

Outlook Paper Port of Cuxhaven

Management Summary



Our Ports. Your Future.

Commissioned by

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Abbreviations

- BVWP – Federal Transport Infrastructure Roadmap
- Fzg – Vehicle(s)
- ISPS – International Ship and Port Facility Security
- NPorts – Niedersachsen Ports
- OECD – Organization for Economic Cooperation and Development
- WTGS – Wind Turbine Generator Systems

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Contents

Introduction 5

Cargo Handling 6

Forecast 6

Results 7

Plan Areas 8

Visions for Select Development Areas 10

 Overview 10

 Tourisms..... 11

 Cargo Handling - Port/Offshore..... 12

 Cargo Handling/Shipyards and Marine Equipments
 as well as the food Industry 13

 Transport Links and ISPS 14

Conclusion 14

Sustainability 15



Introduction

Ideally situated at the mouth of the river Elbe near the access to the Kiel Canal, the port location of Cuxhaven offers optimal conditions both, for the handling of international ship traffic, as well as for barge traffic into the German and European port hinterland. Cuxhaven has established itself particularly as an important interface for the export of motor vehicles and for the import of bulk goods. In light of this development, the transshipment volume at this site could be increased by more than half to 2.7 million metric tons. In the recent past, two special contributing factors were the successful establishment and settlement of companies in the wind energy sector on site, and the international marketing of the site as a German offshore industry hub.

At the same time, Cuxhaven has retained its traditional foothold in the fishing industry and is currently one of the most important German centers of the fish processing industry with services along the entire value chain.

With the outlook paper for the Port of Cuxhaven, Niedersachsen Ports is pursuing the goal to validate the successful development of the port location and to sustainably promote such continued success through appropriate measures. We are plotting developmental paths and are deriving adequate recommendations for action, while keeping any framework requirements in mind.



Cargo Handling

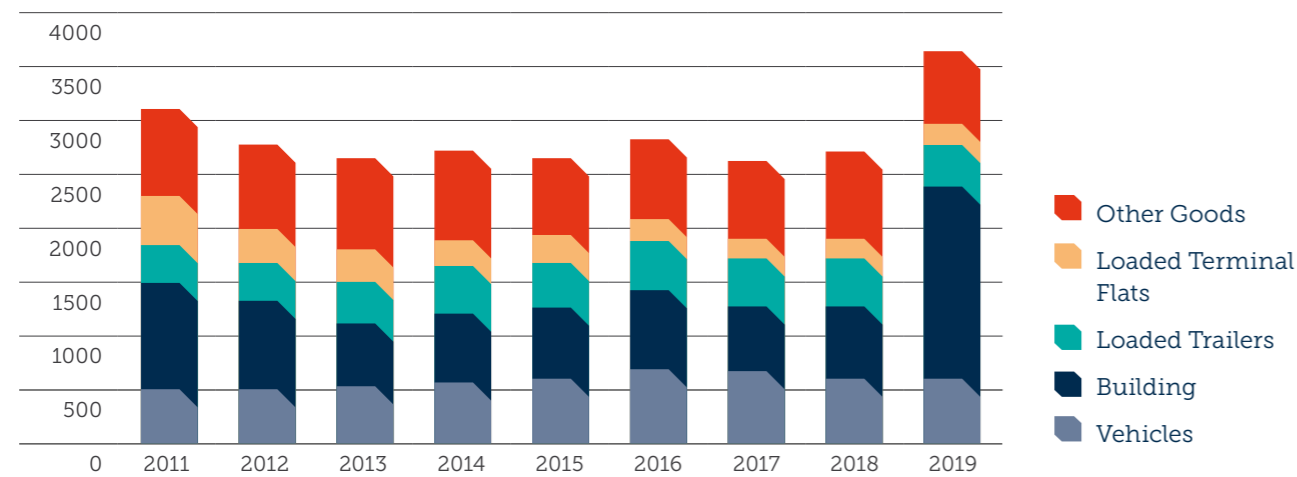
The annual volume of goods transhipped at the site Cuxhaven is somewhere between 2.5 and 3.7 million metric tons.

Caused by spikes within the past ten years, and particularly in the building materials segment, even higher values have been achieved. The export side of this port location is dominated by the handling of motor

vehicles and trailers. The import side on the other hand is dominated by the handling of dry bulk (such as building materials) and the handling of Wind Turbine Generator Systems (WTGS).

Cuxhaven is of particular importance as a base port for offshore transports and as a starting point for the traffic to the Island of Helgoland.

