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BUNDESAMT FÜR SEESCHIFFFAHRT UND HYDROGRAPHIE

Second expert meeting of the Working Group on Marine Geospatial Information Rostock-Warnemünde, Germany, 26 -28 February 2020

National report Germany

UN GGIM, Rostock-Warnemünde, Germany, 26 -28 February 2020

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Water related section of the federal ministry of transport and digital infrastructure

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Bundesministerium für Verkehr und digitale Infrastruktur

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bfg Bundesanstalt für Gewässerkunde

BAW Bundesanstalt für Wasserbau

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SUSTAINABLE DEVELOPMENT GOALS

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Open Data of the federal ministry of transport and digital infrastructure

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Quelle: pixabay/RavindraPanwar

Companies, public authorities and other organisations have a large data stock.

This can be the basis for data-driven innovations, e.g. for developments of assistance systems.

In the digital society, these innovations are a factor for economic growth and social well-being.

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Open Data

However, negative consequences such as a lack of data security must also be taken into account.

In order to generate a positive effect on society as a whole in the long term, intelligent networking of data and the development of its application potential are necessary.

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Open Data

With the mFUND research initiative, the Federal Ministry of Transport and Digital Infrastructure has been funding research and development projects relating to digital data-based applications for mobility 4.0 since 2016.

mFUND not only provides financial support, but also supports networking between players from politics, business and research with various event formats and access to the mCLOUD data portal.

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Open Data

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Via the open data portal mCLOUD the BMVI provides mobility, geo and weather data of its business unit.

In future, founders, start-ups and mobility providers will have a central point of contact with mCLOUD for fast, uncomplicated and free access to data from a wide range of areas related to mobility.

The mCLOUD is a growing system. It is open to data from science and industry and is continuously expanded by the BMVI.

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Open Data

mCLOUD

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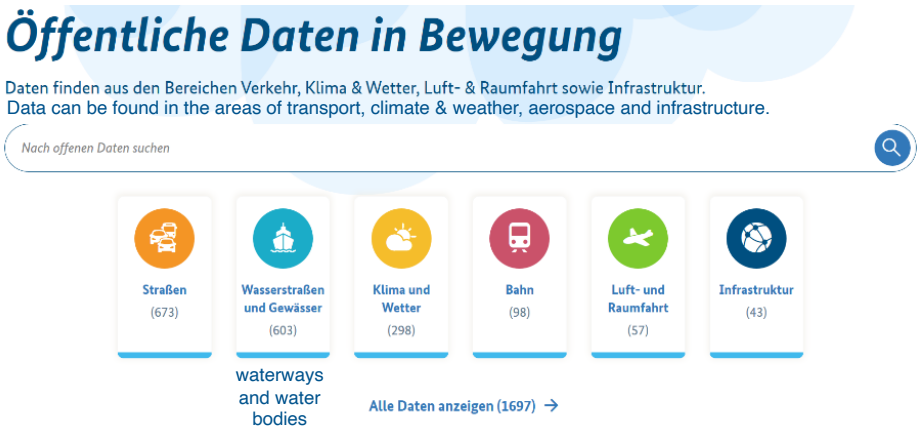
Public data in movement/motion



waterways and water bodies

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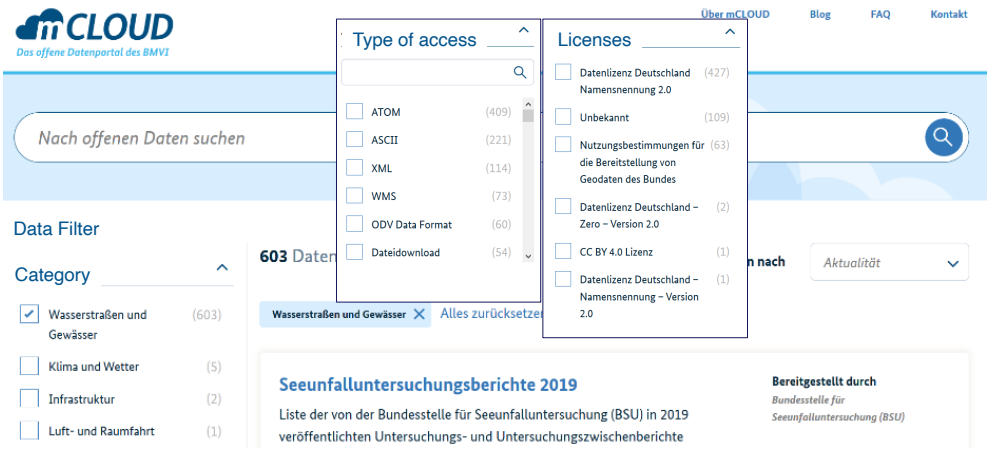
Open Data



