



BUNDESAMT FÜR
SEESCHIFFFAHRT
UND
HYDROGRAPHIE

BSHC 29 National Report Germany



BHSC 29 Tallinn

Organization chart of the Federal Maritime and Hydrographic Agency (BSH)

April 1, 2024

Office Hamburg

Bernhard-Nocht-Straße 78
20350 Hamburg
Germany

P.O. Box 30 12 20
20305 Hamburg
Germany

Telephone: +49 (0) 40 31 90-0
Fax: +49 (0) 40 31 90-50 00

Office Rostock

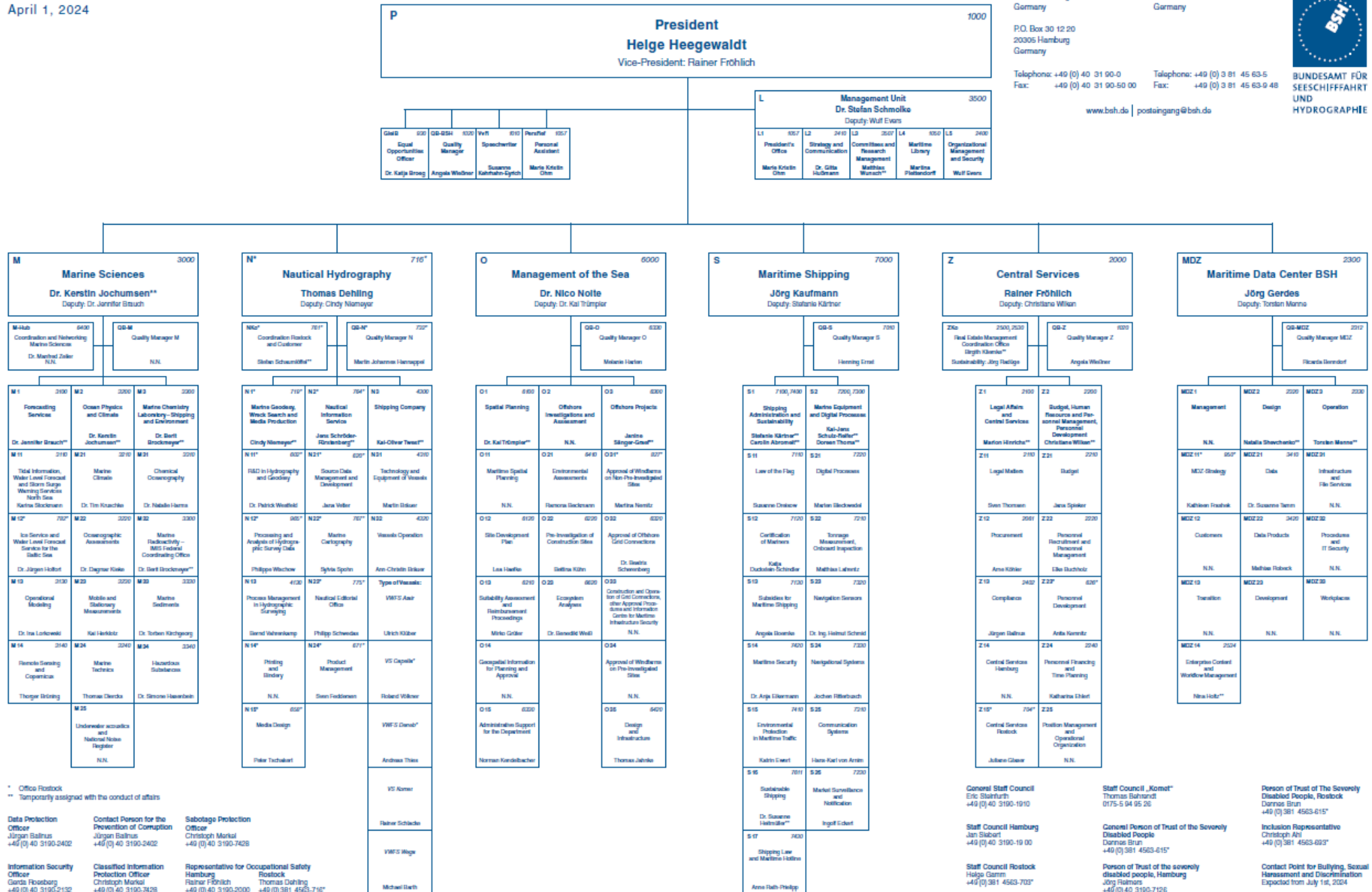
Neptunallee 5
18057 Rostock
Germany

Telephone: +49 (0) 3 81 45 63-5
Fax: +49 (0) 3 81 45 63-9 48