Sea Freight Handling in Thousand Metric Tons



Forecast

Based on the:

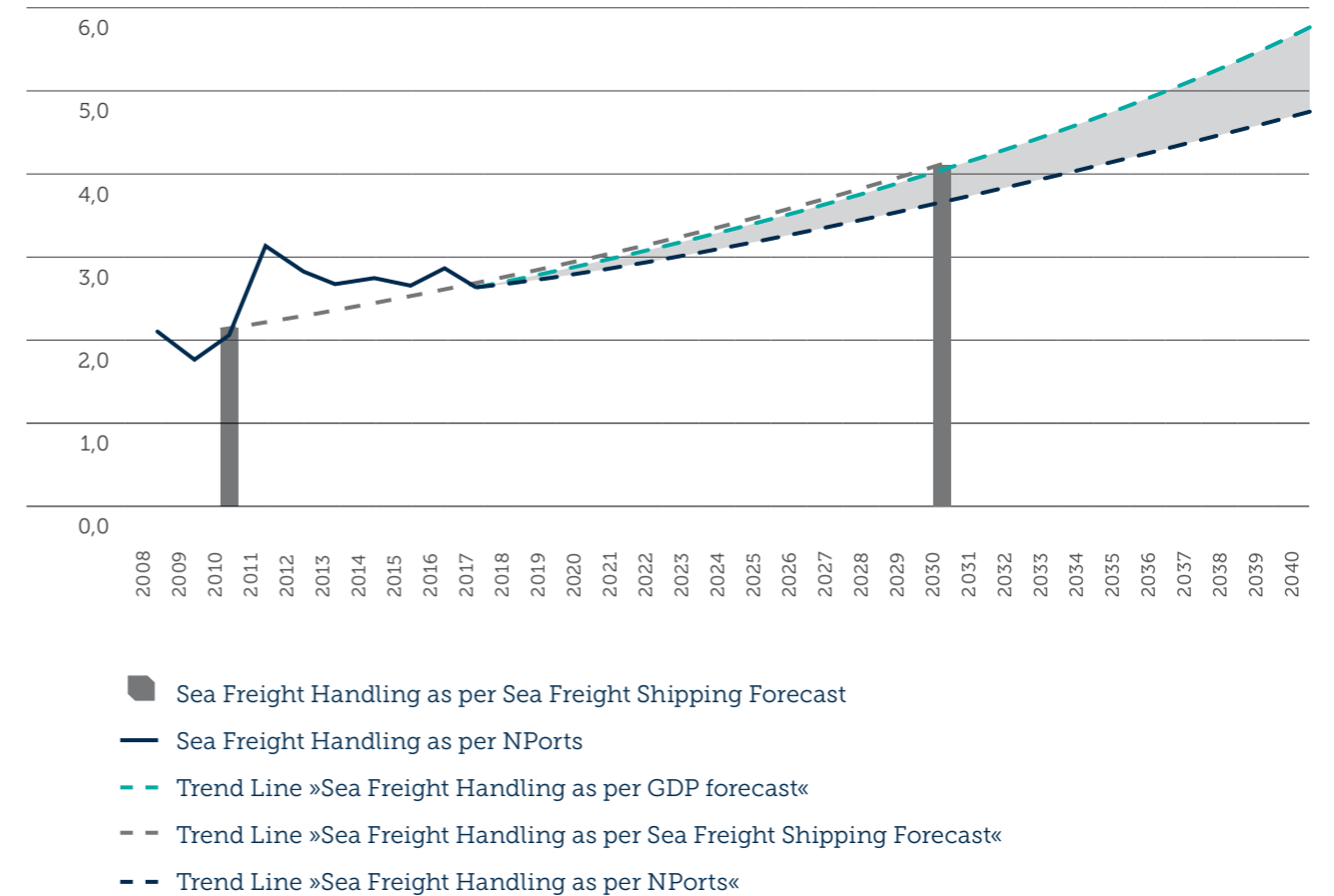
- › Maritime forecast in the Federal Transport Infrastructure Roadmap (BVWP) 2030
- › Development of gross domestic product (OECD)

- › Analysis of the cargo handling statistics (trend projection)
- › Results from the survey of the economic participant in the port industry

Results

- › The cargo handling development for 2040 is expected to be in a bandwidth between 4,69 million and 5,69 million metric tons
- › Vehicles, trailers, wind turbines, and building materials have the strongest growth potential

Sea Freight Handling in Million Tons



The successful development of the port location Cuxhaven in the past paints a positive picture for the cargo development potential in the future. It is expected that the dynamic growth of cargo handling will be slightly less than what was postulated in the BVWP.

Until 2040 however, an increase in the transshipment volume in a bandwidth between 4.7 and 5.6 million metric tons can be derived. This development may in particular be influenced by the transshipment of trailers, vehicles, WTGS components, and bulk cargo.

Plan Areas

Based on the entire port area of Cuxhaven, five plan areas (tourism, cargo handling at the port, shipyards & marine equipment, food industry, and offshore) were defined with various functions. Each of these plan areas may have one or more port sections

assigned to it, which in turn, can be subdivided into port or quay facilities with their assignable terminal areas. In this context, both gathered as well as processed, explicit location characteristics and implicit insights, gained through conversations within the

port business community in the City of Cuxhaven and the Chamber of Industry and Commerce, are taken into consideration.

