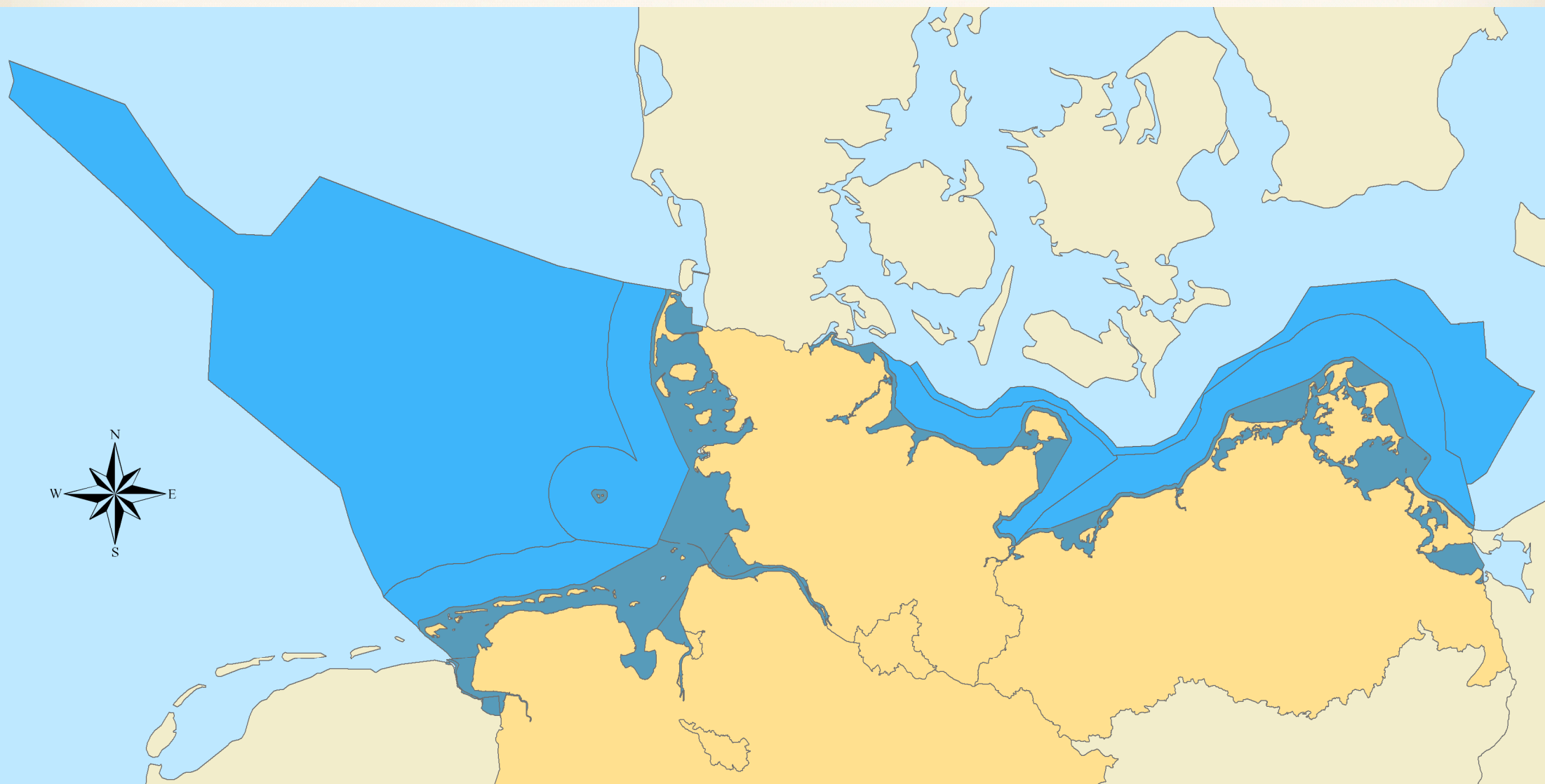




The German Marine Data Infrastructure (MDI-DE)

