

17th BSHC Conference National Report of Germany

FINAL VERSION
August 2012

Executive Summary

The present report outlines and summarizes the activities carried out since the 16th BSHC Conference by the Federal Maritime and Hydrographic Agency (BSH). The report concentrates on the Baltic Sea.

The main issues are:

- Joint survey of Flensburger Förde;
- Withdrawal of paper charts for foreign waters
- Maritime Spatial Data Infrastructure MSDI
- Hydrographic data licensing
- The Hydrographic Office has been participating in the IHO work quite actively.

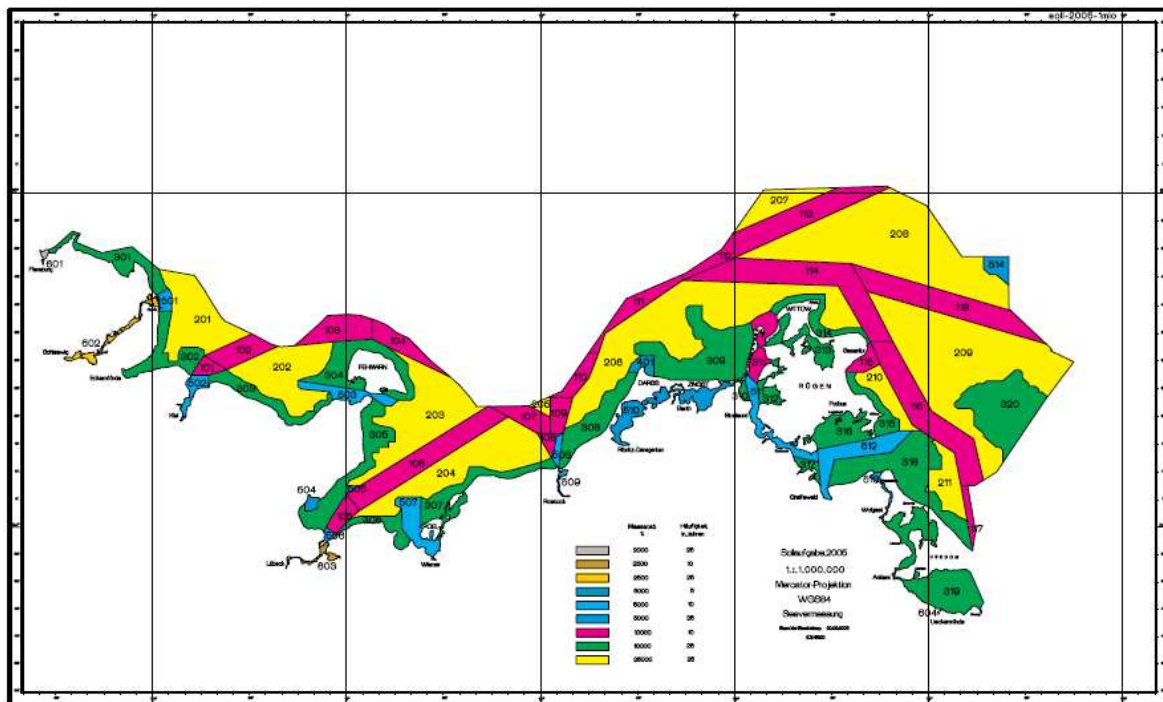
1. Hydrographic Office

The Bundesamt für Seeschifffahrt und Hydrographie (BSH, Federal Maritime and Hydrographic Agency of Germany) is an agency within the remit of the Federal Ministry of Transport, Building and Urban Development and has headquarters in Hamburg and Rostock. It encompasses responsibilities in hydrography, oceanography and shipping. The department "Nautical Hydrography" covers the obligations as the national Hydrographic Office and is mainly situated in Rostock. Alongside the BSH the national Water and Shipping Administration (WSV) belonging to the same Ministry manages and maintains the federal maritime waterways.

2. Surveys

Coverage of new surveys

The BSH conducts hydrographic surveys on a general schedule, which is being updated on a yearly basis and amended if necessary. The survey area is subdivided into different slices of similar quality demands. The quality aspects include the re-survey rate as well as survey standards.



