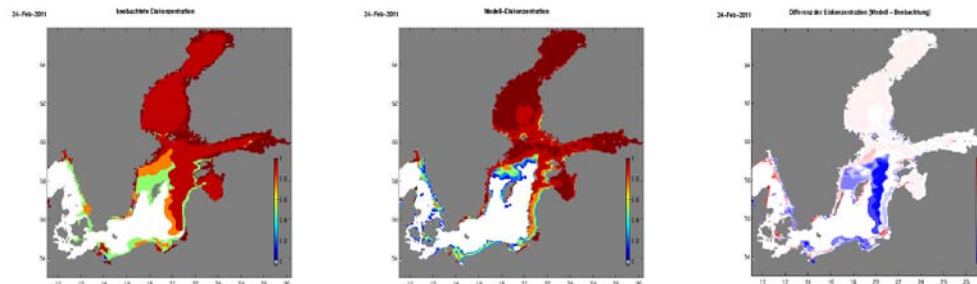


Operational ice charts which will be drawn by German Ice Service from the winter of 2011/12

Changes in German Ice Information System

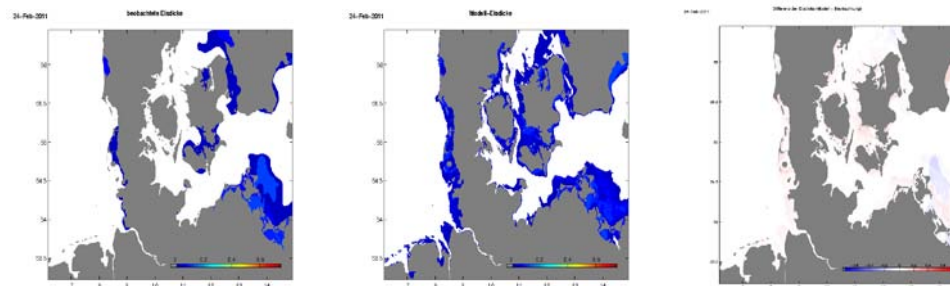


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User's

- Navigation, shipping companies, off-shore companies, etc. ---> (daily Swedish and Finnish ice charts, daily German ice charts for the Western Baltic)
- Ice Services ---> daily German ice charts for the Western Baltic
- Sea state (waves) forecast model of DWD ---> Western Baltic is o.k. Northern part - ?
- Different weather forecast models of DWD ---> Western Baltic is o.k. Northern part - ?
- Ice forecast model of BSH ---> Western Baltic is o.k. Northern part - ?