German EEZ



Data Originators

18 Agencies and Institutions in the EEZ and 12 Mile Zone



For which Systems do we need Data



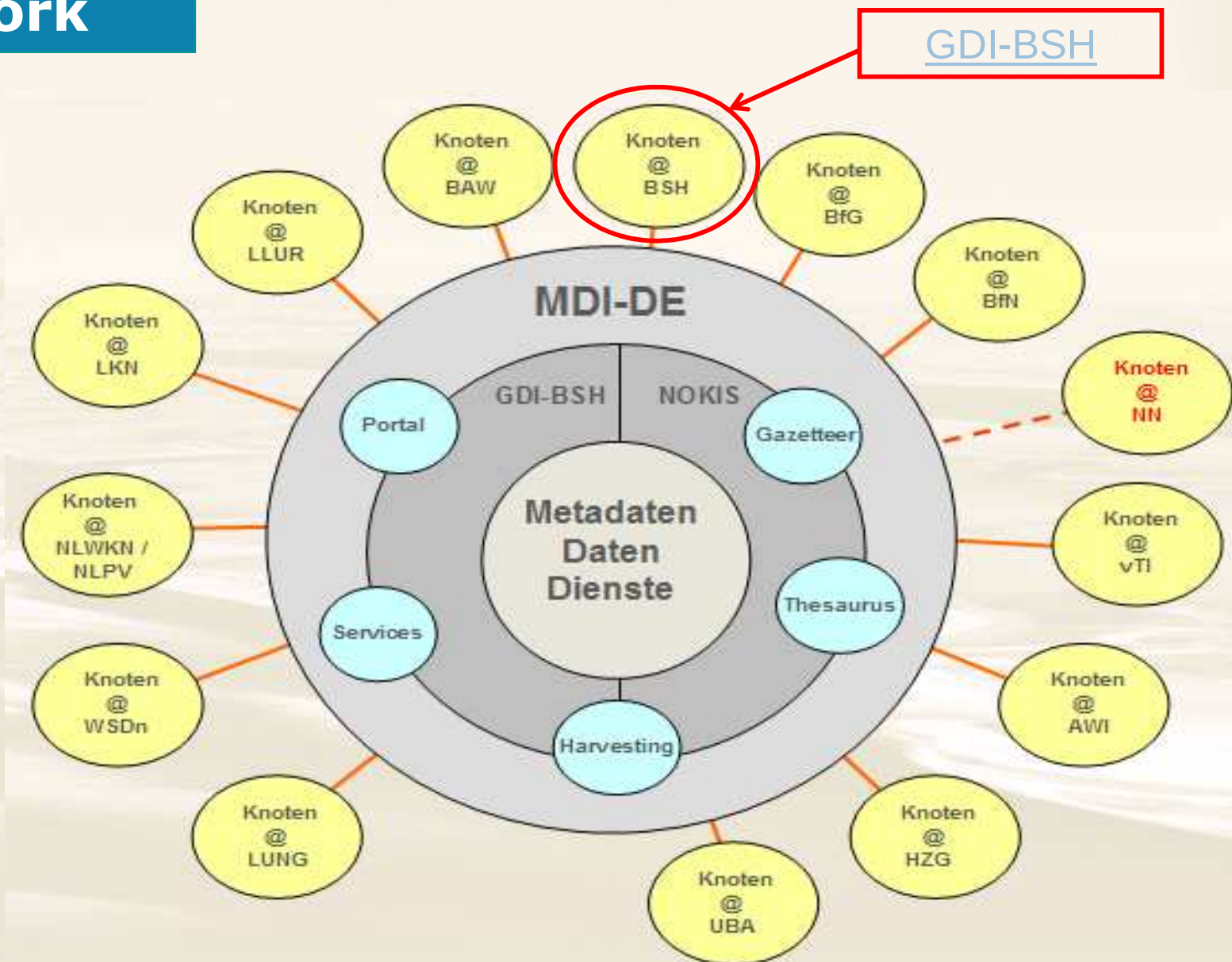
MDI-DE

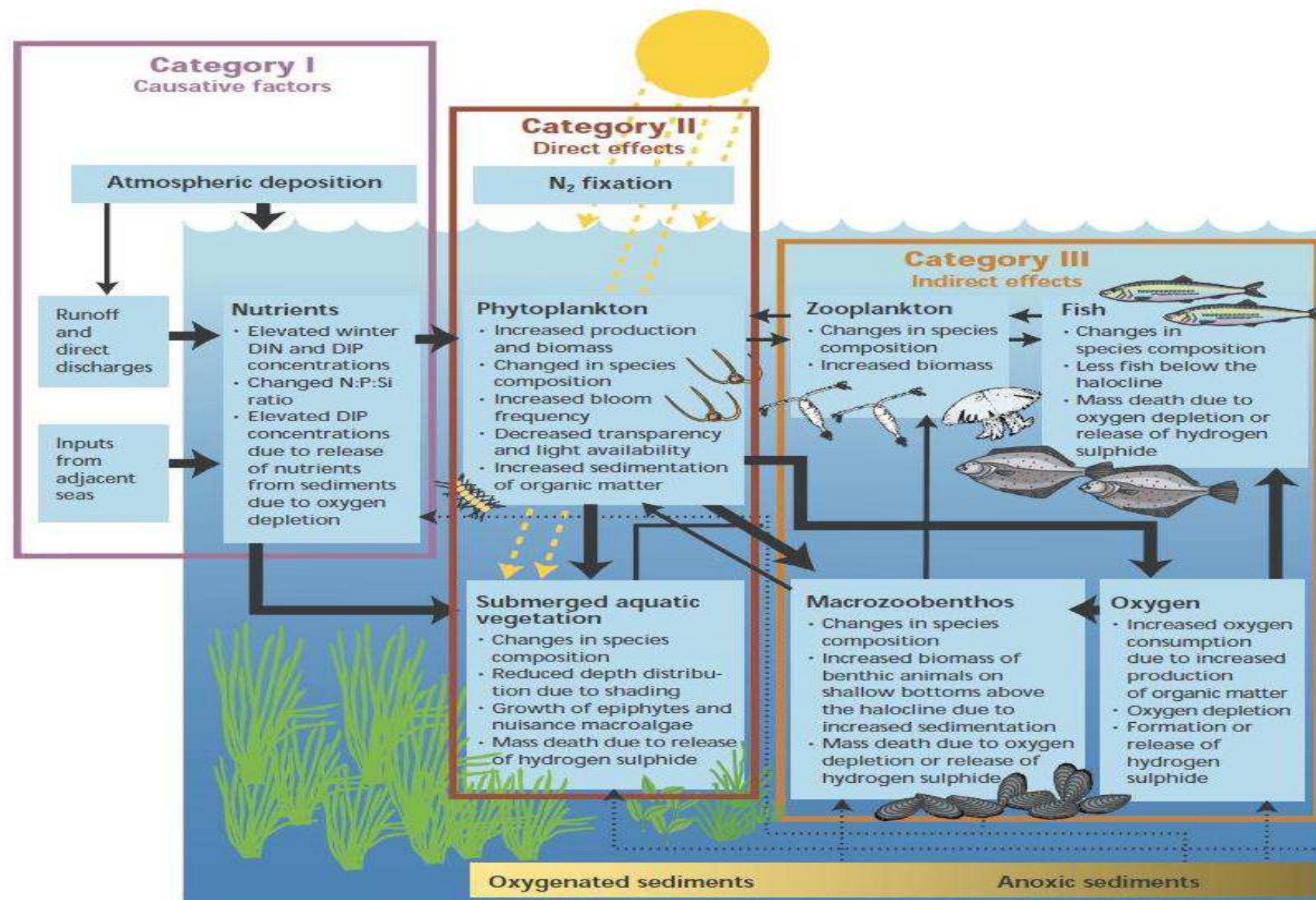
- MDI-DE = Marine Data Infrastructure - Germany
- Supra-institutional network for the integration of marine data from all relevant data sources
 - Federal Institutions
 - State Institutions
 - Research Organizations
- National marine and coastal information system
 - Central geoportal
 - Central metadata catalogue
 - Local infrastructure nodes providing data and services
- Project was funded by the German Ministry of Education and Research
- Cooperation arrangement between the partners for permanent operation



Future Network

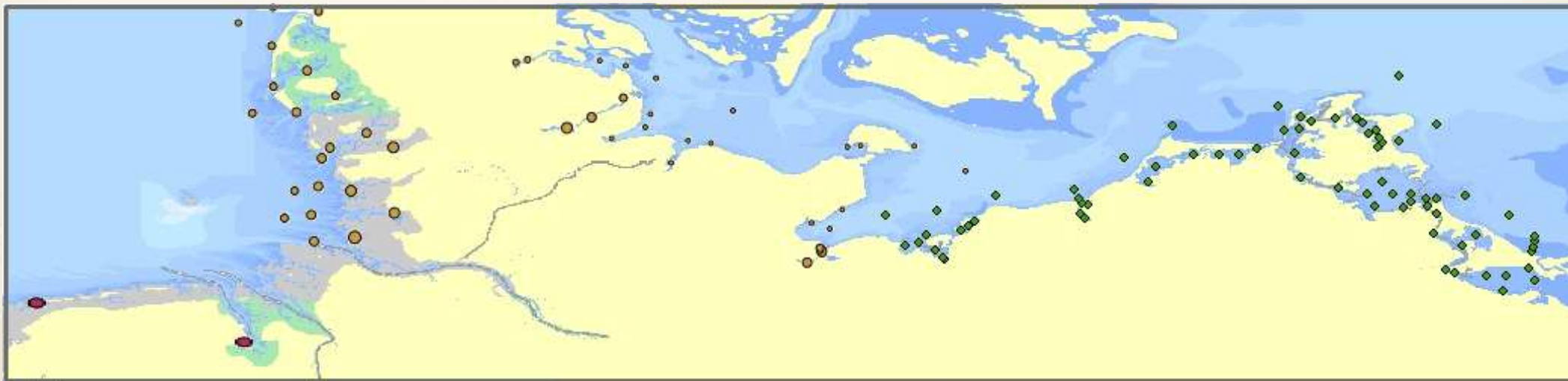
- Service Oriented Architecture
- Decentralized network of data providing services
- Data and Services documented with metadata
- Focus on interoperability
 - open standards (ISO, OGC).