<general survey scheme for the German part of the Baltic Sea>

One main task is the re-survey of the main shipping routes according to the re-survey scheme, agreed upon in the Monitoring Working Group of BSHC. There are only some smaller parts left which are planned to be finished by the end of this year. Then all main routes will be surveyed according to Order 1 of S-44. It means as well that the routes have to be resurveyed again as changes occur. The regular schedule for these permanent re-surveys is usually a 10 years rate.

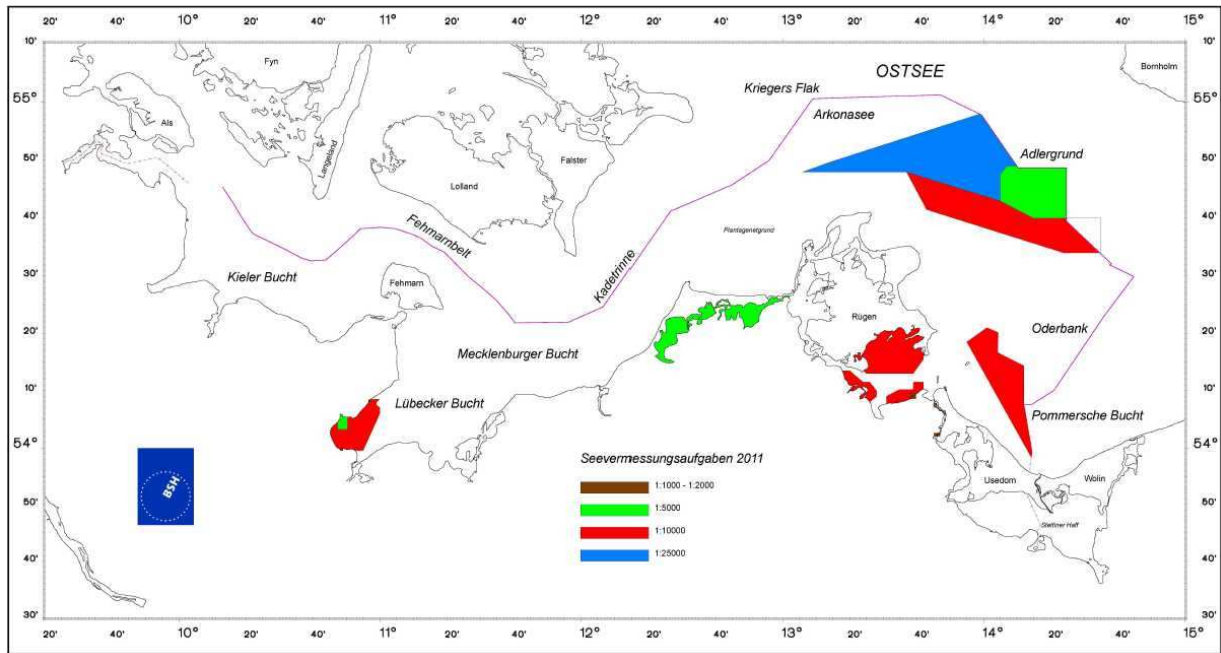
In 2012 a joint resurvey of the Flensburger Förde (Flensburg Fjord) has been agreed between Denmark and Germany. The survey task has been equally split ignoring the common boundaries. The German surveys had to start later due to technical problems with the mobile echosounder system (Geoswath) and its motion sensor (IXBlue).

The detailed survey plans for 2011 and 2012 are provided in a graphical format on the next page. For further details reference is made to the HELCOM Resurvey Site:

