

ENVIRONMENTAL REPORT 2015

Ports of Bremen/Bremerhaven



PUBLISHED BY

The Senator for
Economic Affairs,
Labour and Ports



Free
Hanseatic City
of Bremen

bremenports

Bremen  Bremerhaven  GmbH & Co. KG



CONTACT INFORMATION

**The Senator for
Economic Affairs, Labour and Ports**
Zweite Schlachtpforte 3
28195 Bremen

Phone: +49 (0)421 361-8808 (Auskunft)
eMail: office@wah.bremen.de
www.wirtschaft.bremen.de

bremenports GmbH & Co. KG
Am Strom 2
27568 Bremerhaven

Phone +49 (0)471 309 01-0
eMail: marketing@bremenports.de
www.bremenports.de
www.greenports.de

Hansestadt Bremisches Hafenam
Steubenstr. 7a
D-27568 Bremerhaven

Phone: +49 (0)471 596-13401
eMail: office@hbh.bremen.de
www.hbh.bremen.de



CONTENTS

- 1. Introduction**
 - 2. The ports of Bremen and their activities**
 - 2.1 Own sphere
 - 2.2 Influence on other spheres
 - 2.3 Selected KPIs for the ports of Bremen
 - 3. Environmental policy statement of the Ministry of Economic Affairs, Labour and Ports**
 - 4. Environmental aspects and performance of the ports of Bremen**
 - 4.1 Significant environmental aspects
 - 4.2 Environmental performance indicators
 - 5. Brief description of environmental management structures**
 - 5.1 Ministry of Economic Affairs, Labour and Ports
 - 5.2 bremenports GmbH & Co. KG
 - 5.3 Harbour Master Office (HBH)
 - 5.4 Environmental responsibilities of key staff
 - 5.5 Resources allocated specifically to port environmental management
 - 6. Selected examples of best practice and planned activities**
 - 6.1 Environment-related port discount and the “greenports Award”
 - 6.2 From carbon-neutral ports management company to carbon-neutral port
 - 6.3 Achievements and planned activities
 - 7. Picture credits**
 - 8. Contact information and publishers**
- Appendix**
- Annex A: Register of significant environmental aspects



Environmental Report

CHAPTER 1



1 INTRODUCTION

This Environmental Report is intended to inform anyone interested about the environmental implications of the ports of Bremen in Bremen and Bremerhaven and provides information on the implemented environmental management that aims to avoid, reduce or compensate detrimental effects. The ports of Bremen/Bremerhaven were certified as the first German ports in 2011 based on the so-called PERS¹ standard of the Ecoport Network². This Environmental Report also constitutes part of the second recertification under the auspices of the Ministry for Economic Affairs, Labour and Ports, which has been applied in July 2016. This documents again the successful environmental management which has been practised in the ports of Bremen for several years now.³ PERS is an environmental management system developed specially for the demands in ports. Environmental management systems for example refer to voluntary instruments of preventive environmental protection for systematic registration and prevention of the environmental implications of a port. Accordingly, the report primarily addresses the demands that the certification process makes in terms of contents; it should be updated every two years and be available in the public domain.

While in the past reporting in this context tended to refer to projects (such as expansion of the container terminal), since 2006 the annual business reports of bremenports GmbH & Co. KG have been devoting several pages in particular to specific environmental issues, thus underlining the great significance attributed by the management to these aspects. Finally, in September 2009 bremenports GmbH & Co. KG launched the



initiative⁴. This essentially consists of the first comprehensive national look at environmental protection in the ports of Bremen.⁵ On the other hand, it also contains the clear avowal of the management and the Ministry for Economic Affairs, Labour and Ports to a sustainable approach (in economical, ecological and social terms) in the ports of Bremen. The exemplary fashion in which this is now being implemented at many points is featured in extensive descriptions. But with a view to the ports as a whole and their many players (companies and authorities), the intention is to ensure that these players are all extensively involved and to win them over to this initiative. The outlook of the abovementioned publication illustrates a number of activities whose implementation aims to bring about further progress "on the way to the green port".

¹ Port Environmental Review System

² This network has been part of the European Sea Ports Organisation (ESPO) since 01.01.2011.

³ The Environmental Reports 2010 & 2013 can be found at

<http://www.bremenports.de/en/greenports/shaping-the-future/pers-sets-high-standards>

⁴ cf. <http://www.i2b.de/fileadmin/Media/i2b/pdf/greenports.pdf>

⁵ „greenports – Sustainable Management – Successful Performance”

<http://www.bremenports.de/en/company/our-skills/greenports>

In addition to protecting the logo shown above, a separate website⁶ has been set up and numerous presentations have been given in order to introduce the new mission to the (professional) public.

A first booklet⁷ on sustainability at bremenports GmbH & Co. KG was published in September 2011.

The progress of the greenports initiative was presented to the public deputation for environment, building, transport, urban affairs and energy on April 2013⁸, and on August 2013, to the Committee on Ports Affairs in the Federal State of Bremen. A particular highlight was the certification of sustainability of both the bremenports GmbH & Co. KG and the ports as special assets according to the standards of the Global Reporting Initiative (GRI) which is domiciled in Amsterdam. The application level check resulted in the reporting level "B+", in which the "+" was assigned for the external check by the auditor KPMG. The comprehensive and complex approval process was a milestone for the sustainability initiative greenports. Since then, bremenports has successfully been recertified twice; the last time in 2015⁹ for the reporting period 2014 according to the ambitious GRI G4 standard. All progress in the economical, ecological and social sustainability management is carried out and approved in accordance with an international standard which underlines the professionalism of the sustainability reporting concerning the two ports of Bremen. Additionally, in 2012 the green house gas emissions of bremenports and the special asset were calculated and revealed. It was intended to do so during the first PERS certification process.

With this reporting procedure, the aim is – also in the future – to illustrate the constant willingness of those responsible for the ports to work towards on-going improvements in the quality of the environment in and around the ports and to proceed with corresponding organisational improvements in their own sphere and in interaction with all players involved in the ports.

⁶ See: www.greenports.de

⁷ greenports, Sustainability in our policies and in practice: www.bremenports.de/en/company/media-centre/downloads

⁸ See: <http://www.bauumwelt.bremen.de/sixcms/media.php/13/Pr%20sentation+-+greenports+->.pdf

⁹ See: greenports - Sustainability Report 2014: <http://www.bremenports.de/en/company/our-skills/greenports>



Environmental Report
CHAPTER 2



2 THE PORTS OF BREMEN AND THEIR ACTIVITIES

Two cities, one centre of maritime excellence - as a location for port and logistics operations, Bremen/Bremerhaven has successfully positioned itself among Europe's leading centres of commerce and freight handling.



Fig. 1: The twin ports of Bremen/Bremerhaven in between the world ports

Rudolf Alexander Schröder, a German poet, once wrote "In Bremen, life and shipping are one and the same". This positive attitude to the maritime life, to shipping and world trade forms the bedrock for many courageous decisions and for billions of euros in port infrastructure investment. As a result, the ports of Bremen have grown to become one of Europe's leading hubs for freight transport. The port and logistics industry is a lynchpin of the economy in Germany's smallest state - Bremen. About 74,000 jobs depend directly and indirectly on the port and logistics¹⁰, thus every fifth job in Bremen¹¹. Further details are provided in the study "Beschäftigungseffekte der Bremischen Häfen" (Effects on Employment of the Ports of Bremen, Summary 2011)¹², created by the Institute of Shipping Economics and Logistics.

¹⁰ cf. study "Effects on Employment of the Ports of Bremen, Summary 2011" of the ISL: <http://www.bremenports.de/unternehmen/unsere-aufgaben/hafenentwicklung>

¹¹ cf. Ports Handbook 2013/2014, p. 64

¹² cf. <http://www.bremenports.de/unternehmen/unsere-aufgaben/hafenentwicklung>



Fig. 2: Geographical location of the twin ports of Bremen/Bremerhaven in between the main European ports

A key feature of the twin ports is their function as universal ports with swift, professional handling of containers, automobiles, project cargo and general/ bulk cargo of all kinds. Their success derives from a distinctive division of labour - whereas Bremerhaven, only 32 nautical miles from the open sea, specialises in handling container ships, car carriers, specialized ships for the offshore wind industry and fruit reefer ships, the terminals in Bremen, 60 kilometres further to the south, concentrate mainly on general and heavy-lift cargo and on handling bulk commodities. In recent years, the Hanseatic City of Bremen has also become a kind of back office for the container terminal in Bremerhaven - a powerful and efficient network of logistics service providers has been established in Bremen that offers comprehensive value-added services in all aspects of container logistics.