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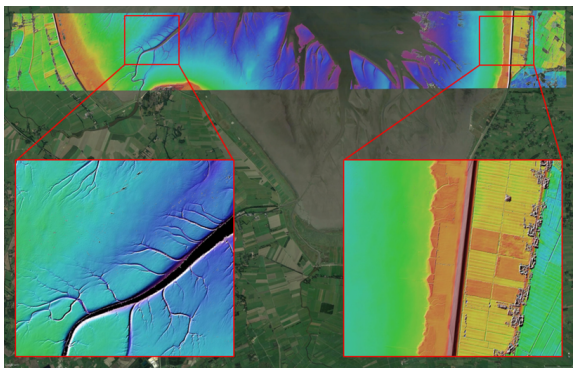
mFUND Project GeoWAM

New geodata to improve the water management of tidal coastal areas - GeoWAM



Large coastal areas of the German North Sea lie in the Wadden Sea and are exposed to the influence of tides and storm surges.

To ensure safe shipping, for coastal protection and other issues, up-to-date, high-resolution geodata of the waters are required.

This includes digital terrain, surface and difference models, digital image data, 3D water-land boundaries and 3D structural lines.

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The aim of GeoWAM

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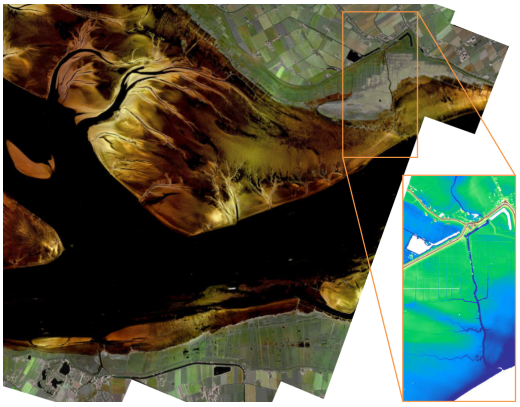
The aim of the GeoWAM project is to further develop airborne radar interferometry (InSAR) as a remote sensing method.

Also the image analysis procedures based on it in such a way that it can be used efficiently and effectively for flying over tidal coastal areas and for deriving application-related data products.

This should make data generation for the tasks of the state and federal authorities and private users (such as engineering offices) faster, of higher quality and independent of weather conditions.



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mFUND Project ImoNav

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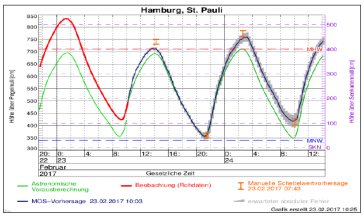
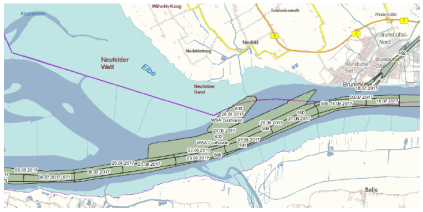
Project ImoNav

Integration of high resolution marine geodata in electronic Navigation systems

- New data service for narrow and congested waterways
- Combination of the bathymetry with the actual water level or water level forecasting (S-102 + S-104 + S-111)
- Development of suitable communication procedures for the reliable data transition





Bundesministerium für Verkehr und digitale Infrastruktur

mFUND Das Startkapital für die Mobilität 4.0

smile: consult

7Cs SevenCs

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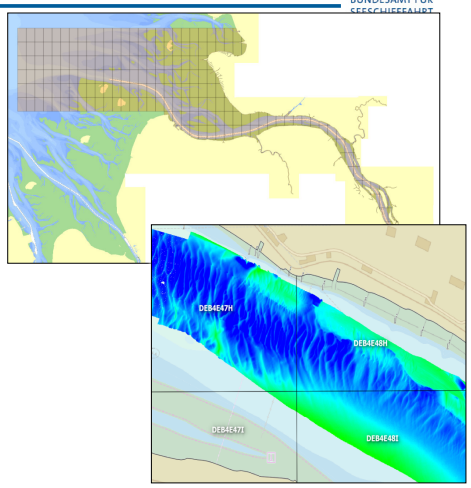
Work package: Hydrographic data

- Tiles 2‘ x 2‘ (2,2km x 3,7km)
- Projection : ETRS89 / UTM Zone 32N
- Automation of DGM calculation and export
- IHO S-102 Format (BAG)
- FTP & THREDDS Data Server
- Goal: Processing of newly incoming surveys within 1-2 working days