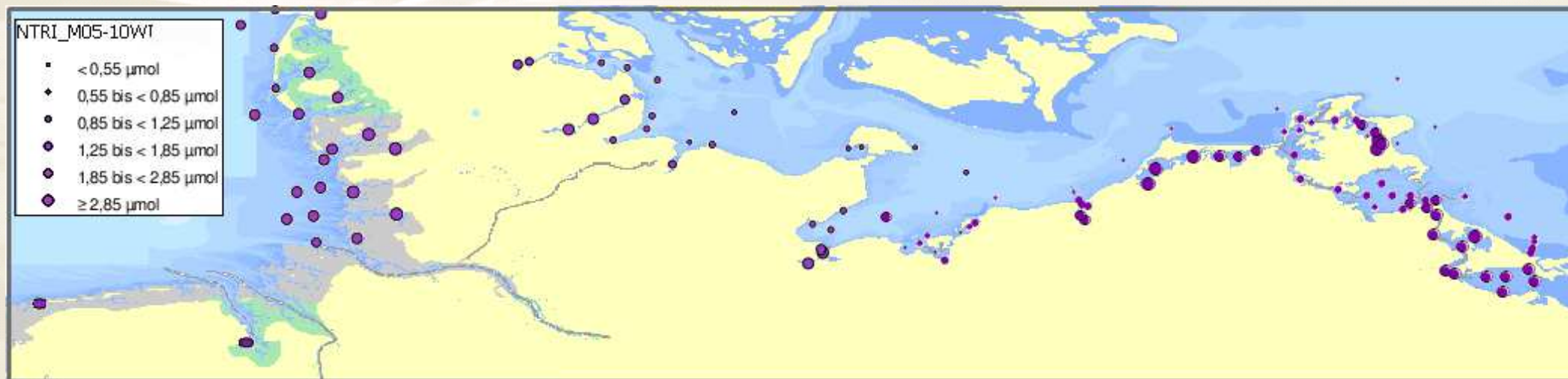


HELCOM, 2006: Development of tools for assessment of eutrophication in the Baltic Sea, Baltic Sea Environmental Proceedings No. 104

Harmonization: Example Eutrophication

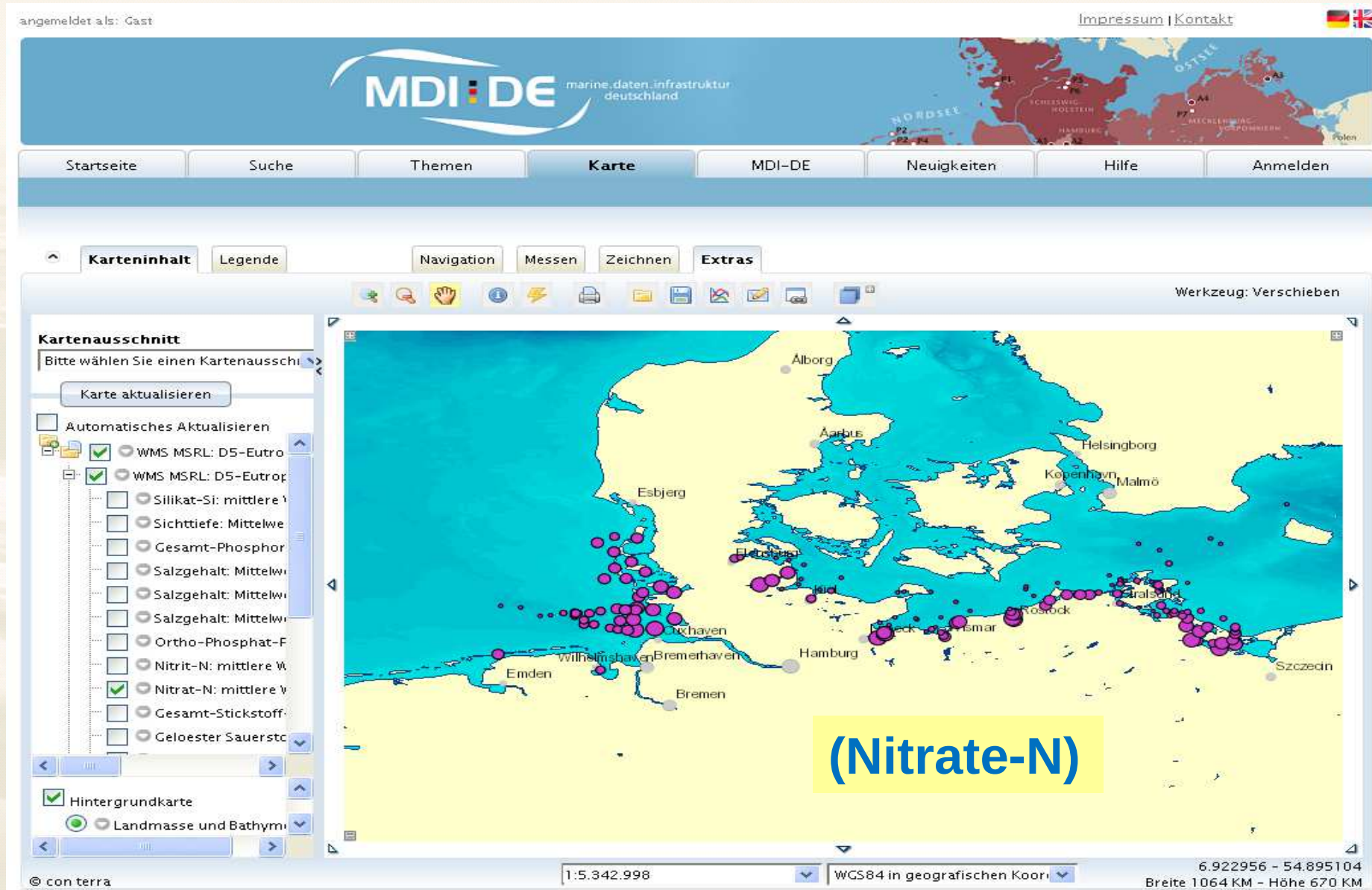


The Nitrite-N-Layer of different agencies with their own styles



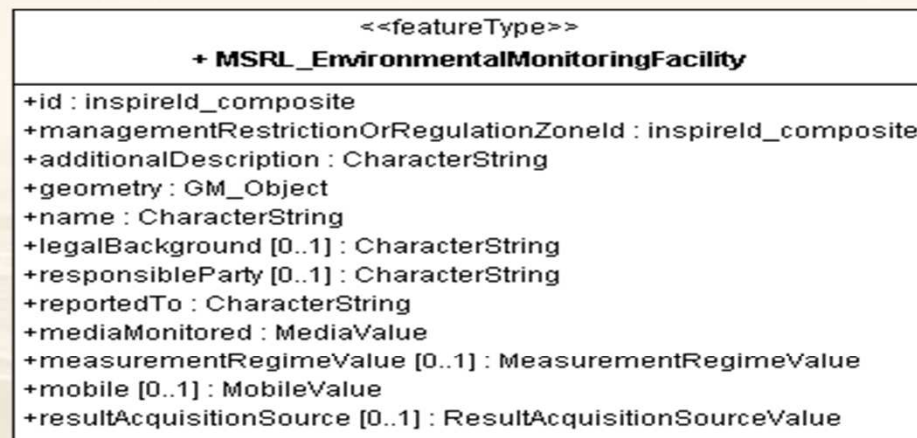
The harmonized Nitrite-N-Layer with unified symbols and legend