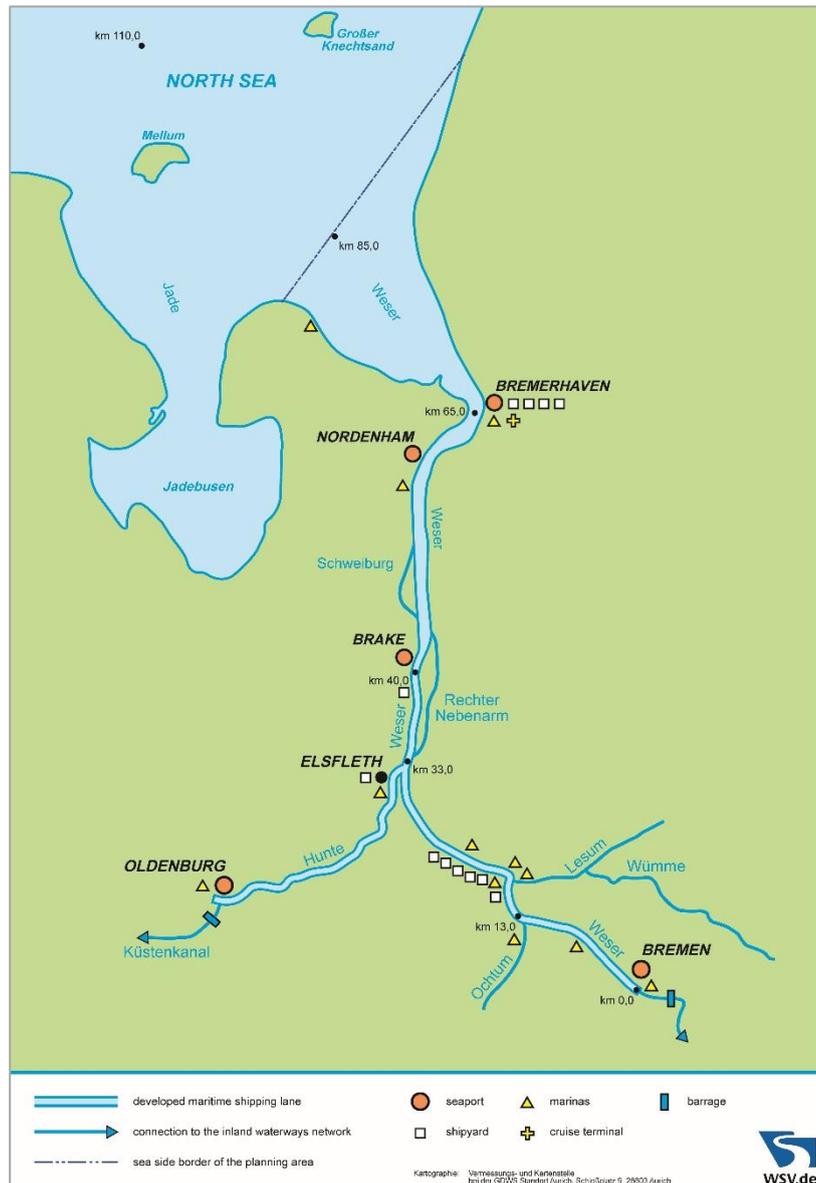


Fig. 3: The twin ports of Bremen/Bremerhaven in the Weser estuary

Since the onset of the global economic crisis, the ports of Bremen have continued to make their mark with strong performance. Despite significant deterioration of the global economy, they managed to achieve a new record in 2012. The total volume of cargo throughput increased to 84 million tons, a plus of 4.2 percent compared to 2011. Since then, the figures slightly declined again. In 2014¹³, the total turnover was 78.2 million tons.

In 2014, container handling in Bremerhaven was again one of the most important factors. The number of boxes handled was 5.8 million TEUs.

The volume of labour-intensive, non-containerized general cargo increased in 2014 to 8.9 million tons. That corresponds to 6 percent growth by comparison with 2012.

¹³ See: <http://www.bremenports.de/en/location/statistics/port-facts-and-figures>

The volume of automobiles handled in 2014 reached 2.3 million which is the highest value until then. Thus, Bremerhaven maintained the leading position in handling of automobiles in Europe. Bulk cargo handling, 90 percent of which is carried out in Bremen, recorded a total throughput of 9.4 million tons.

2.1 Own sphere

In the framework of this certification of environmental management, it is first necessary to describe the sphere of the public port authority. For the Free Hanseatic City of Bremen, the Ministry for Economic Affairs, Labour and Ports uses the operative organisations of bremenports GmbH & Co. KG and the Harbour Master Office (HBH) (cf. Fig. 4).



Fig. 4: Role allocation in the twin ports of Bremen/Bremerhaven

While the Ministry for Economic Affairs, Labour and Ports performs the ministerial tasks (including port policy and political strategies), which also include responsibility for the ports as special assets, covering the whole area of the ports, bremenports GmbH & Co. KG as a wholly owned subsidiary of the Free Hanseatic City of Bremen manages these assets for the Ministry. bremenports also manages the so-called port infrastructure. Furthermore, bremenports is responsible for the development, planning, expansion and maintenance of the ports and for marketing the twin ports.

Port authority functions are performed by the Harbour Master Office (HBH), including the tasks of the port captain, port safety and averting any danger, together with the shipping office. The actual public law permits for usage are issued by other municipal and state authorities (with the exception of the port authority).

The port areas (ports as special assets) refer to both sites in Bremen (cf. Fig. 5) and Bremerhaven (cf. Fig. 6) and also include a large number of compensation sites caused and managed by the port. The following illustrations also show the surroundings of the ports, i.e. the protected zones, the ports location within the cities or on the river/estuary, together with the state borders of the city state of Bremen.