23 participants for port-related businesses were available through written or oral contributions.

Legend

- Plan Area 1 – Tourism
- Plan Area 2 – Cargo Handling at the Port
- Plan Area 3 – Shipyards + Marine Equipment
- Plan Area 4 – Food Industry
- Plan Area 5 – Offshore



Visions for Select Development Areas

The following five guidelines delineate a sustainably successful port development.

1 Demand-oriented development of the supply structure of the port

- 2 Internal streamlining before external expansion
- 3 Consolidation/clustering of functions
- 4 At least an equivalent replacement in the event of relocation
- 5 Strategic securing of the port location

1.1 Plan Area Tourism

Port Section Steubenhöft/Amerikhafen (America Port)



1.2 Plan Area Tourism

Port Section Seebäderbrücke (Gateway to the beach resorts)/Seglerhafen (Marina)



| Plan Area | Port Section | Importance |
|--|--|---|
| 1. Tourism | 1.1 Steubenhöft/Amerikhafen | <ul style="list-style-type: none"> › Multi-functional surface area expansion for the re-activation of the Amerikhafen › Investment in new business fields › Securing existing commercial settlements › Strengthening the tourism location Cuxhaven |
| | 1.2 Seebäderbrücke/Seglerhafen | <ul style="list-style-type: none"> › Strengthening the cargo handling at the Amerikhafen › Investment in new business fields › Strengthening the tourism location Cuxhaven › Re-activation and upgrading of the ferry port Extension of the Norwegerpier (Norwegian Pier) › Resolving the situation at the »Alte Liebe« › Expansion of the offer of berths for passenger ships |
| 2. Port Handling | 2.1 Steubenhöft/Amerikhafen | <ul style="list-style-type: none"> › Multi-functional surface area expansion for the re-activation of the Amerikhafen › Securing existing settlements › Strengthening the long-term growth in the automotive sector |
| | 2.2 Berths 5, 6 und 7 | <ul style="list-style-type: none"> › Multi-functional surface area expansion › Securing existing commercial settlements › Strengthening and expansion of the growth area |
| | 2.3 Bulk Terminal and cold storage capacities at the head section of the Fischereihafen (Fishing Port) | <ul style="list-style-type: none"> › Long-term protection of structures in the area of dry bulk handling › Future investments for the preservation and demand-driven expansion of the cold storage capacities at the quay's edge › Providing additional surface areas for cargo handling |
| 3. Shipyards and marine equipment as well as food industry | 3.1 Niedersachsenkai (Niedersachsen Quay) and Imperatorufer (Emperor's Banks) | <ul style="list-style-type: none"> › Securing the location Neuer Fischereihafen on a long-term basis › Preservation and strengthening of the site for the fisheries and fish industry › Demand-driven restoration of warehouse capacities › Strengthening the shipyard site and securing sufficient dock capacities |
| | 3.2 Neuer Fischereihafen (New Fishing Port) with sea lock | <ul style="list-style-type: none"> › Langfristige Sicherung des Standortes Neuer Fischereihafen › Erhalt und Stärkung des Standortes für die Fischerei und Fischindustrie › Erhalt der Schleuse durch vorausschauende Sanierung |
| 4. Offshore | 4.1 Berths 5, 6 und 7 | <ul style="list-style-type: none"> › Multi-functional surface area expansion › Securing existing settlements › Strengthening and expansion of the growth area |

Select Visions for the Development

2.1 Plan Area Port Handling

Port Section Steubenhöft/Amerikhafen (America Port)