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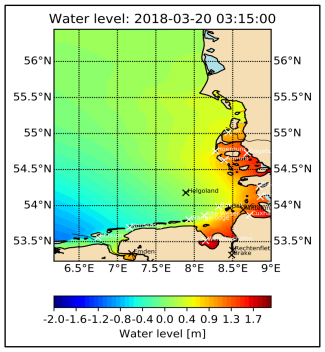
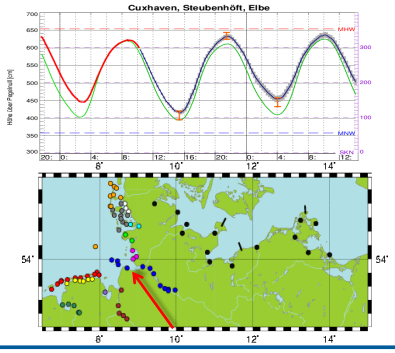
Work package: Oceanographic data

The BSH supplies two automated products for water level prediction

1. Numerisches Modell:
   Area-based results



2. MOS-Procedure (Model Output Statistics):
   The model results are
   Statistical follow-up (individual locations)



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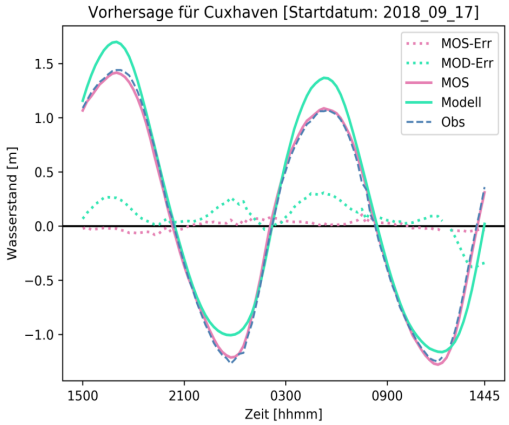
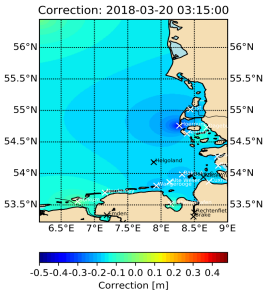
Work package: Oceanographic data

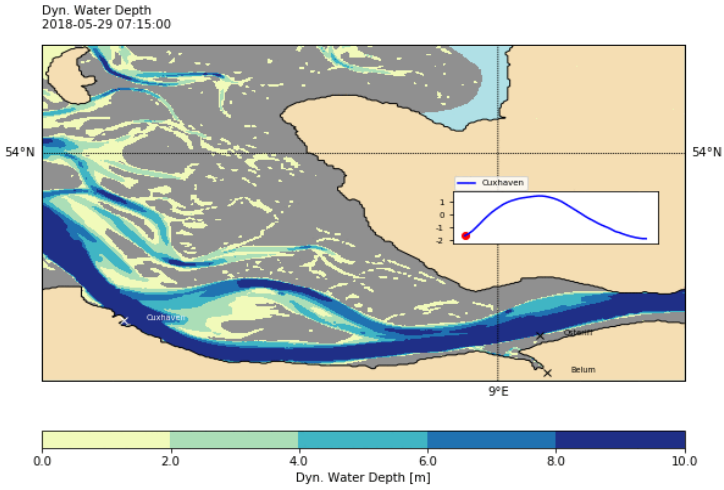
Methodology: Linking the numerical model with MOS



- A correction surface is generated from the difference between MOS and model by interpolation



Perspective: Dynamic water depth



accompanying research

- The aim of the project is to investigate how regulation and control systems can be designed in terms of data governance in innovation processes.
- Using an interdisciplinary approach, the challenges in the development of data-driven innovations will be investigated and evaluated.
- Within the framework of the research work, a consulting model for companies and other institutions will be developed. In this way, new data-driven applications can be optimally promoted.

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accompanying research

Checklist for better data quality

These 15 dimensions can help you to systematically assess data quality.

- Zugänglichkeit(accessibility)
- Bearbeitbarkeit(ease of manipulation)
- Glaubwürdigkeit(believability)
- Hohes Ansehen(reputation)
- Objektivität(objectivity)
- Fehlerfreiheit(free of error)
- Aktualität(timeliness)
- Wertschöpfung(value-added)
- Vollständigkeit(completeness)
- Angemessener Umfang(appropriate amount of data)
- Relevanz(relevancy)
- Übersichtlichkeit(concise representation)
- Einheitliche Darstellung(consistent representation)
- Verständlichkeit(understandability)
- Eindeutige Auslegbarkeit(interpretability)

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Accompanying research project "Data governance in the innovation process”

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iRights.Lab

In a sprint of ideas, we want to examine questions of "good" data governance. Everyone interested in data-driven innovation projects is invited.

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Thank you!

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