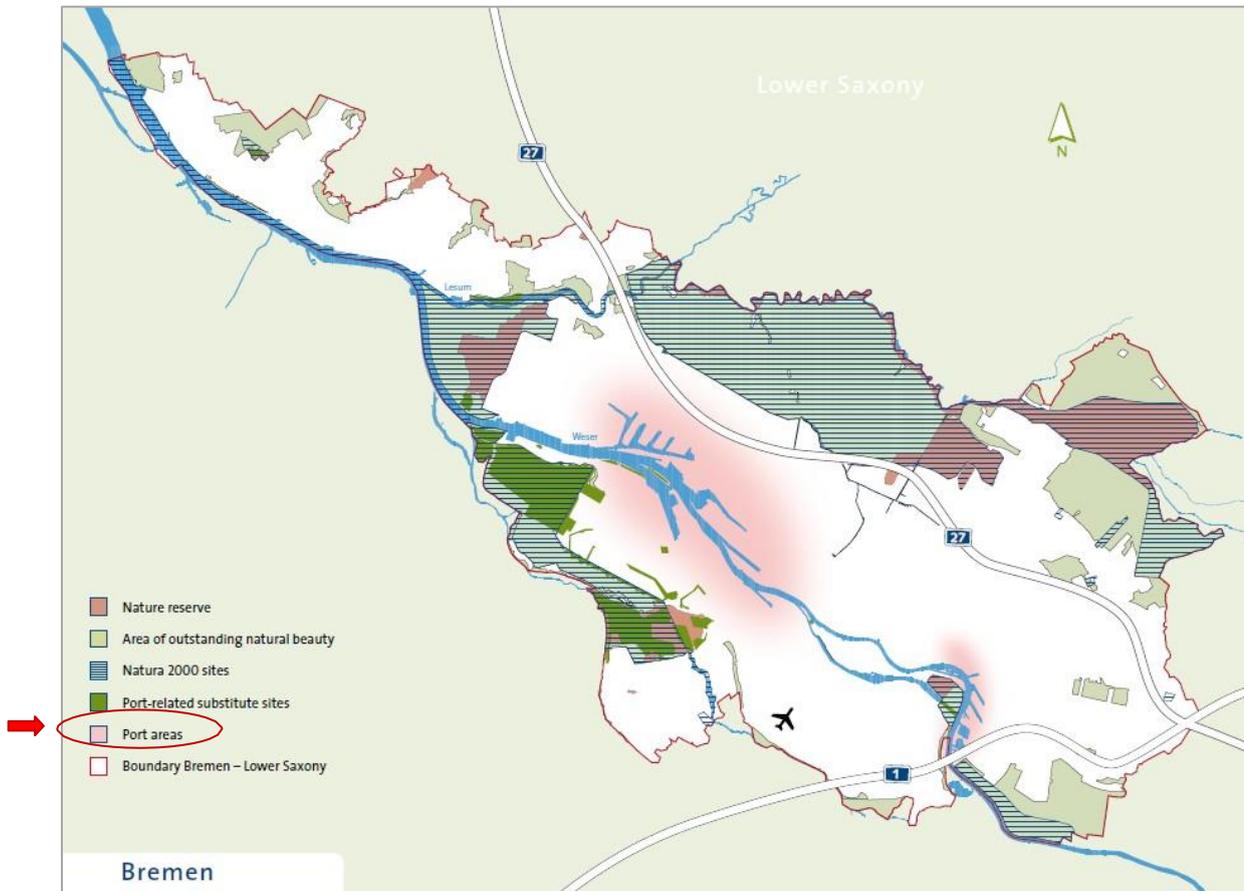


Fig. 5: Port areas and port related compensation sites in the City of Bremen

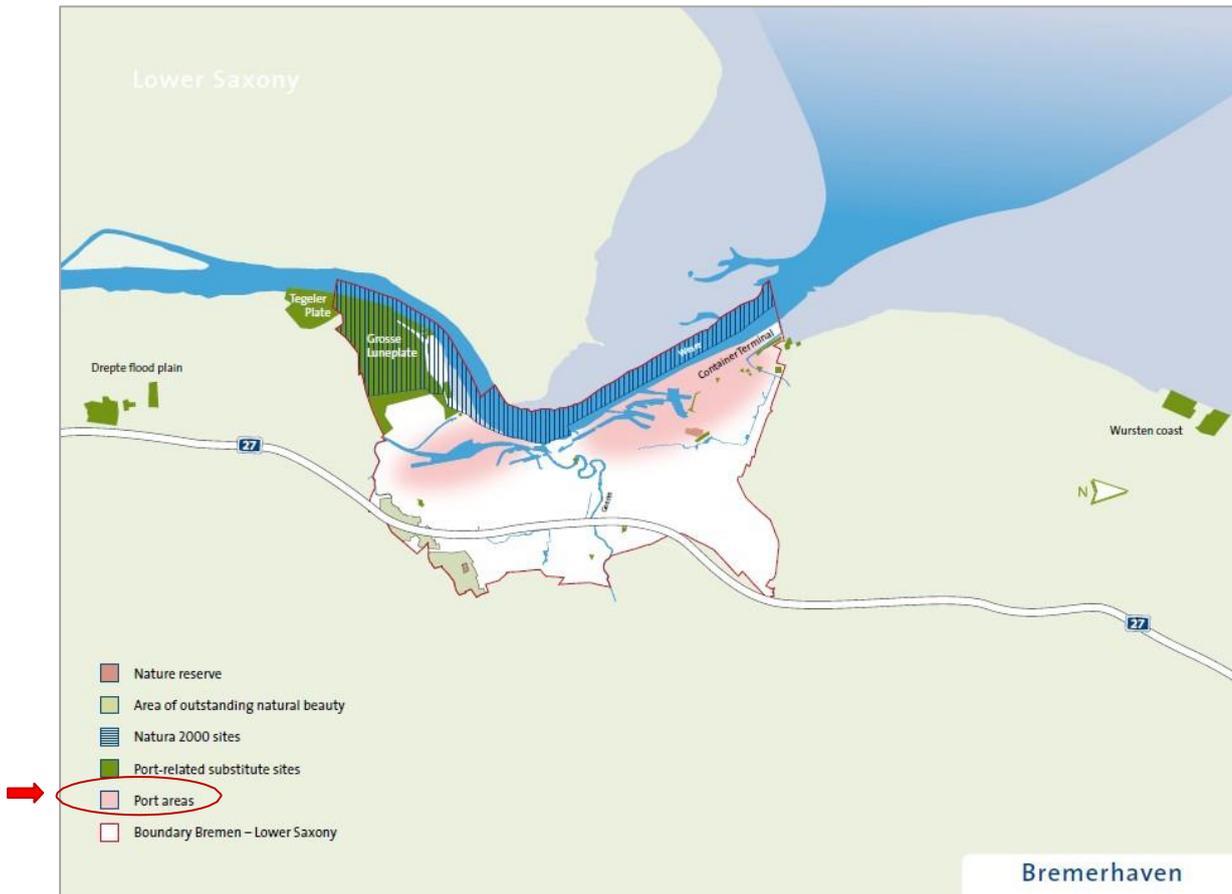


Fig. 6: Port areas and port related substitute sites in and around the City of Bremerhaven

A closer look at the actual port areas encompassed in the special assets is provided in the following illustrations 7 to 9. These include the port areas in Bremen (cf. Fig. 7) and the international port area in Bremerhaven (cf. Fig. 8). In addition, Fig. 9 shows the port area of the fishing port in Bremerhaven belonging to the state.