MSRL D5: Eutrophication



MSRL D5: INSPIRE compliant WFS

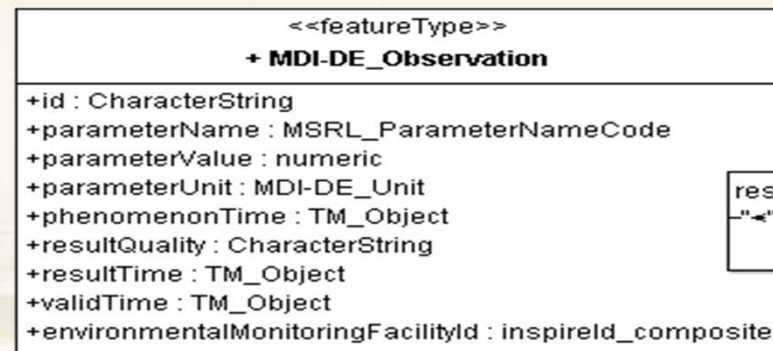
FeatureTypes



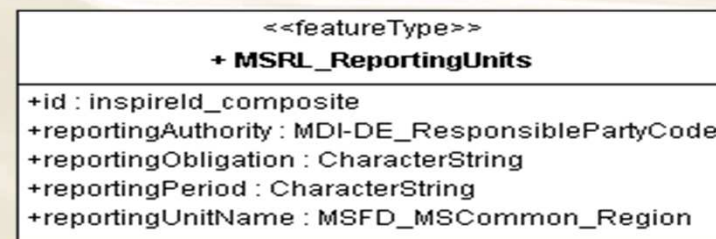
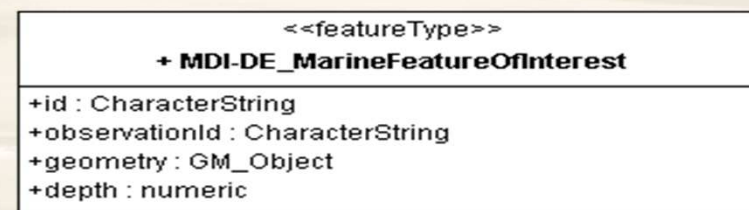
responsibleParty
Werte aus MDI-DE_ResponsiblePartyCode
getrennt durch Komma

reportedTo:
const: "MSFD"

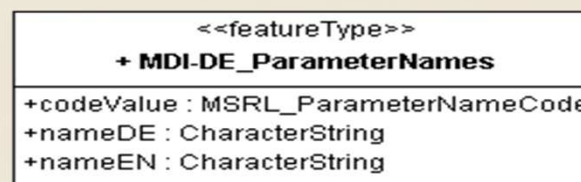
legalBackground: z.B. WRRL, OSPAR usw.
getrennt durch Komma



resultQuality
"-<"- oder null



reportingObligation:
const: "MSFD"
reportingPeriod:
Berichtszeitraum



MDI-DE Portal



The screenshot shows the MDI-DE Portal interface. At the top, there is a navigation bar with links: Startseite, Suche, Themen, Karte, MDI-DE, Neuigkeiten, Hilfe, and Anmelden. Below this is a search bar labeled 'Geodatenuche' with a 'suchen' button and a link to 'erweiterte Suche'. The main content area is divided into two sections. On the left, 'Themeneinstieg' (Topic Introduction) features a grid of 12 topic cards: WRRL-Bewertung, Schutzgebiete, Windparks, Leitungen, Bundeswasserstraßen, Leere Karte, Bathymetrie, Schadstoffe, PEGELONLINE, Geologie, Eutrophierung, and Human Activities. On the right, 'Neuigkeiten' (News) lists three recent updates with dates and links to more information.

Data Search

Data Visualisation

Data Access

<https://www.mdi-de.org>

Kartenausschnitt
Bitte wählen Sie einen Kartenausschnitt

Karte aktualisieren
Automatisches Aktualisieren

Raumplanung

- ☒ BSH WMS CONTIS Spatial_Off
- ☒ BSH WMS CONTIS Administrat
- ☒ Boundaries
- ☒ Maritime Features (Shipping R
- ☒ Maritime Features (Areas)
- ☒ Preferred Areas
- ☒ Sediment Extraction
- ☒ Military Practice Area
- ☒ Dumping Grounds
- ☒ Contis Area
- ☒ BSH WMS CONTIS Facilities
- ☒ Platforms
- ☒ Data_Cables
- ☐ Cathode_Electrode
- ☒ High_Voltage_Cables
- ☒ Pipelines
- ☒ Offshore_Windfarms

Hintergrundkarte
☒ Landmasse und Bathymetrie
☐ Landmasse

Ergebnisse der Objekt-Info-Abfrage - Mozilla Firefox
Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe
https://www.geoseaportal.de/gdi-bsh-mapclient/IdentifyAll.do

Ergebnisse der Objekt-Info-Abfrage

OBJECTID	41353
FEATUREID	129443
FEATURECODE	windfarms
FEATURETYPE	Windfarms
FEATURESPEC	PilotPhase
NAME	BARD Offshore 1
STATUS	inUse
CONFIDENCE	Public
REMARK	De21/Germany
SHAPE	Polygon
FSR1_OIN	87

Pipelines
High_Voltage_Cables

FeatureInfoCollection - layer name: 'High_Voltage_Cables'

OBJECTID	401
FEATUREID	154302
FEATURECODE	tennet
FeatureType	HighVoltageCable
FEATURESPEC	Unclassified
NAME	Veja Mate West/East