www.bsh.de | posteingang@bsh.de



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UND
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* Office Rostock
** Temporarily assigned with the conduct of affairs

Data Protection Officer
Jürgen Ballnus
+49 (0) 40 3190-2402

Contact Person for the Prevention of Corruption
Jürgen Ballnus
+49 (0) 40 3190-2402

Sabotage Protection Officer
Christoph Markal
+49 (0) 40 3190-7428

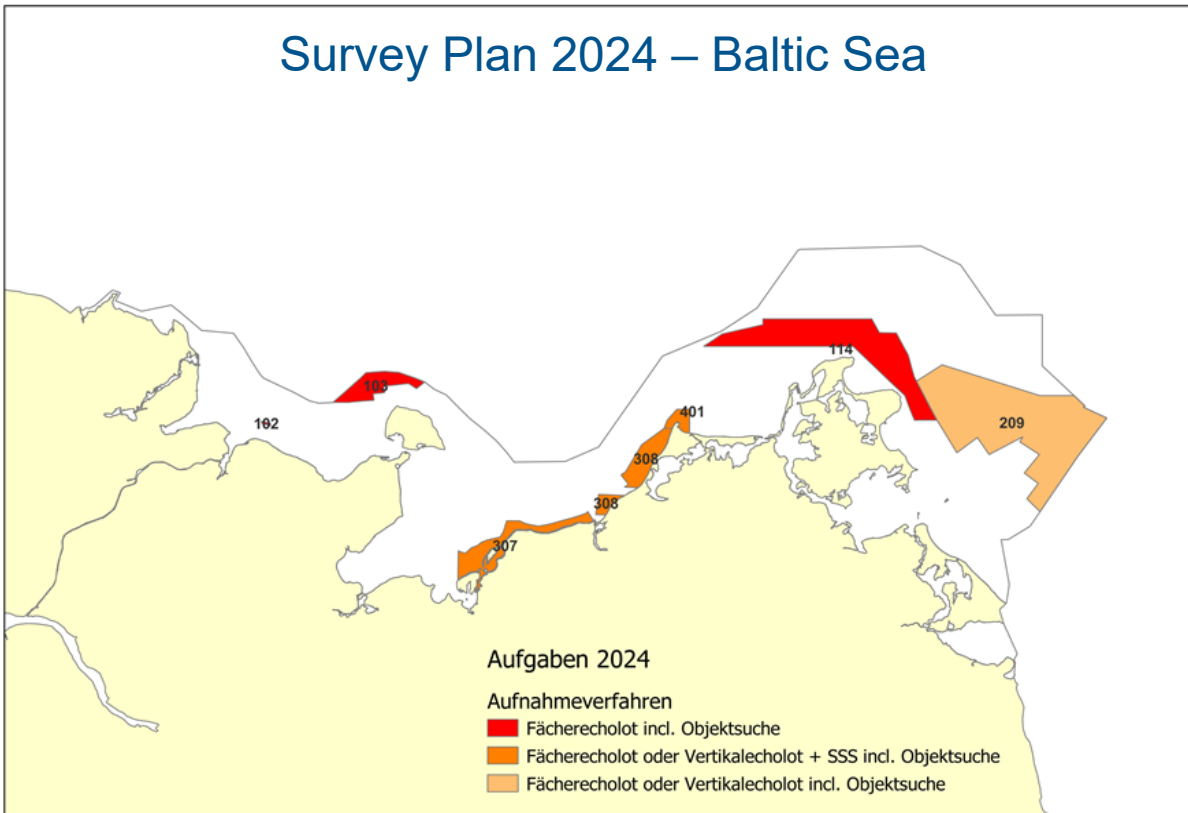
Information Security Officer
Gerd Frosberg
+49 (0) 40 3190-2132