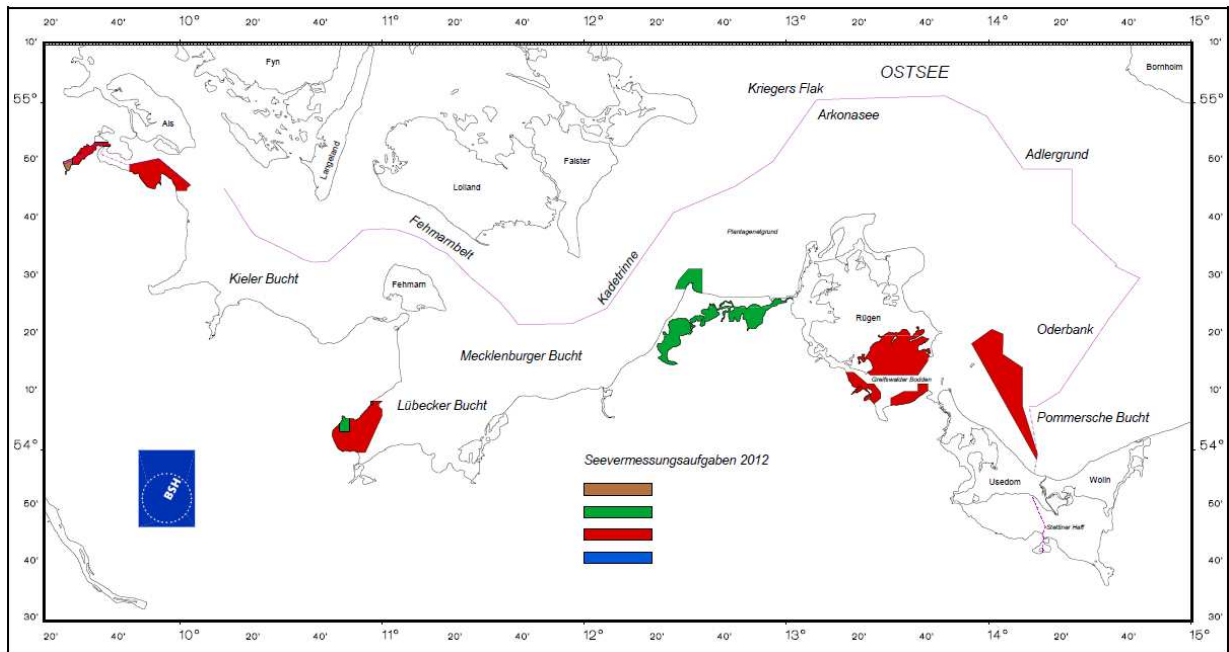
<http://helcomresurvey.sjofartsverket.se/HELCOMRESURVEYSITE/>

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Surveys planned in 2011:



Surveys planned in 2012



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Wreck search

BSH investigated 51 wrecks in 2011 in the Baltic Sea, 11 of them were new found obstructions or wrecks, the others were reinvestigated on a regular schedule.

New technologies and /or equipment

The survey vessel DENEK has been equipped with a new multi-beam echo-sounder (Reson 7125).

For the reduction of soundings to the German Quasigeoid (CD in the Baltic Sea) a new Quasigeoid model GCG2011 has been delivered. This is more accurate than the old one, and covers the whole EEZ. It will be used as the reference surface in the new survey database for all soundings. The nautical products will be derived from a difference model between CD and the geoid.

VS CAPELLA has been equipped with a new generation of GNSS sensors. This allows us to determine the height reference of the soundings using GPS as well as GLONASS measurements on all our vessels with high precision.

New ships

No new ships have been put in to service since the last report.

Problems encountered

No new problems were encountered since the last report.

3. New charts & updates

Charts (paper as well as ENC)s covering the German waters are produced and updated by BSH. For the whole Baltic Sea BSH issues and updates 149 charts (36 for German waters).

ENCs

The German waters have been covered with 153 ENC)s in various navigational bands. All the ENC)s are updated on a weekly basis. Since BSH managed the first time to produce ENC)s as well as applying updates from a hydrographic production data base in 2007, the enhancement of this production method to all German waters is ongoing but will take a number of years before completion.

ENC Distribution method

All the German produced ENC)s and updates (ER)s are distributed through a network of IC-ENC authorized distributors.

INT charts

43 German produced INT charts (for the North Sea and the Baltic Sea) have been updated. For the Baltic Sea, BSH is producer of 23 INT charts and printer of 67 INT charts produced by the Hydrographic Offices of Denmark, Poland, Sweden, Finland, Latvia and Russia.

National paper charts for domestic waters

The overall chart portfolio of the German waters comprises 66 charts (including INT charts) and 11 Small Craft Charts Series - all produced according to international charting standards. For the German waters of the Baltic Sea BSH issues 5 Small Craft Charts Series and a general planning chart on the back side.