Fenster schließen

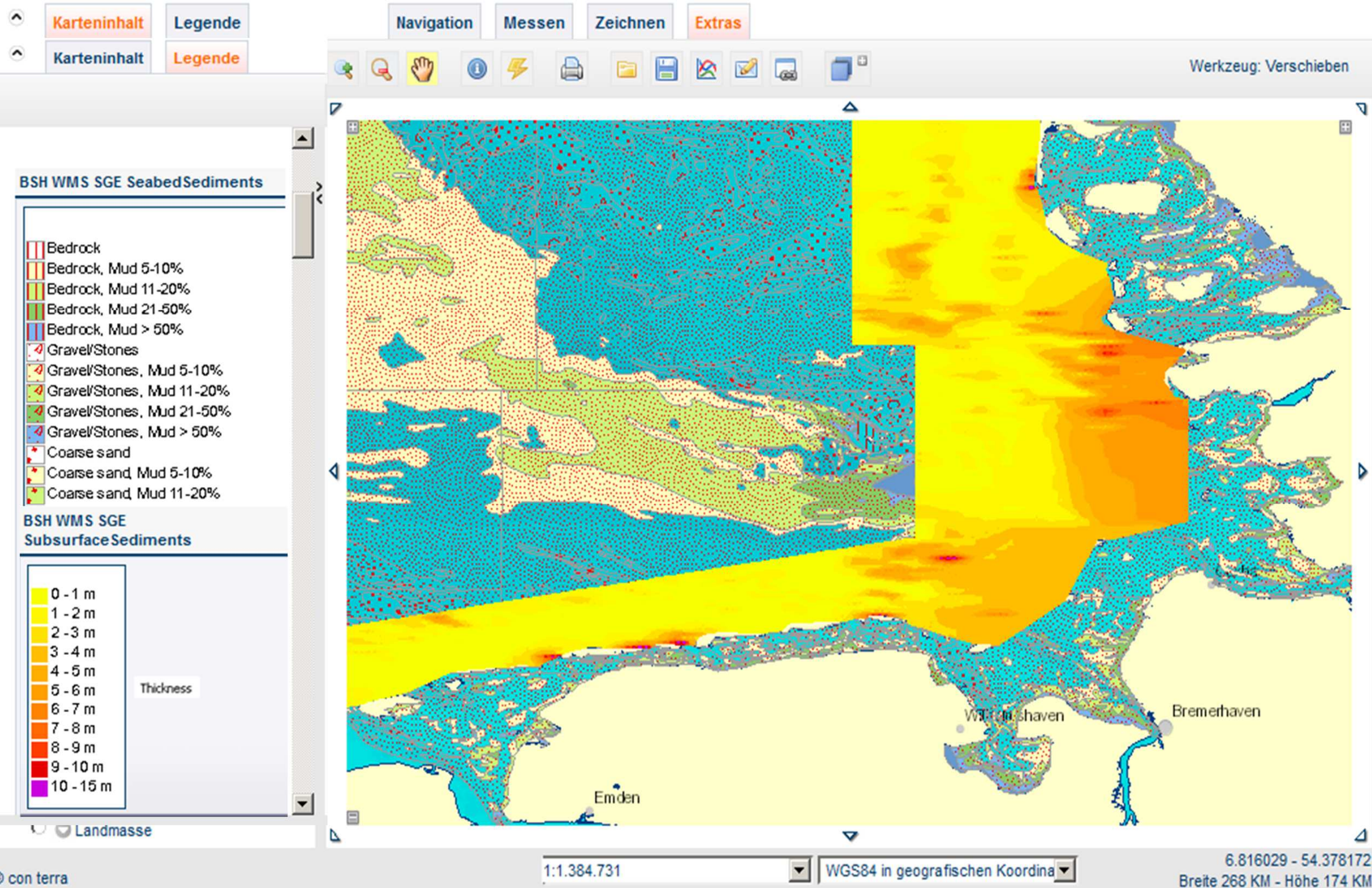
© con terra

1:1.828.931

WGS84 in geografischen Koordinat

6.029525 - 55.851151
Breite 571 KM - Höhe 337 KM

Sediments, Classification and Thickness



[Karteneinhalt](#)
[Legende](#)

Navigation

Messen

Zeichnen

Extras



Werkzeug: Verschieben

Legende

BSH WMS SGE Survey

Cone Penetration Tests (CPT)