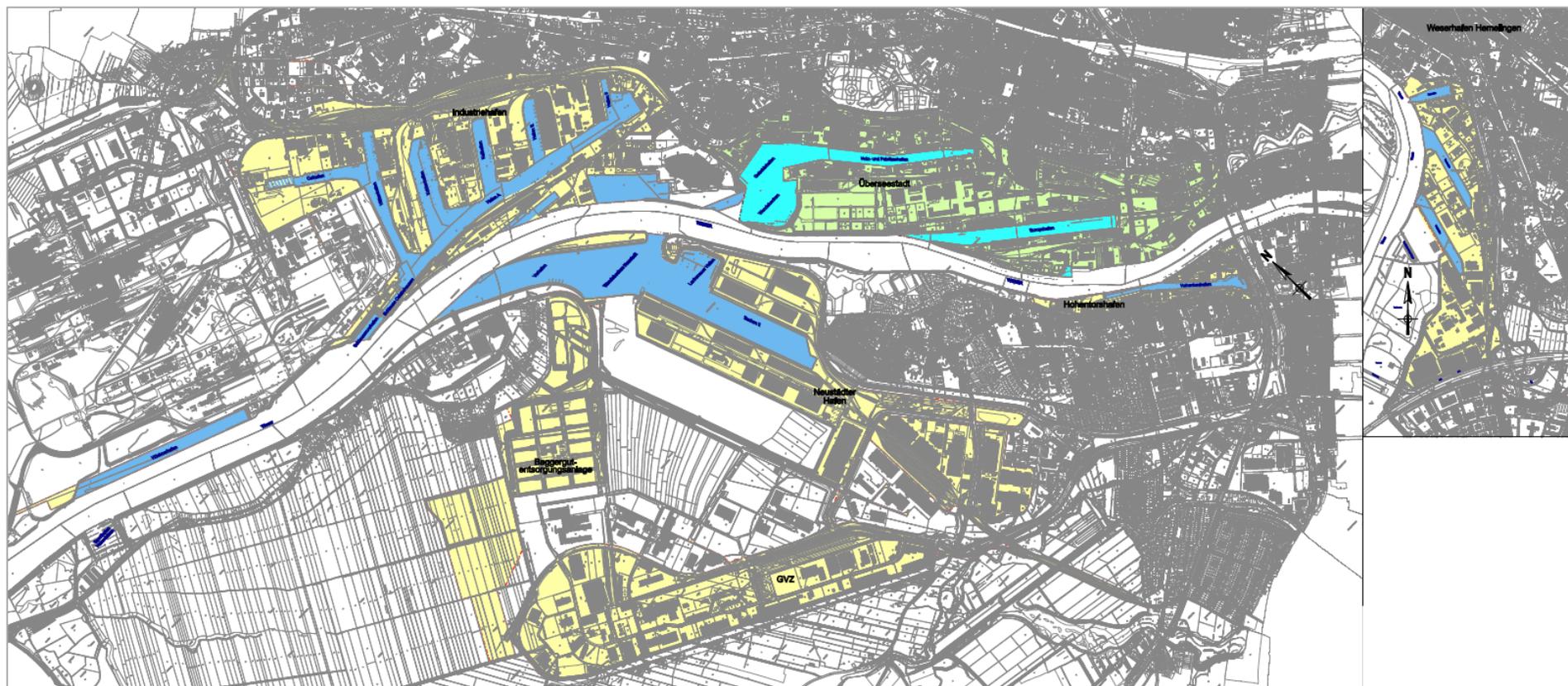


Fig. 7: Port areas in the City of Bremen

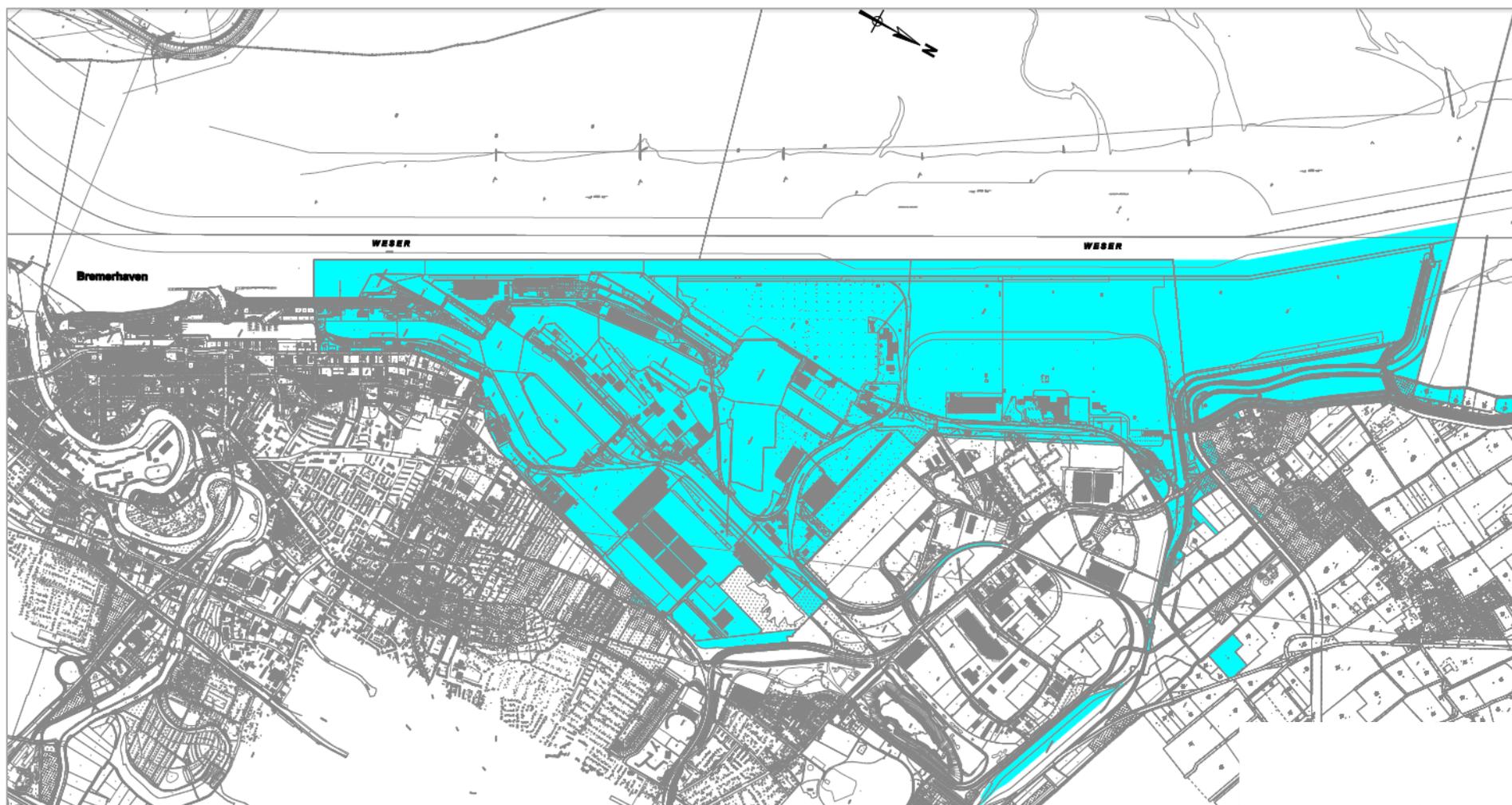


Fig. 8: Port areas to the north of Bremerhaven (international port area)



Fig. 9: Port areas (brown/yellow/blue areas) and compensation areas (green areas) in the south of Bremerhaven (fishery port)

The municipality of Bremen and the state of Bremen are the owners of the municipal ports respectively of the state fishing port in Bremerhaven. The port infrastructure (see blue elements in Fig. 10) was financed by public funds and the port land areas were subsequently leased and/or sold to private users. From there on, the corresponding users are responsible for the so-called superstructure (see green elements in Fig. 10).

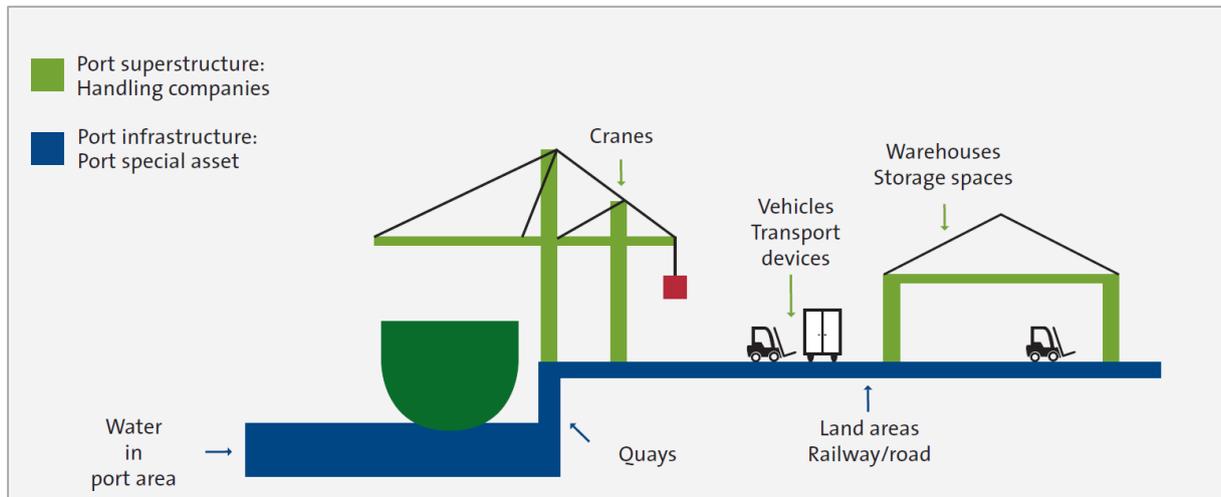


Fig. 10: Task distribution in port infrastructure and port superstructure

Private companies are responsible for operating the terminals, for actual handling operations in the port and for warehousing activities.

2.2 Influence on other spheres

In addition to the direct sphere (see chapter 2.1), the municipality of Bremen respectively the state of Bremen act as land owners and lessors under private law. Any influence on the users is restricted to the contents of the contracts negotiated between the parties. Possibilities of influence no longer exist in those places where land has been sold to private users. This applies for example to certain parts of the city ports in Bremen.

Compared to the port's own sphere, the port authority thus has very limited influence outside the activities described above (chapter 2.1). The actual public law permits for usage are issued by other municipal and state authorities (with the exception of the port authority).

2.3 Selected KPIs for the ports of Bremen

Bremerhaven

The ports in Bremerhaven are located at the estuary of the River Weser into the North Sea (cf. Fig. 3 & 6). Access to the port coming in from the North Sea extends for 32 nautical miles and takes about two and a half hours. The average tidal range, i.e. the difference between tidal high water and low water was 3.77 m in the period from 2009 to 2013. The largest ships to call at the port of Bremerhaven were approx. 400 m long with a draught of 15.0 m. At the moment, the port can only be reached regardless of the tide by ships with a draught of 12.8 m. The maximum effective draught in the port is up to 16 m LAT at the river quay of CT 4. For the time being, this depth is not maintained as ships with this draught currently do not call at Bremerhaven. The following two figures show the international port and the fishing port which are both located in Bremerhaven:



Fig. 11: Aerial picture of the international port



Fig. 12: Aerial picture of the fishing port

Bremen

The ports in Bremen City are connected to the North Sea by 66 nautical miles of the River Weser (cf. Fig. 3 & 5), a journey that takes five to six hours. The average tidal range, i.e. the difference between tidal high water and low water was 4.19 m in the period from 2009 to 2013. The largest ships calling at Bremen were approx. 250 m long with a draught of 10.70 m. The maximum effective draught in the tidal part of the port is up to 11.0 m. The following figures show the industrial port and the Neustädter port which are both located in Bremen.