Classified Information Protection Officer
Christoph Markal
+49 (0) 40 3190-7428

Representative for Occupational Safety
Hamburg
Rostock
Rainer Fröhlich
Thomas Dehling
+49 (0) 40 3190-2000
+49 (0) 381 4563-716*

Surveying and wreck search

Survey Plan 2024 – Baltic Sea



Surveys in 2024:

| | | |
|-----|-------------------------|------------|
| 102 | Ansteuerung Kiel 2 | finished |
| 113 | Route H | in process |
| 114 | Route Sassnitz 2 | planned |
| 209 | zw. Rügen u. Bornholm S | planned |
| 307 | Wismarbucht O | planned |
| 308 | Rostock bis Darss | in process |
| 401 | Darsser Ort | planned |

New technologies

- BSH researches, implements and evaluates complementary data sources to hydroacoustic measurements, and how data from heterogeneous sources can be processed jointly.
- work on improved techniques to determine spatiotemporally resolved water sound velocity profiles (SVP) using dense in-situ measurements and distribution model data. Also to predict water body characteristics in real time during hydrographic surveys.
- develop and implement automated data analysis techniques:
 - workflow for fully automated AI-based boulder detection in hydroacoustic data, training and evaluation of detection models, execution of boulder detection models, and post-processing of detection results without programming.
 - automatic processing chain for the extraction of coastlines from multispectral aerial and satellite imagery.
 - Integrated processing of multispectral satellite image sequences using deep machine learning techniques to derive bathymetry from optical imagery and tracking techniques to monitor changes in seabed topography for intelligent hydrographic resource planning.
- BSH is addressing augmented reality (AR) technologies for crewed hydrographic surveys and public relations.
- BSH is partner in the Interreg Baltic Sea Region project “Shared waters – Same standards. Baltic Sea partnership for future navigation (Baltic Sea e-nav)”.

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New ships

WEGA (1990) and DENEK (1994), both Survey, Wreck Search and Research Vessels.
Call for tender (call for expression of interest as a first phase).

Negotiations are ongoing with several shipyards.

Plan to award the contract to a shipyard by the end of this year.

Funding is not finally confirmed yet.

Vessels will be operated with environmentally friendly and climate neutral fuels based on methanol.

Size max 65 m x 15 m.

To be equipped a.o. with ASV.



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Charts

ENCs

- 308 ENC cells in various navigational bands in German waters. The gridded scheme will be implemented step by step for the main harbours and the approach cells of the Baltic Sea.
- BSH published the HD ENC DE6HOSRO in May 2024. Other HD ENCs will follow in the coming months.

ENC distribution method

- All the German produced ENCs and updates (ERs) are distributed through IC-ENC.
- Supported by IC-ENC S-101 readiness checks and constantly updated conversion software the German HPD data base gets prepared for producing S-101 ENCs.

INT charts

- 36 German published INT charts have been updated. 15 North Sea and 19 Baltic Sea INT charts in DIN A0 format are produced in co-operation with UKHO and are distributed through UKHO chart agents.
- BSH transferred the INT chart 120 (DE 98) to UKHO and the INT chart 1201 (DE 40) to SMA.
- BSH changed the paper size of all INT charts to DIN A0.

National paper charts for domestic waters

- BSH published and updated 63 North Sea and 41 Baltic Sea paper charts in DIN A1 format during the reporting period. The remaining 3 charts will be replaced by DIN A1 paper charts by the end of 2024.

Paper charts for foreign waters

- Germany is the producer of 3 INT charts for Antarctic waters.

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Survey, wreck search and research vessel ATAIR