Penetration Depth

- ◇ < 6 m
- ◇ 6 - 35 m
- ◇ 35 - 50 m
- ◇ 50 - 100 m
- ◇ > 100 m

Corings

Core length

- ◇ < 6 m
- ◇ 6 - 35 m
- ◇ 35 - 50 m
- ◇ 50 - 100 m
- ◇ > 100 m

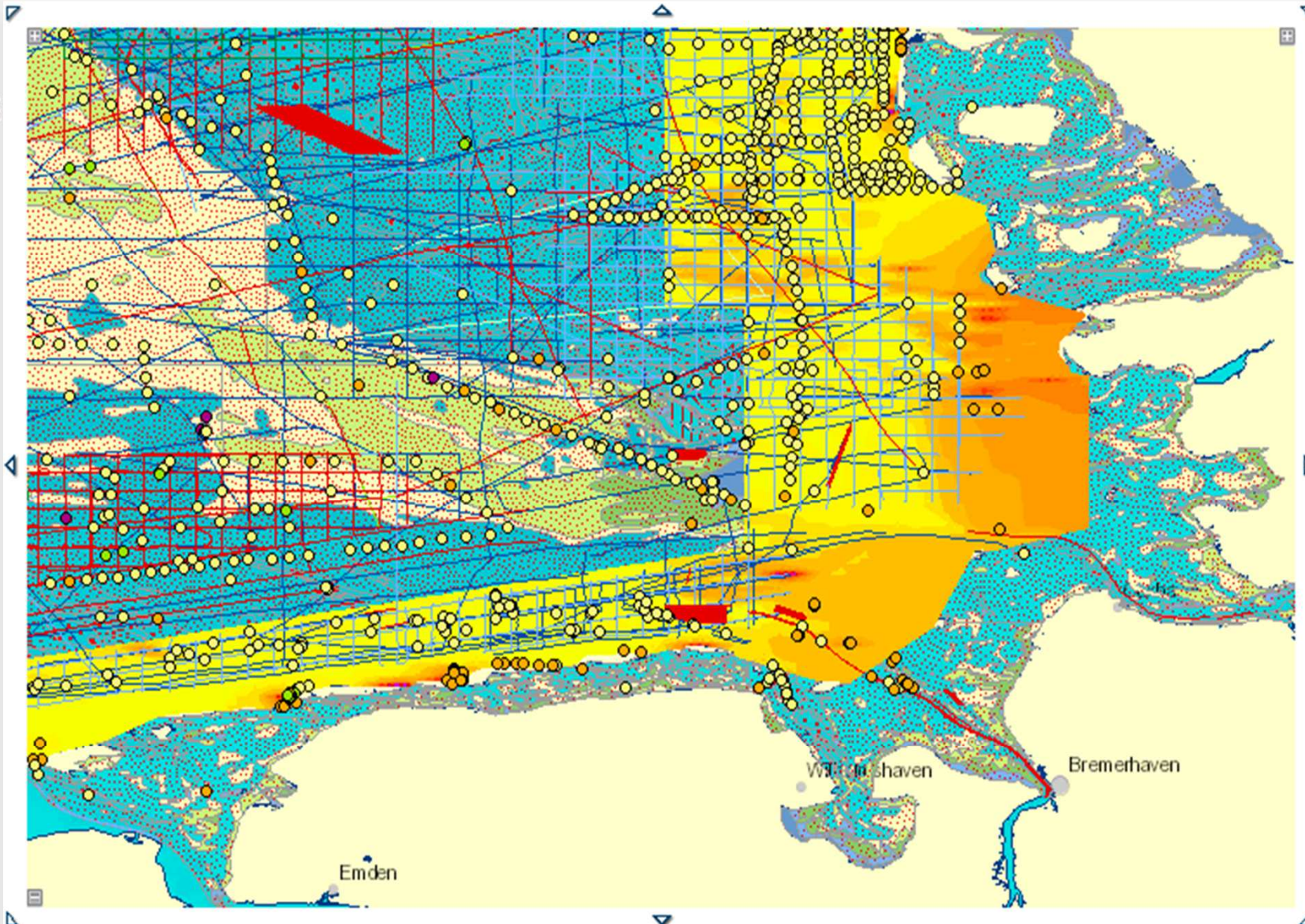
Single Beam Echosounding

Multi Beam Echosounding

Side Scan Sonar

Chirp Sonar

Boomer