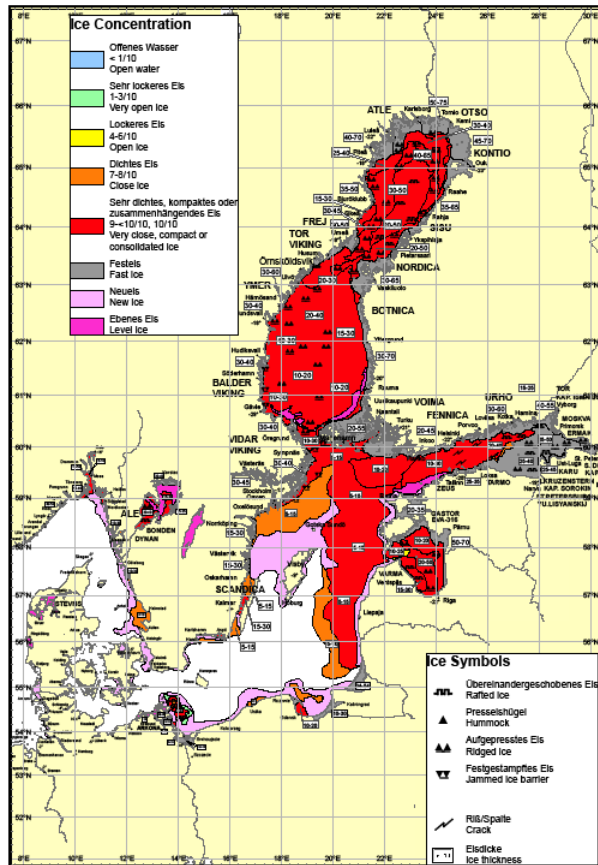


Changes in German Ice Information System

3rd, and may be important

Bundesamt für Seeschifffahrt
und Hydrographie

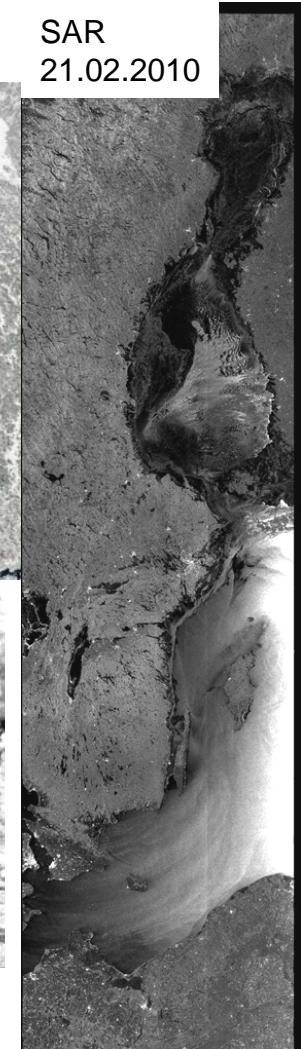
REFERENCE ICE CHART
Rostock, 24.02.2011



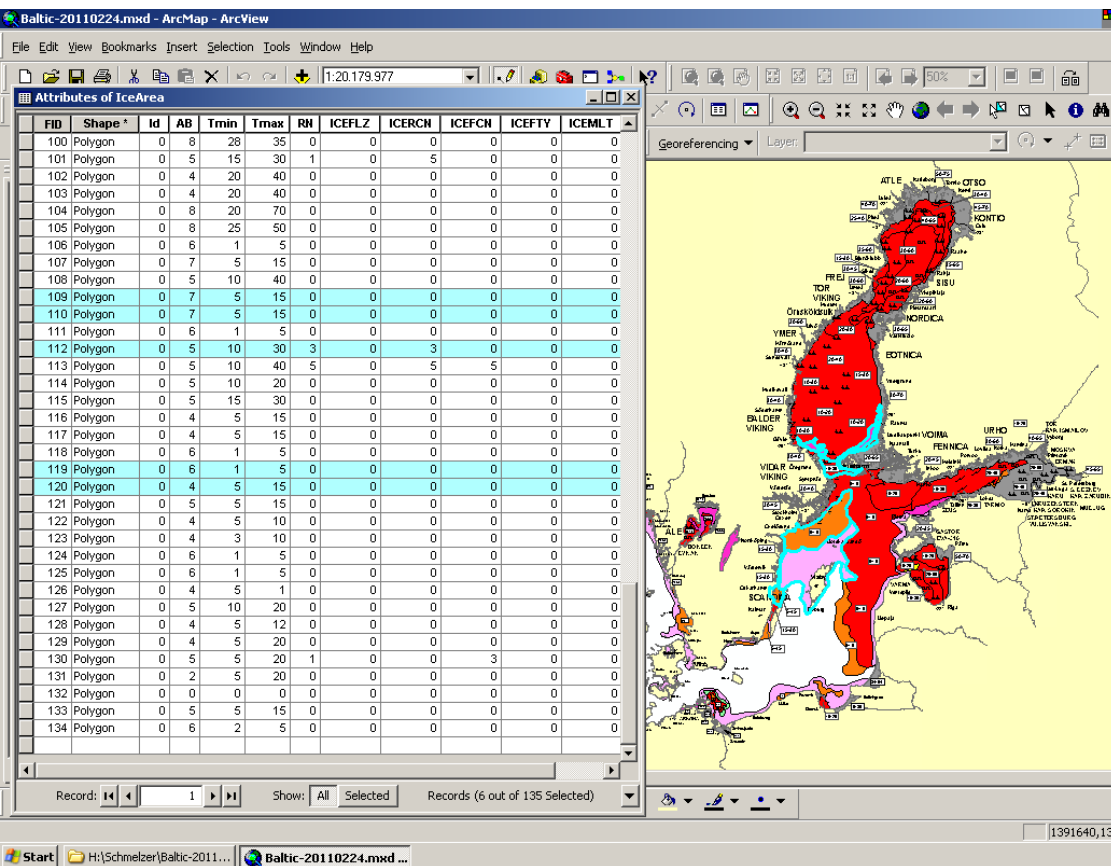
NOAA-19
24.02.2011

MODIS
16.03.2011

SAR
21.02.2010



Changes in German Ice Information System



Attribute table with parameters of Ice Area coded according to the Ice Objects Catalogue

Ice chart/Attribute table	IOC	Description
AB / AB		Concentration
1	01	< 1/10
2	13	1-3/10
3	46	4-6/10
4	78	7-8/10
5	91	9-10/10
6	50	5-10
7	92	10/10
8	92	10/10
Symbols / RN		Topographie
1	1	Rafted ice
2	2	Hummock
3	3	Ridged ice
4	4	Jammed brash ice barrier
5		Rafted and ridged ice
6		Cracks / Fractures
/ ICEFLZ		Ice floe size
1	01	Brash ice, < 2 m
2	02	Ice cake, < 20 m
3	03	Small ice floes, 20-100 m
4	04	Medium ice floes, 100 - 500 m
5	05	Big ice floes, 500 m - 2 km
6	06	Vast ice floes, 2 - 10 km
7	07	Giant ice floes, > 10 km
8	08	Fast ice
9	09	Ice floebit
/ ICERCN		Ice ridge concentration
1	01	Single ridges
3	03	Predominantly level ice, partly ridged ice
5	05	Approximately equal parts of level and ridged ice
7	07	Predominantly ridged ice, partly level ice
9	09	Almost exclusively ridged ice
/ ICEFCN		Ice rafting concentration
1	01	Single rafted ice
3	03	Predominantly level ice, partly rafted ice
5	05	Approximately equal parts of level and rafted ice
7	07	Predominantly level ice, partly rafted ice
9	09	Almost exclusively rafted ice
/ ICEFTY		Openings in ice
1	01	Crack, up to 1 m wide
2	02	Very small fracture, > 1 - 50 m wide
3	03	Small fracture, > 50 - 200 m wide
4	04	Medium fracture, > 200 - 500 m wide
5	05	Large fracture, > 500 m wide
/ ICEMLT		Melting forms
1	01	Few puddles
2	02	Many puddles
3	03	Flooded ice
4	04	Few thaw holes
5	05	Many thaw holes
6	06	Dried ice
7	07	Rotten ice

Tmin, Tmax in cm

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J. Holfort
2010:01:28
10:18:11



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Thank you for your attention