National paper charts for foreign waters

For the Baltic Sea outside German waters, BSH produces 73 national charts besides the above mentioned INT charts. The main editing task is the application of INT1 standards for chart signatures. The preferred production method for foreign charts published by BSH is the adoption of digital repromats of INT or national charts from the producer nations based on bilateral arrangements. For the majority of these charts the editing is made in a hybrid system which allows superimposition of the raster repromats with vector elements.

For Polish Waters, 3 Small Craft Charts Series are produced in co-operation with the Polish Hydrographic Office (HOPN).

Withdrawal of paper charts for foreign waters

Due to decreasing customizers request for those charts and increasing internal capacity needs for chart production of domestic waters, BSH will terminate the issue of INT charts and national paper charts for foreign waters stepwise within the next two years. According to the current plan, BSH-charts of foreign waters covering Baltic Sea Area will have been completely withdrawn by the end of 2014. BSH will approach all members of this Commission who are in cooperation under bilateral arrangements to adapt these arrangements appropriately.

Other charts, e.g. for pleasure craft

None

Problems encountered

Delivery of Russian sources – charts, books, NtM – infrequent and often delayed.

4. New publications & updates:

New Publications

BSH has published the English version of the "Nordsee-Handbuch, südöstlicher Teil" and "Ostsee-Handbuch, südwestlicher Teil" early 2012.

- 20034 Sailing Directions Baltic Sea, Southwestern Part
- 20064 Sailing Directions North Sea, Southeastern Part

Updated Publications (June 2012)

- 2001 Ostsee-Handbuch, östlicher Teil
- 2007 Nordsee-Handbuch, südlicher Teil
- 2011 VTS Guide Germany
- 2115 Gezeitentafeln, Europäische Gewässer 2012
- 2155 Jachtfunkdienst Nordsee, Ostsee und Englischer Kanal 2012
- 2452 Katalog der Seekarten und Bücher 2012
- 3001 Wegepunkte in der Nord- und Ostsee 2012
- 4003 Leuchfeuerverzeichnis Teil 3
Wetter- und Warnfunk 2012 (Internet version only)

The following Publications will be updated 2012 and 2013

- 2002 Ostsee-Handbuch, westlicher Teil
- 2009 Handbuch Kattegat, Belte und Sund
- 2010 Winterbetonung 2012/2013
- 2115 Gezeitentafeln , Europäische Gewässer 2013
- 2155 Jachtfunkdienst Nordsee, Ostsee und Englischer Kanal 2013
- 2175 Nautisches Jahrbuch, Ephemeriden und Tafeln 2013
- 2452 Katalog der Seekarten und Bücher 2013
- 3001 Wegepunkte in der Ost- und Nordsee 2013
- 4003 Leuchfeuerverzeichnis Teil 3, östliche Nordsee
- 5000 Handbuch Nautischer Funkdienst 2012/2013
Wetter- und Warnfunk 2013 (Internet version only)

Supplements
None

Means of delivery, e.g. paper, digital

Nautical Publications will be delivered as paper and digital copies. Some Publications are only available on the Internet.

Charts will be delivered as paper copies and ENC. GeoTiffs are available for all charts. Alternative digital formats and products such as pdf or shape files will be produced on request.

Problems encountered

None

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5. MSI

Existing infrastructure for transmission

Incoming hydrographic data is immediately assessed for vital information. Urgent updates are issued as chart-updating Notices to Mariners (NtMs) or Navigational Warnings (Radio Navigational Warnings - NAUTISCHE WARNNACHRICHTEN, NWN).

The NtMs are issued weekly by the BSH. The NtMs provide information on important navigational measures, incidents, and changes concerning the German navigable waterways, the high seas, and the territorial waters of other European states (the greater part in German/English).

NWN are issued by the VTS centres for their areas of responsibility, and by the 24-h maritime warning service in Emden for the entire German warning area, and are broadcast as radio messages. In special cases, the maritime warning service also informs about dangers outside its area of responsibility (e. g. dangerous wrecks in the main shipping lanes).