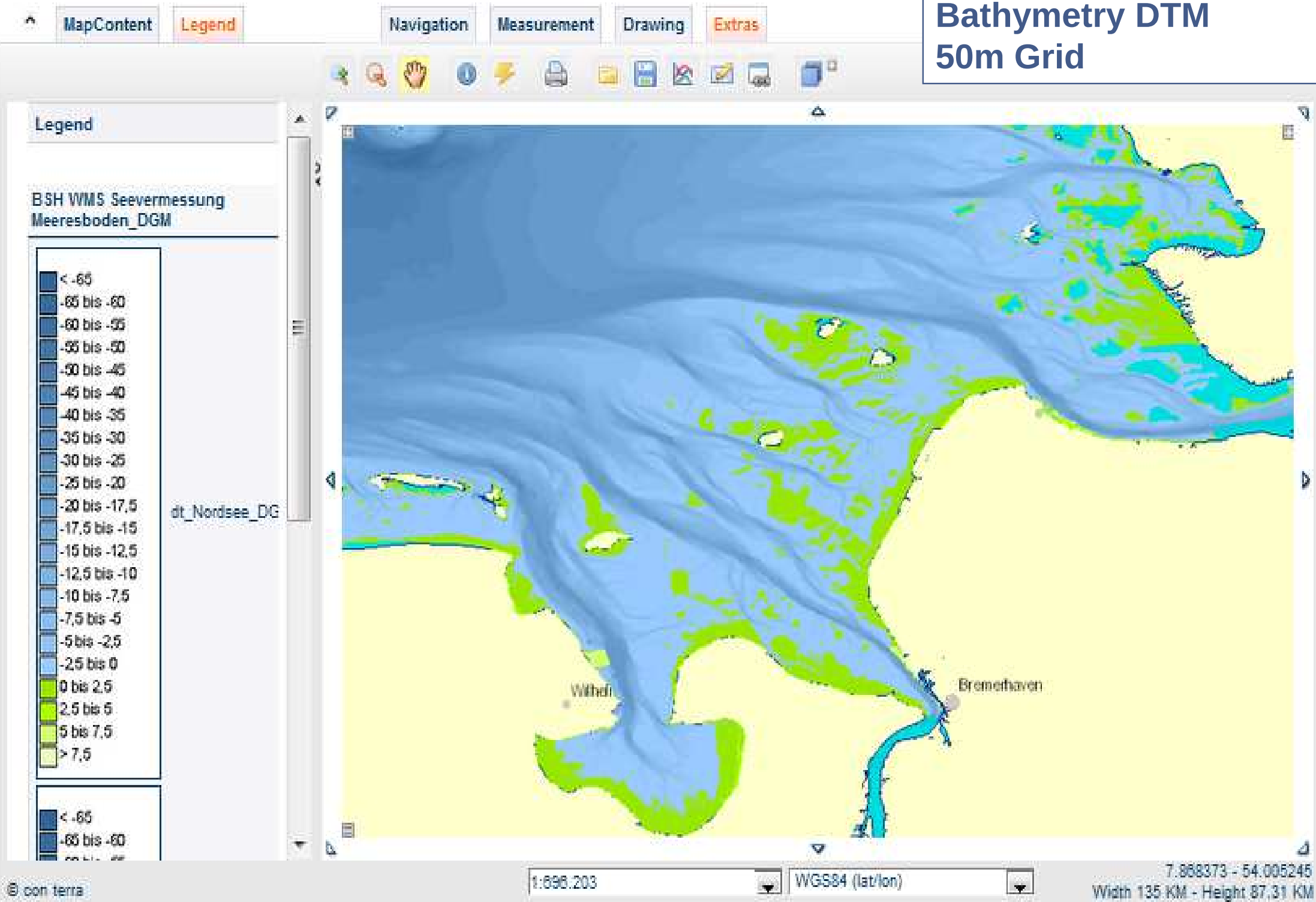


1:1.384.731

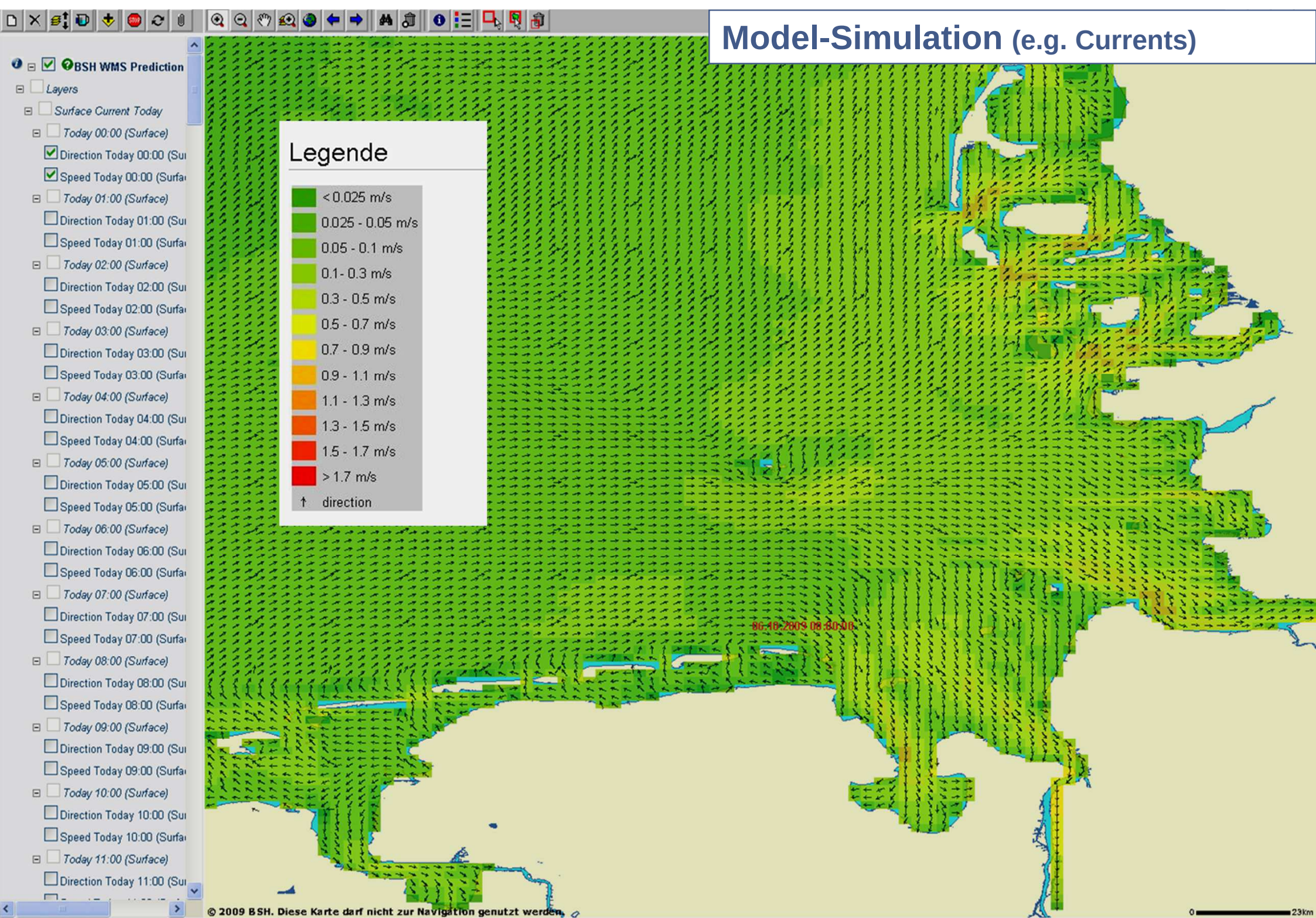
WGS84 in geografischen Koordina

7.576301 - 53.999682
 Breite 268 KM - Höhe 174 KM

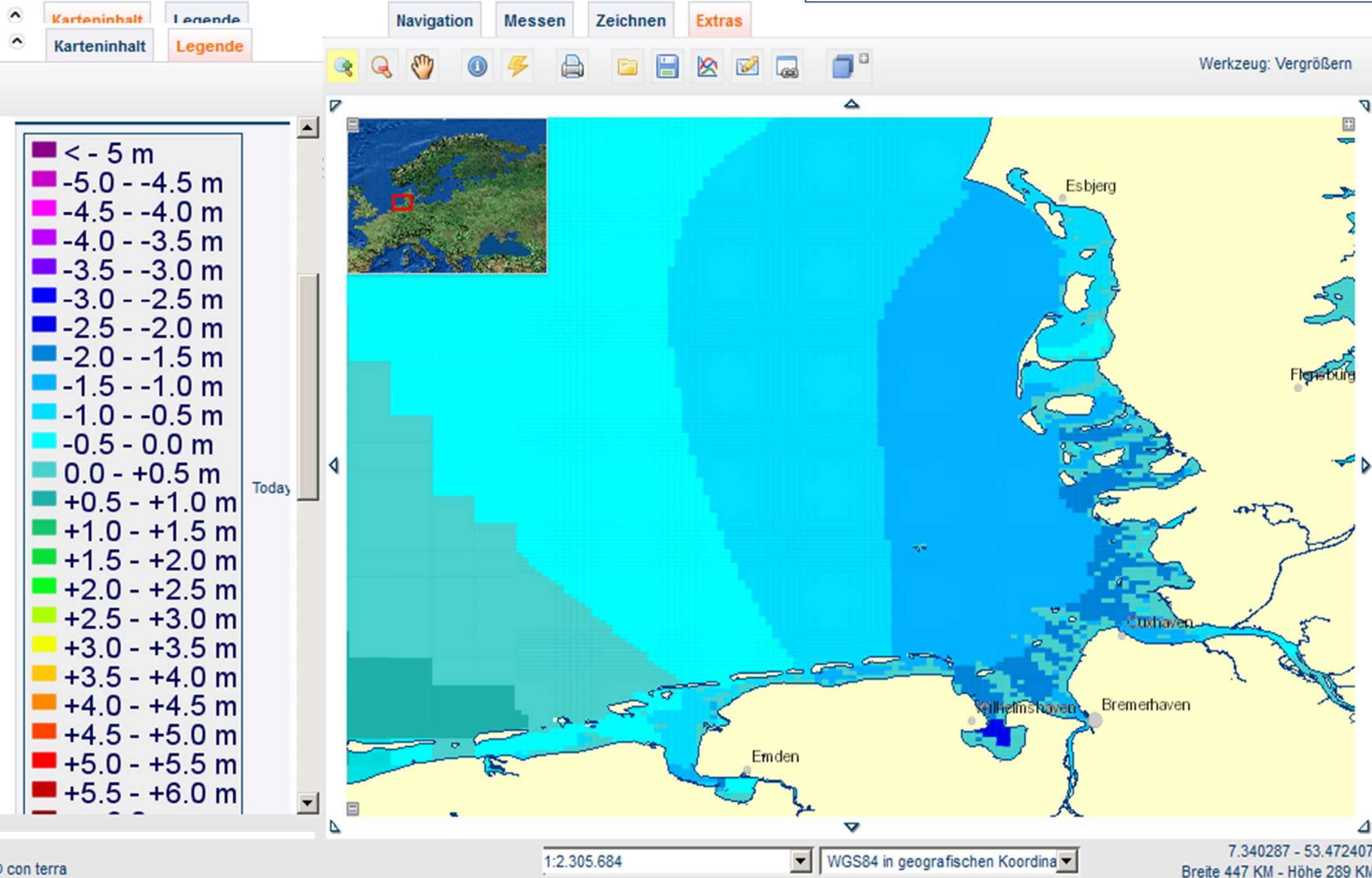
Bathymetry DTM 50m Grid



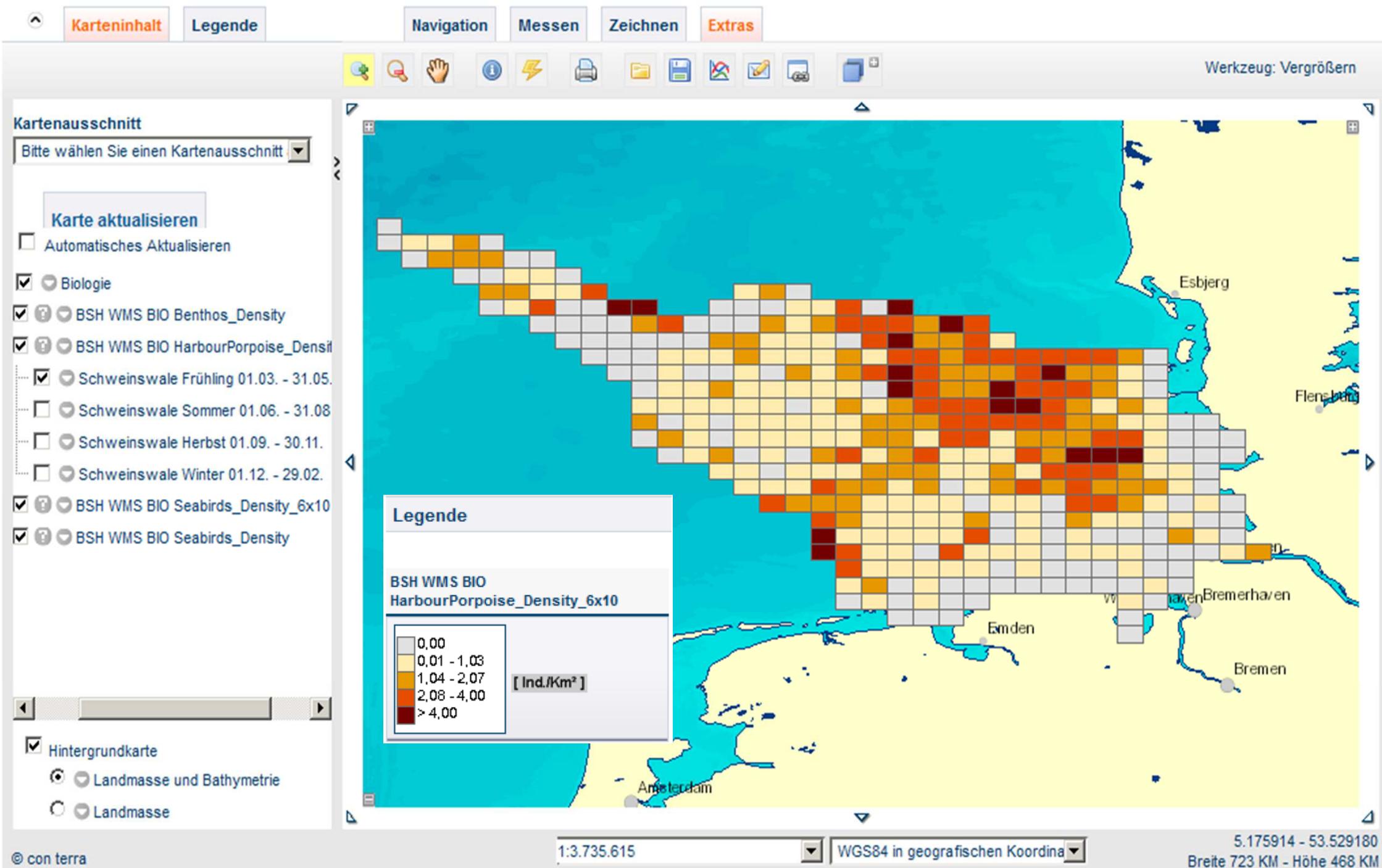
Model-Simulation (e.g. Currents)