2.2 + 4. Plan Area Port Handling and Offshore

Port Area Berths 5, 6, and 7



2.3 Plan Area Port Handling

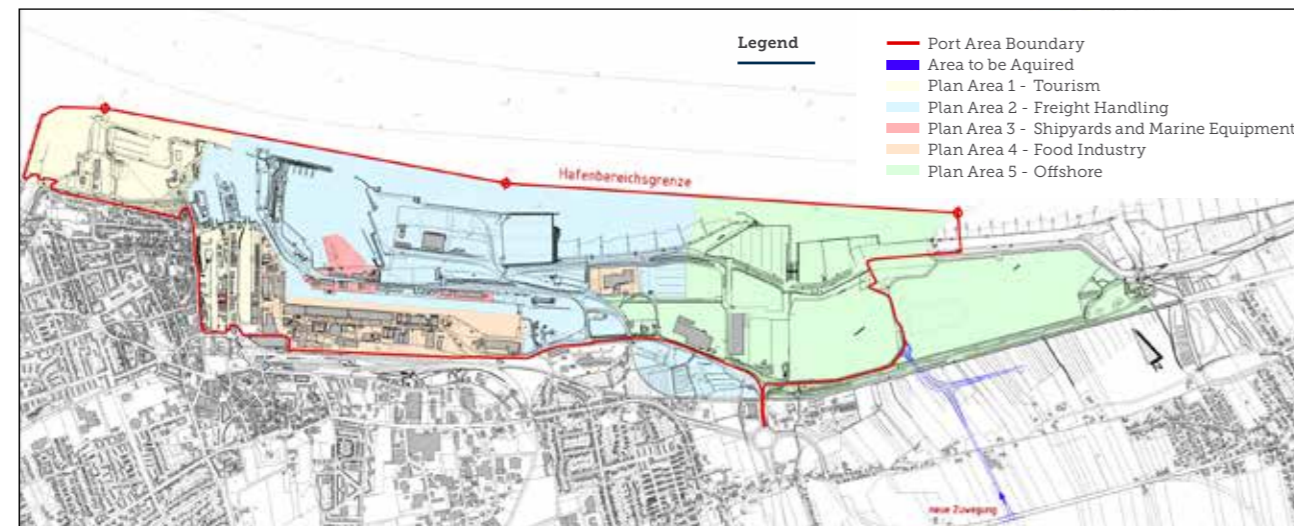
Port Area Neuer Fischereihafen



3. Plan Area Shipyards & Marine Equipment and Food Industry



Transport Links and ISPS



ISPS Measures

- › Reduction of the number of small ISPS areas
- › Creation of contiguous areas
- › Centralized gate functions

Measures Transport Links

- › Risk minimization through expansion of the access road via the traffic circle
- › Support for a new connection to Federal Highway B73 (implemented by the City of Cuxhaven)

Conclusion

Cuxhaven is

- › An important interface for the export of vehicles and the import of bulk cargo, for instance.
- › The hub for the offshore wind energy sector,
- › One of the most important German centers of fish processing industry with services along the entire value-added chain.

Cuxhaven offers

- › Optimal conditions both for the handling of international ship traffic and for inland waterway transports to the German and European port hinterland,
- › Extensive space expansion and settlement options

Cuxhaven expects

- › A positive cargo handling development,
- › An increased value creation from cargo handling of trailers, vehicles, and WTGS components.

Cuxhaven achieves its goals by

- › The optimal design of the port hinterland infrastructures,
- › Maintaining and further developing the complex value chain in the fish processing industry,

- › Continuously developing the entire port in a way that meets the needs of the entire port,
- › Utilizing the given expansion potential on the sea ship navigable waters,
- › Internally expanding by filling parts of the Amerikahafen and creating logistics space with rail sidings,
- › Internally streamlining or relocating utilizations and through the formation of clusters,
- › Concentrating tourism functions and expanding the offers for passenger shipping or leisure tours,
- › Reducing the twelve ISPS zones through creation of aggregated areas,
- › Sustainably strengthening the tourism in the region by integrating a cruise ship terminal, and
- › Preserving the sea lock as the infrastructural prerequisite for the local uses and for value-added emphases

Sustainability

Acting sustainably and the commitment to further develop environmental standards within the port operation are things that are implemented by NPorts even today; any activities within this context are consolidated under the hafen+ brand and comprise any economic, social, and environmental measures that lead to the goal of a sustainable port management.

Sustainable action in the port industry generally requires the following measures or requisites:

Construction

- › Implementation of an energy efficient construction method
 - › Use of sustainable building materials
 - › Resource-conserving use of building materials
- › Consideration of transport distance and the choice of means of transport in the evaluation of tenders for construction material deliveries (e.g. asphalt delivery)

Operation

- › Continued granting of discounts for environmentally friendly ships that fulfill high environmental standards
- › Electronic traffic guidance systems: Streamlining of transport processes, reduction of waiting times at the gates (reduction of pollutant and noise emissions)
- › Record keeping and proper disposal of ship-generated wastes
- › Use of low-emission handling equipment: Use of electric motors, encapsulation of the motors for soundproofing
- › Avoidance of emissions (air pollutants) of cruise ships through the supply of shore supplied electricity or LNG
- › Use of renewable energies (photovoltaics, wind energy) for the supply of port areas
- › Use of LED technology for lighting

- › Use of environmentally friendly vehicles such as natural gas or electric vehicles
- › Thermal insulation of buildings
- › Process-driven optimization of the duration of the devices under electric power (e.g. in the conveyor technology)
- › Recycling of process water
- › Work processes within the office building (as indicated)
 - › Utilization of electric devices with low power consumption
 - › Waste separation
 - › Use of recycled paper

During the assessment of developmental variants, we are identifying primarily those measures from the list above that are best suited to aid in the minimization of environmental pollution within the port areas.

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**Niedersachsen
Ports**