Navigational warnings in English language relating to the area of responsibility of the Federal Republic of Germany are broadcast on 518 kHz (international NAVTEX service) by the Swedish coastal radio station Gislövshammar Radio, identification character J, for the Baltic Sea, and by the Pinneberg radio station of the German Meteorological Service (DWD), identification character S, for the North Sea.

A national NAVTEX service in German language is broadcast on 490 kHz by the Pinneberg radio station (identification character L) for the entire navigational warnings area of the North and Baltic Seas.

New infrastructure in accordance with GMDSS Master Plan

None

Problems encountered

None

6. C-55

Excerpt of C-55 for Germany in INT Region E updated 1 July 2011

Status of surveys

A1	A2	B1	B2	C1	C2	Comment
98	0	2	0	0	0	A regular re-survey scheme is in place, taking into account the rapid changes of the sea floor topography. For more details for the Baltic Sea see http://helcomresurvey.sjofartsverket.se/HELCOMRESURVEYSITE/ .

Status of nautical charting

Offshore passage/Small			Landfall Coastal passage/Medium			Approaches Ports/Large			Comment
A	B	C	A	B	C	A	B	C	
100	0	100	100	0	100	100	0	100	

7. Capacity Building

BSH is chairing in the Capacity Building Subcommittee. A Cat A course in Hydrography is offered in english language at the Harbour City University (HCU) in Hamburg. TechAWI in Bremerhaven provides certified Cat B courses.

8. Oceanographic activities

The BSH operates several services such as daily water level forecasts, storm surge warnings, ice reports, ice charts and charts of the sea-surface-temperature. It surveys and evaluates the physical and chemical conditions of the North and Baltic Sea.

9. Other activities

The BSH is represented in more than 20 international bodies.

9.1 Participation in IHO Working Groups

BSH is actively involved in the work done by

- HSSC,
- IRCC,
- CBSC,
- WWNWS,
- CSPCWG including INT1 subWG,
- DIPWG,
- HCIWWG,
- MSDIWG,
- SNPWG,
- TSMAD,
- TWLWG.

Within BSHC:

Baltic Sea Bathymetry Database (BSBDWG),
Baltic Sea International Charting Coordination Working Group (BSICCWG),
Baltic Sea Marine Spatial Data Infrastructure Working Group (BSMSDIWG),
Chart Datum Working Group (CDWG),
Resurvey Monitoring Working Group (MWG).

9.2 Other international activities

BSH is participating in two approved INTEREG-Projects, namely

- BALTSEAPLAN as the lead partner to establish foundations for transboundary spatial planning by means of pilot projects – this project was finished within this reporting period.
- BLAST (Bringing land and sea together) – this project will finish in 2013.

BSH is also participating on IMO Committees, namely MSC and NAV as well as IOC.

BSH contributes to the annually held HPD User Group Meetings.

9.3 Maritime Spatial Data Infrastructure MSDI

In order to adopt the Open Data Policy of the EU-Commission, Germany is about to prepare national regulations to provide free and unlimited access and re-use to the following types of hydrographic data for national waters:

- Coast line data,
- Bathymetric data, i.e. depth soundings and depth contours,
- Type and position of fixed and floating aids to navigation,
- Type and position of underwater hazards as far as they are of relevance for surface navigation and presented in navigational charts.

The provision of these data sets will be done by means of IT-infrastructure which have already been established to facilitate the applicable requirements of INSPIRE for data of the hydrographic domain.

9.4 Hydrographic data licensing

The national interpretation of the applying EU-regulations for the unlimited provision of basic hydrographic data is that charts as compilations of georeferenced information from various internal and external sources do not undergo this obligation. Therefore BSH will maintain its established system of chart licensing for commercial and noncommercial re-use. In order to reflect the current developments within the emerging market of mobile GIS-applications, BSH is about to establish a revised royalty calculation method with the flexibility to consider high sales figures on mobile applications ("Apps") for marginal prices.

10. Conclusions

BSH is observing a steady increasing request for hydrographic data beyond classic navigation, namely from maritime spatial planning and offshore activities. BSH also considers the establishment of larger organizations whose business model is to interface between the available data stocks of Hydrographic Services and Customers outside the navigation market.