Fig. 13: Aerial picture of the industrial port



Fig. 14: Aerial picture of the industrial port and the Neustädter port



Fig. 15: Aerial picture of the Neustädter port

Further details

KPIs for the ports of Bremen are constantly updated and published:

- Handling: Facts & Figures (issued every year by Ministry for Economic Affairs, Labour and Ports; also available as download at: <http://www.bremenports.de/en/location/media-centre/downloads>)
- Port structure: Facts & Figures (issued every year by bremenports GmbH & Co. KG; also available as download at: <http://www.bremenports.de/en/location/media-centre/downloads>)
- Port usage: Ports Pilot (issued every year by bremenports GmbH & Co. KG; also available as download at: <http://www.bremenports.de/en/location/media-centre/downloads>)
- Shipping: Port information guides Bremen and Bremerhaven and information on ship's waste disposal and water ballast available as download at: <http://www.hbh.bremen.de/sixcms/detail.php?gsid=bremen138.c.1842.de>

Further KPIs for 2014:

	Bremerhaven	Bremen	Total
Infrastructure:			
Area of port land ¹⁴	2,578 ha	1,786 ha	4,364 ha
Navigable waters in the port ¹⁵	319 ha	302 ha	621 ha
Total quayage ¹⁶	28,000 m	9,200 m	37,200 m
Port business:			
Cargo handling in 1,000 tons ¹⁷	65,401	12,835	78,236
Container handling in 1,000 TEU ¹⁸	5,758	19	5,777
Passengers ¹⁹	68,939	-	68,939
Main commercial activities [handling in 1,000 tons]:			
Ore, stones, gravel ²⁰			5,620
Metal products, semi-finished products ²¹			2,020

¹⁴ Data source: internal data (port profile)

¹⁵ Data source: internal data (port profile)

¹⁶ Data source: internal data (product data)

¹⁷ Data source: Hafenspiegel für die Bremischen Häfen 2014, p. 6, 7

¹⁸ Data source: Hafenspiegel für die Bremischen Häfen 2014, p. 14

¹⁹ Data source: Hafenspiegel für die Bremischen Häfen 2014, p. 21

²⁰ Data source: Hafenspiegel für die Bremischen Häfen 2014, p. 12

²¹ Data source: Hafenspiegel für die Bremischen Häfen 2014, p. 12

Cargo handling [handling in 1,000 tons]:			
Bulk ²²			9,372
Trade cars / number of vehicles ²³			2,269,512
Coal, oil, gas ²⁴			1,377
General cargo ²⁵			68,864
Containers ²⁶			59,917

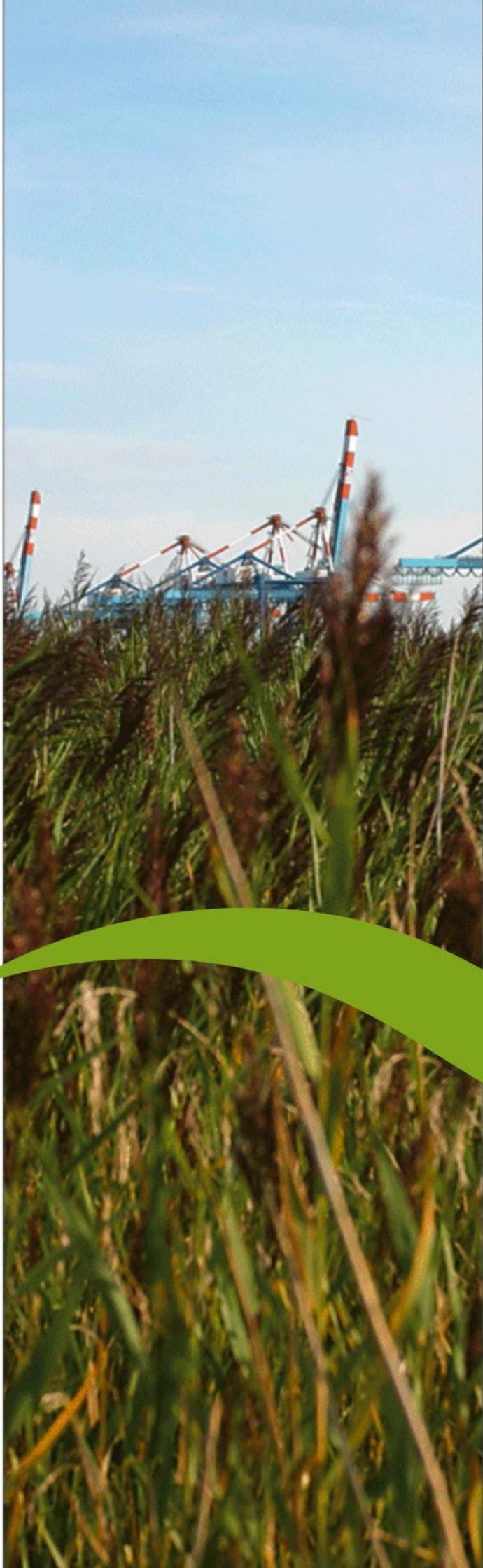
²² Data source: Hafenspiegel für die Bremischen Häfen 2014, p. 6

²³ Data source: Hafenspiegel für die Bremischen Häfen 2014, p. 19

²⁴ Data source: Hafenspiegel für die Bremischen Häfen 2014, p. 12

²⁵ Data source: Hafenspiegel für die Bremischen Häfen 2014, p. 6

²⁶ Data source: Hafenspiegel für die Bremischen Häfen 2014, p. 14



Environmental Report

CHAPTER 3



3 ENVIRONMENTAL POLICY STATEMENT OF THE MINISTRY OF ECONOMIC AFFAIRS, LABOUR AND PORTS

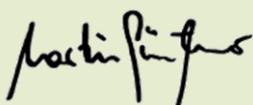
As the second-largest port location in Germany, the ports of Bremen handle functions which are of central economic importance at both national and regional level. The Senate of Bremen is fully aware of its responsibility for reconciling economic and environmental concerns in the interests of sustainability.

"I herewith declare that the ports of Bremen

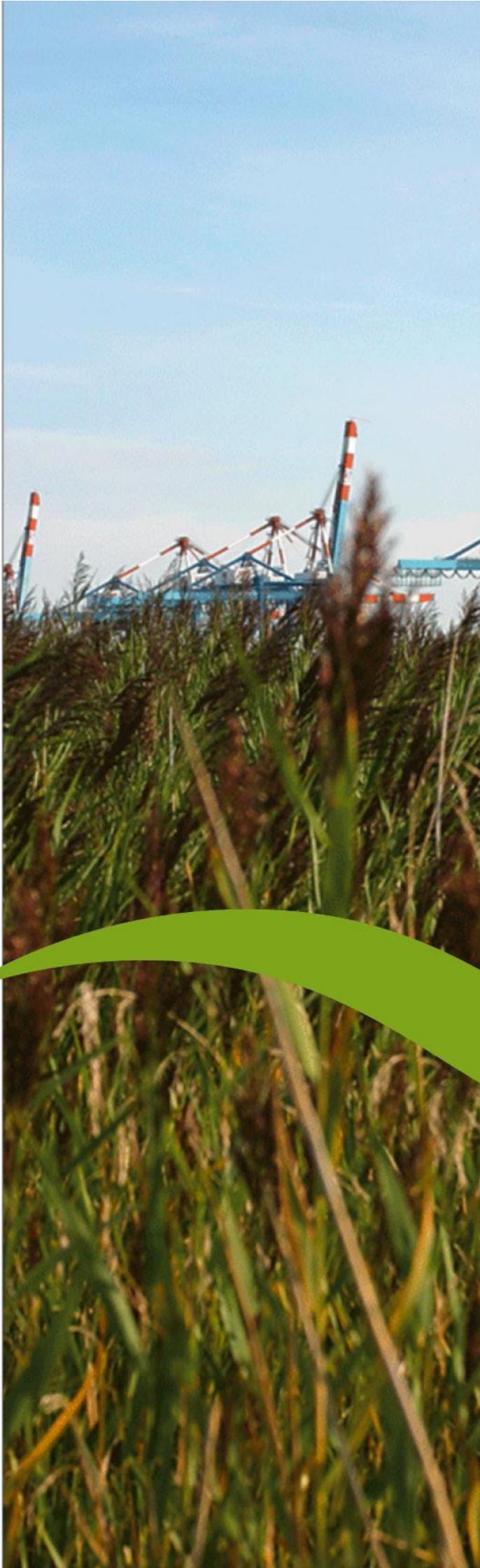
- will pursue the Environment Management System "PERS" which was implemented in 2011 and recertified in 2014 and meets the requirements of Ecoports. It makes a contribution to improvements continuously, documents the port's performance in terms of environment protection and provides a framework for setting and reviewing environmental objectives and targets;
- comply with relevant environmental legislation and regulations, and with other requirements to which the ports of Bremen subscribe;
- regard the avoidance of environmental pollution and due regard to nature conservation as a decisive factor for port operations and port development;
- are taking steps above and beyond the legally required environmental standards in order to introduce innovative environment technologies and procedures e.g. LNG as environmentally friendly energy source will actively be enhanced in the ports of Bremen;
- manage their resources as efficiently as possible and endeavour in particular to raise energy efficiency and consequently reduce carbon emissions;
- demand and deploy products whose manufacture and disposal cause minimum environmental impact;
- attach central importance to the avoidance of waste with adverse environmental effects and to exploiting potential for accident control;
- are engaged in the development of environmentally friendly techniques and practices;
- update the Environment Report, which was firstly drawn up in 2010/11, every two years and publish it in a suitable manner.