Model-Simulation (e.g. Water Level Prediction)



Density of Harbour Porpoise



Wrecks and Obstructions

☐ ☒  BSH_IMS_NAUTHIS_Rocks_Wrecks_Obst

- ☐ ☒ Rocks Wrecks Obstructions

- ☒
- ☐
- Berthing

- ☒
- Harbour

- ☒ ☐ Approach

- ☐
- ☒
- Coastal

- ☒
- Rocks

- ☒
- Wrecks Depth known

- ☒
- Wrecks Depth unknown

- ☒
- Dangerous Wrecks Depth know

- ☒
- Dangerous Wrecks Depth unkn

- ☒ Wrecks other

- ☒
- Foul Ground

- ☒
- Obstruction

- ☒
- Wreck and Obstruction Area

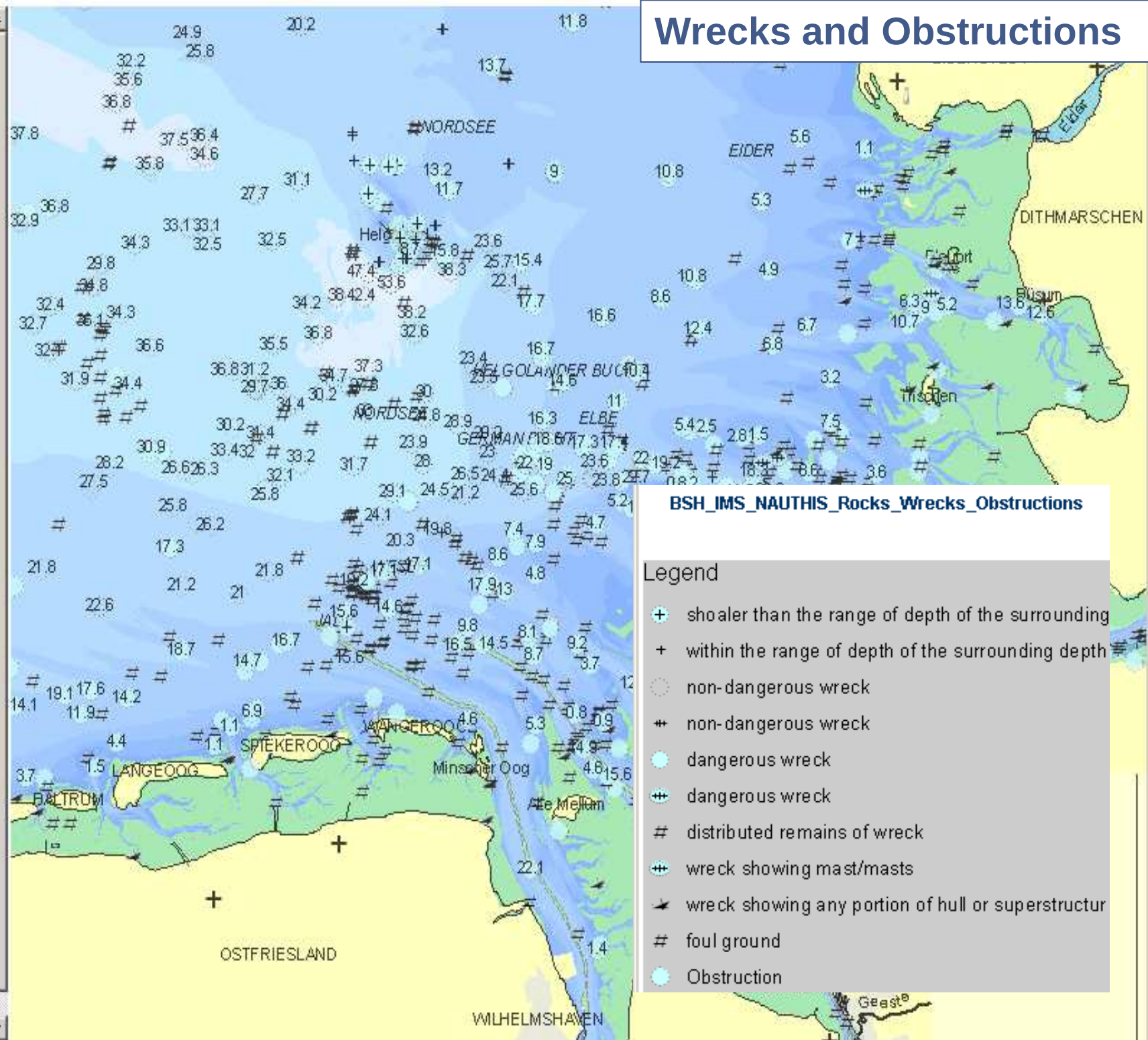
- ☐ ☒ General

- ☐ ☒ Overview

- ☐
- ☒
- 
- BSH_IMS_NAUTHIS_Topography

- ☐
- ☒
- 
- BSH_IMS_NATHIS_Skin_Of_Th

- + ☒ ? Background



BSH_IMS_NAUTHIS_Rocks_Wrecks_Obstructions

Legend

-  shoaler than the range of depth of the surrounding
-  within the range of depth of the surrounding depth
-  non-dangerous wreck
-  non-dangerous wreck
-  dangerous wreck
-  dangerous wreck
-  distributed remains of wreck
-  wreck showing mast/masts
-  wreck showing any portion of hull or superstructure
-  foul ground
-  Obstruction

tor (WGS 1984)) - Mozilla Firefox

-   **Background** 



Fertig

Summary

- Easy access to spatial data
- Data could be used interdisciplinary
- The processes of providing data to different systems could be simplified
- Data remains with its originators
- Minimal alteration to existing data structures
- Datasets could be provided for multiple uses





www.mdi-de.org

Thank you for your attention.

Questions?

johannes.melles@bsh.de, +49 40 3190 – 3420