In order to implement the above environment policies, the ports of Bremen shall ensure continuously that their employees are aware of the policy and receive appropriate information and training to deliver and maintain a high standard of environment protection.

The ports of Bremen shall further communicate their environmental programme with the local community and endeavour to convince all shipping and port actors to implement sustainable and environmentally friendly technologies and procedures".



Martin Günthner
Senator for Economic Affairs, Labour and Ports
Free Hanseatic City of Bremen



Environmental Report

CHAPTER 4



4 ENVIRONMENTAL ASPECTS AND PERFORMANCE OF THE PORTS

Depending on the location and surroundings, the expansion and usage of a port have a wide range of implications for the environment. Even when there is a willingness to reduce environmental impacts as far as possible, certification to PERS still requires a focus on significant environmental aspects.

After a general compilation of environmental implications, work proceeded on drawing up the "register of significant environmental aspects" which is presented in chapter 4.1.

4.1 Significant environmental aspects

In accordance with the requirements²⁷, "*significant environmental aspects*" refer to those which are subject to

- statutory provisions or
- political aims.

Annex A shows the results of the analysis with a systematic description according to the spheres for the port administration:

- A:** own sphere of the port infrastructure:
B: sphere of the port users

- influencing factors (port activities)
- paths of influence
- responsible organisations
- main legal principles or prerequisites and
- further remarks for individual cases with target statements.

In terms of function, this register is used for self-analysis and for developing suitable control instruments, and in the end also for providing transparent information to those interested.

4.2 Environmental performance indicators

In the framework of environmental management, environmental performance indicators have to be developed to verify compliance with the statutory requirements and to document progress made in improving the quality of the environment in and around the ports.

The levels of consideration are:

- a) environmental impact of the port
- b) environmental management services of the port and
- c) environmental quality in and around the port

The six indicators, which were chosen for the first certification procedure, were amended by two more significant indicators for the recertification: check of sulphur content in ship's fuel and emission of CO₂ produced during container handling. For all of the eight indicators which are listed below, the necessary basic data and statistics are available; at the same time, the evaluation of these indicators supports to verify environmental improvements.

²⁷ PERS - Specification and guidelines Vers. 4 (2011)

Amount of dredged material

Viewing level	Environmental implications
Enquiry	Sum of dredged material in Bremen and Bremerhaven in m ³ (without turning basin) / total port water area according to „Hafengebietsverordnung“ in m ²
Collected by	bremenports GmbH & Co. KG Division Manager Port Maintenance [in cooperation with Sustainability Controlling and Division Water Depths]
Value for 2008 ²⁸	0.076m³/m²
Value for 2009	0.062m³/m²
Value for 2010	0.069m³/m²
Value for 2011	0.092m³/m²
Value for 2012	0.146m³/m²
Value for 2013	0.096m³/m²
Value for 2014	0.103m³/m²
Value for 2015	0.089m³/m²

Noise from container port operations

Viewing level	Environmental implications
Enquiry	Immission level, measured at the edge of the terminal and adjacent to the nearest housing areas. The noise rating level shown has been calculated manually as a mean level for the night period including all extra charges.
Collected by	bremenports GmbH & Co. KG Port Development Division
Value for 2008	51.2 db(A)/1 mio TEU
Value for 2009	51.3 db(A)/1 mio TEU
Value for 2010	50.8 db(A)/1 mio TEU
Value for 2011	49.9 db(A)/1 mio TEU
Value for 2012	49.9 db(A)/1 mio TEU
Value for 2013	49.6 db(A)/1 mio TEU
Value for 2014	49.7 db(A)/1 mio TEU
Value for 2015	48.9 db(A)/1 mio TEU

²⁸ Figures for the years 2008-2012 for this indicator have been corrected due to higher data quality

Disposal of dredged material²⁹

Viewing level	Own environmental efforts
Enquiry	Deposited dredged material in m ³ [directly deposited dredged material in year X + deposited dredged material from the dewatering fields in Seehausen in the following year (year X+1) ³⁰] / total amount of dredged mud in year X in m ³
Collected by	bremenports GmbH & Co. KG Division Manager Port Maintenance [in cooperation with Sustainability Controlling]
Value for 2010	36.6%
Value for 2011	23.5%
Value for 2012	17.7%
Value for 2013	47.3%
Value for 2014	43.6%
Value for 2015	³¹

²⁹ The methodology for the calculation of this indicator has been changed. The indicator now allows to evaluate how much of the total dredged material has been deposited. Due to this methodological change a calculation is only possible from the year 2010 onwards.

³⁰ The amount of deposited dredged material from the dewatering fields in Seehausen in the following year has to be considered to calculate the total deposited dredged material because the dredged mud has to stay about one year in the dewatering fields in Seehausen until it can be deposited.

³¹ Due to the fact that the total amount of deposited dredged material from the dewatering fields in Seehausen for 2016 will not be available before the end of 2016, the calculation of the indicator for 2015 is not yet possible.

Ship inspections³²

Viewing level	Own environmental efforts
Enquiry	Detected deficiencies with respect to number of ship inspections <i>The main deficiencies were as follows: not wearing the personal protective clothing, unsecure entrances to ships, smoking within the port area in spite of the prohibition</i>
Collected by	Harbour Master Office
Value for 2008	4.8%
Value for 2009	3.8%
Value for 2010	4.8%
Value for 2011	3.2%
Value for 2012	2.7%
Value for 2013	2.0%
Value for 2014	1.5%
Value for 2015	1.7%

Check of sulphur content in ship's fuels

Viewing level	Own environmental efforts
Enquiry	Violation of sulphur limit of 0.1 percent during port stay / number of inspections
Collected by	Harbour Master Office
Value for 2010	37.2%
Value for 2011	19.0%
Value for 2012	34.0%
Value for 2013	12.7%
Value for 2014	13.2%

³² Figures relate to sea going vessels in the port districts of Bremen and Bremerhaven and differ from those of the Environmental Report of 2013 where the figures applied to all ships.

Use of regenerative energy	
Viewing level	Own environmental efforts
Enquiry	Electricity from renewable energy / total electricity consumption
Collected by	bremenports GmbH & Co. KG Energy Management Commissioner
Value for 2008	18.0%
Value for 2009	20.3%
Value for 2010	20.2%
Value for 2011	95.0%
Value for 2012	81.4% ³³
Value for 2013	88.9%
Value for 2014	88.4%
Value for 2015	91.5%

³³ Figure corrected due to higher data quality

Habitat index for the total port area³⁴

Viewing level	Quality of the environment in and around the port
Enquiry	Habitat area under the responsibility of the ports of Bremen in hectares / total port area in hectares
Collected by	bremenports GmbH & Co. KG Director Environment & Sustainability
Value for 2006	20.90% ³⁵
Value for 2007	20.78%
Value for 2008	24.07%
Value for 2009	24.13%
Value for 2010	24.60%
Value for 2011	24.31%
Value for 2012	31.11%
Value for 2013	30.83%
Value for 2014	30.14%
Value for 2015	30.71%

³⁴ All areas in the responsibility of the port authority

³⁵ The annual values refer to the respective calendar year from now on; percentage changes in the years 2006-2011 result from corrected values for the water areas which are part of the total port area.

CO₂ emissions of the container terminal

Viewing level	Efforts of port user
Enquiry	Discharge of CO ₂ in kg per container handled (except reefer container) ³⁶
Collected by	EUROGATE
Value for 2008	15.6
Value for 2009	15.3
Value for 2010	14.4
Value for 2011	13.5
Value for 2012	15.3
Value for 2013	12.9
Value for 2014	13.2
Value for 2015	12.6

The intention is to develop and use further meaningful indicators.

³⁶ EUROGATE Container Terminal Bremerhaven GmbH, EUROGATE Technical Services GmbH, NTB North Sea Terminal Bremerhaven GmbH & Co. KG, MSC Gate Bremerhaven GmbH & Co. KG



Environmental Report
CHAPTER 5

5 BRIEF DESCRIPTION OF ENVIRONMENTAL MANAGEMENT STRUCTURES

The environmental tasks and duties of the ports of Bremen/Bremerhaven are shared between the three different institutions (Ministry of Economic Affairs, Labour and Ports, bremenports GmbH & Co. KG and HBH) as shown in Fig. 4.

5.1 Ministry of Economic Affairs, Labour and Ports

The Ministry of Economic Affairs, Labour and Ports covers ministerial tasks for the ports as special assets. The ministerial administration appoints members of staff to serve on parliamentary bodies, contracts and monitors the operational institutions and organises campaigns and initiatives. At the same time, the Ministry is the commissioning entity for bremenports and the Minister, or his representative, is the Chairman of the Supervisory Board.

The port-related environmental duties of the Ministry are concentrated in the section "Environmental and climate related affairs" (section 32) which is integrated in the ports and logistics department (department 3, see Fig. 16).

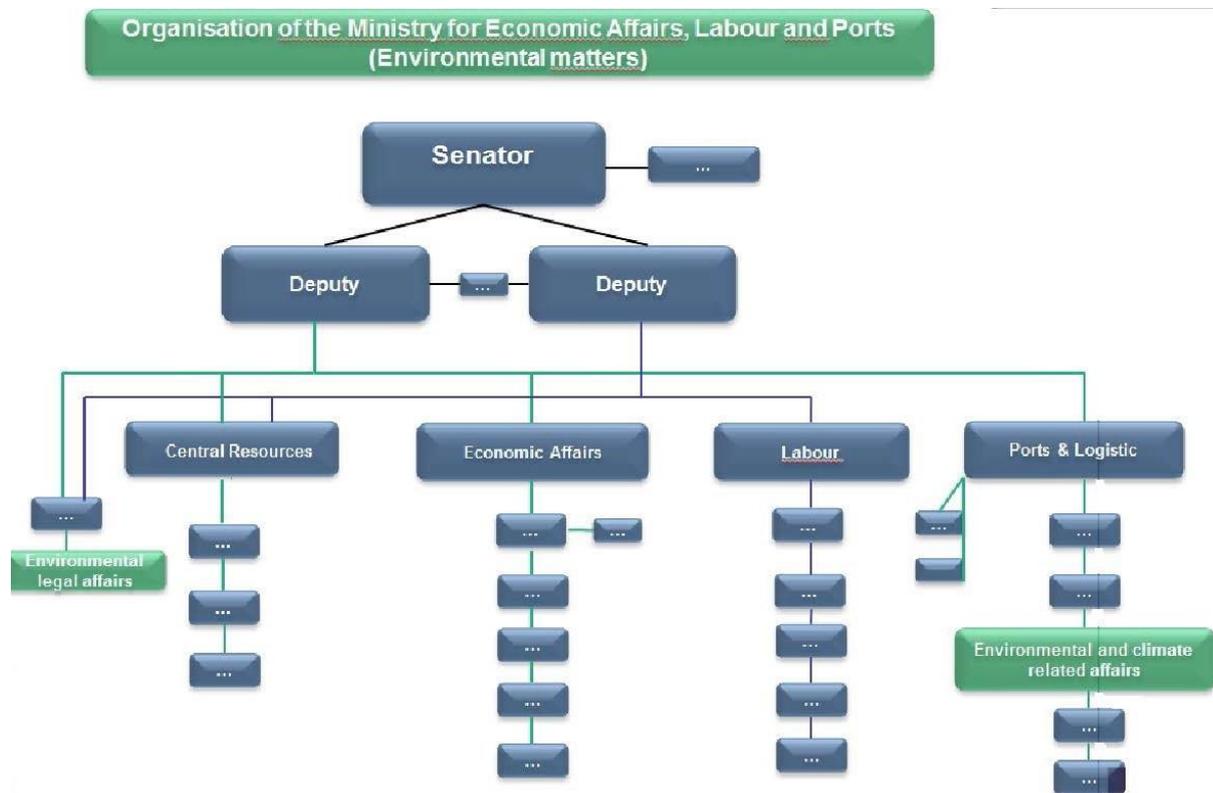


Fig. 16: Organisation of environmental matters at the Ministry of Economic Affairs, Labour and Ports

In this section, two members of staff are concerned with port-related environmental affairs: the head of section Dr. Lampe and Mr. Kress. The head of section reports to the head of the authority, Minister Mr. Günthner and the deputy head Mr. Siering via the head of department Mr. Peters, and often directly in urgent cases.

The scope of this section comprises the whole range of port-related environmental issues (e.g. European directives such as Natura 2000, MARPOL, OSPAR, dredging, port development, noise). It evaluates the implication for the ports and the need for reaction. It also proceeds with project work and independent concepts. Furthermore, the section represents the ports of Bremen/Bremerhaven in certain international and national working groups, committees and organisations (e.g. MEPC of IMO, Sustainable Development Committee of ESPO, Ecoports) as well as in projects (e.g. LIFE Project NoMEPorts, Interreg Project TIDE).

Transport issues with a focus on short sea shipping and safety issues are covered by section 31 "Port economics and shipping". Mr. Krämer is the head of this section.

Legal issues concerning the environment are covered by the section "Shareholding management, legal affairs" (section 02), with the head of unit Mrs. Blaseio and the consultant Mrs. Lamot.

5.2 bremenports GmbH & Co. KG

bremenports GmbH & Co KG is entrusted by the Federal State of Bremen with management of the ports as special assets and port-related activities with the aim of managing, developing and maintaining the port infrastructure of the Free Hanseatic City of Bremen in Bremen und Bremerhaven in accordance with the principles of good business practice.

bremenports is organised as a company under private law to handle these tasks. The company is wholly owned by the Free Hanseatic City of Bremen.

In addition to special assets management, the remit of bremenports also includes the regular management activities relating to the port infrastructure (such as port infrastructure operation, resources management, maintenance, marketing, construction, planning, project approval and project management, the tasks of port infrastructure owner and building principal, location marketing, strategic port development).

Tasks occurring in the course of major investment projects, or tasks which are not regular tasks, are referred to as "special tasks". These are individually commissioned by the Free Hanseatic City of Bremen.

In terms of human resources, environmental affairs at bremenports are organised on two different levels which are staffed by environment specialists. A Director for Environmental and Sustainable Affairs deals with this remit at management level, whilst an Environment Planning Department is responsible for operational tasks within the scope of project management (see Fig. 17). Additionally, there are representatives for waste management and a team for the management of dredged material.

Organisation of bremenports GmbH & Co. KG (environmental matters)

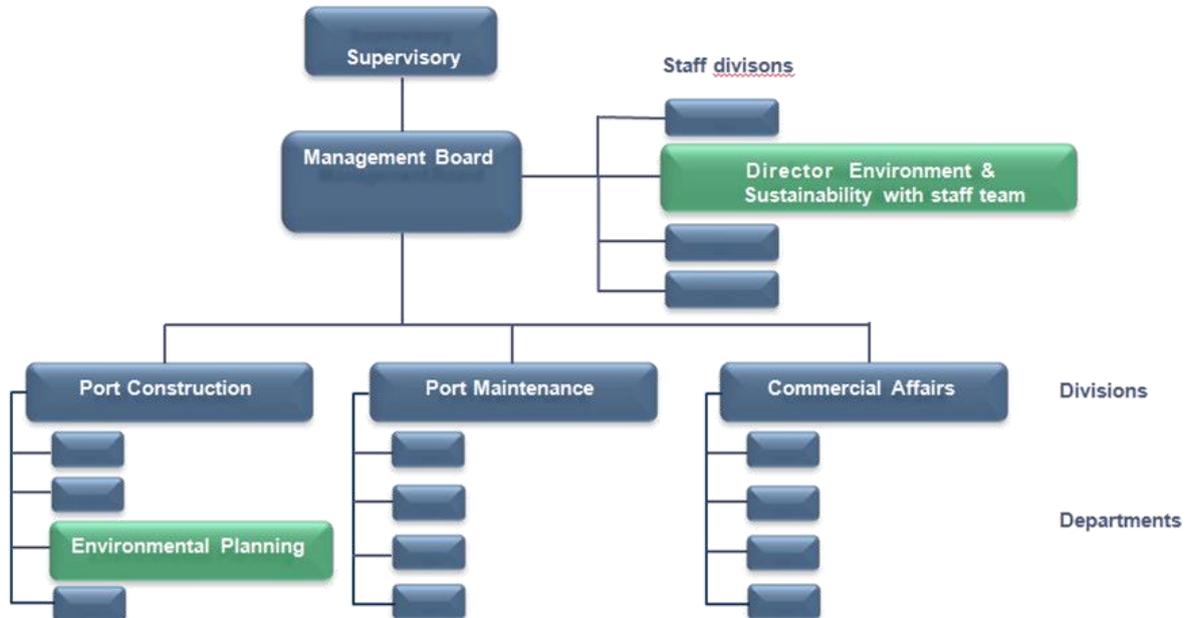


Fig. 17: Organisation of environmental matters at bremenports GmbH & Co. KG

As a staff department, the Director for Environmental and Sustainable Affairs is linked to and reports to the Board of Management. He initiates and coordinates the port sustainability initiative “greenports” and thus the environmental aspects of the ports; he provides support in shipping issues, serves on national and international panels and assists the Board of Management in strategic decisions. Since October 2009, he is delegated by the International Association of Ports and Harbours (IAPH) to the Port Environment Committee. The Director for Environmental and Sustainable Affairs has executive authority in matters of environmental policies vis-à-vis all employees, ensuring that expert influence can be exercised over environmentally relevant activities if necessary. This position is held by Mr. Uwe von Bargen. He is recently backed by a team of 3 employees (one of them in part time): Mrs. Karina Wieseler for all ship related sustainability aspects, Mrs. Alexandra Groth for sustainability controlling and Mrs. Sabine Müller for energy management.

The Environment Planning Department deals with operational project management within the port construction division and consists of two teams, Project Approval Planning and Compensation Measures, with a total of 10 employees. Work focuses on the preparation of application documents or the planning and implementation of compensatory measures with respect to port development projects.

The department manager is responsible for the coordination of human resources deployment, offers, applications and special problems in connection with projects, as well as initiating and coordinating new projects. This position is held by Mrs. Anne Brüggem by proxy.

The Project Approval Planning and Compensation Measures team leaders coordinate the provision of services by their own teams, deal with special problems, prepare application documents and offers. The Project Approval Planning team is led by Mr. Ulrich Kraus, the Compensation Measures team by Mr. Thomas Wieland.

Both waste inspectors, Mr. Wolfgang Arndt and Mr. Peter Brösche, work on the operational level, too. The team which manages the treatment of dredging material that occurs during maintaining water depth consists of three staff members and is led by Mr. Norbert Binder. Their duties also include the operation of the dump for treatment of contaminated soil in Bremen-Seehausen.

The management remit of bremenports does not include public administrative tasks.

The functions of water protection, pollution control, soil protection, waste disposal and nature conservation authorities, for example, are the responsibility of the Ministry for the Environment or respectively the Department of Environmental Protection in Bremerhaven.

5.3 Harbour Master Office/Port Authority (HBH)

The Harbour Master Office is responsible for the vessel traffic management as well as supervision of safety and security within the port areas. The environmental issues are concentrated in the units "Port Safety" in Bremen and Bremerhaven (see Fig. 18). These sections supervise and control the safe handling of dangerous goods, occupational health and safety of port work and ship waste disposal.

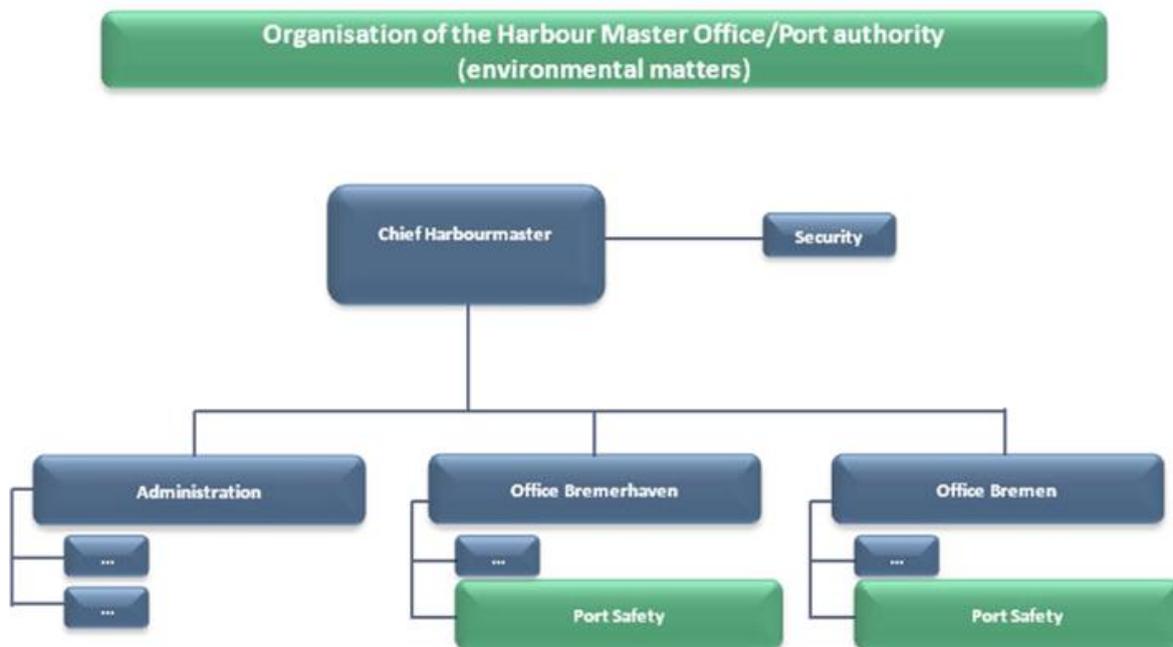


Fig. 18: Organisation of environmental matters at the Harbour Master Office

The Harbour Master Office is the competent authority for the inspection of dangerous goods during handling, transit and intermediate storage in the port area with regard to applicable regulations. The main tasks are the inspection of dangerous cargo/containers, the authorization of storage sites for these dangerous cargo/containers and the enforcement of applicable law.

In the field of port inspection and ship related environmental protection, the main tasks are the inspection and supervision of compliance with safety regulations during cargo handling, the inspection of bunkering operations, controlling the sulphur content of fuels used and the disposal of ship generated waste and cargo residues. The head of unit in Bremerhaven is Mr.

Claußen and in Bremen Mr. Kraft. They have directive authority with regard to all staff of their units. These sections consist of 11 employees in total. Both units have direct access to the harbour master on duty and to the head of the Harbour Master Office Mr. Mai.

5.4 Environmental responsibilities of key staff

The following list indicates those liabilities affecting the environment in the ports of Bremen, which are specified in the requirements of PERS certification. These are activities that may cause, control or minimise environmental impacts when managed, or may cause environmental impacts if control was lost, or may result in a breach of environmental policy guidelines or regulations.

Task	Job title or name	Department
Port operations (dredging)	Mr. Behrends	bremenports / Division Manager Port Maintenance
Port operations (navigation)	Mr. Mai	Harbour Master
Port operations (shipping)	Mr. Mai	Harbour Master
Port operations (terminals)	Not within the competence of public port administration	
Cargo handling operations	Not within the competence of public port administration	
Jetty/wharf management	Mr. Behrends	bremenports / Division Manager Port Maintenance
Site management	Mr. Plewa	bremenports / Division Manager Port Construction
Strategic planning	Mr. Bartels	bremenports / Staff Division Manager Port Development
Supplies acquisition	Mr. Rehberg	bremenports / General Manager Commercial Affairs
Operator licensing/permit ³⁷	Mr. Plewa, Mr. Behrends	bremenports / Division Manager Port Construction Division Manager Port Maintenance
Quality management	Mrs. Wellbrock	bremenports / Quality Management Commissioner
On site ³⁸ contractor ³⁹ management	Mr. Rehberg	bremenports / Division Manager Commercial Affairs
On site ⁴⁰ conservation	Mr. von Bargaen	bremenports / Director Environment & Sustainability
Emergency planning	Mr. Claußen ⁴¹ , Mr. Kraft ⁴²	Harbour Master Office / Port Authority Bremerhaven resp. Bremen

³⁷ Operator: entity doing operational work with environmental relevance under the responsibility of the port

Operator licensing: with know-how and skills related to permit management of operators

³⁸ On site: in the port as a whole

³⁹ Contractors: all the companies performing environmentally relevant work for the port as a whole

⁴⁰ On site: in the port as a whole

⁴¹ For Bremerhaven

⁴² For Bremen

Waste management (shipping)	Mr. Claußen ⁴³ , Mr. Kraft ⁴⁴	Harbour Master Office/ Port Authority Bremerhaven resp. Bremen
Waste management (port construction, maintenance)	Mr. Howe	bremenports / General Manager Technical Affairs
Waste management (cargo handling)	Not within the competence of public port administration	
Marina/slipway management	Not within the competence of public port administration	
Environmental document management	Mr. von Bargaen	bremenports / Director Environment & Sustainability
Environmental data management	Mr. von Bargaen	bremenports / Director Environment & Sustainability
Soil pollution assessment	See "Environmental Monitoring"	
Air quality monitoring	See "Environmental Monitoring"	
Water quality monitoring	See "Environmental Monitoring"	
Vehicle management of terminal traffic	Not within the competence of public port administration	
Port railway operations	Mr. Behrends	bremenports / Division Manager Port Maintenance
Port construction; incl. - Project approval management - Implementation of compensation measures	Mr. Plewa	bremenports / Division Manager Port Construction
Organisation of environmental management	Mr. von Bargaen	bremenports / Director Environment & Sustainability
Environment monitoring - Habitats, flora, fauna - Noise - Air quality - Port lighting - Land consumption - Sustainability - Greenhouse gases - Water quality - Sediment quality	Mr. von Bargaen	bremenports / Director Environment & Sustainability
Climate change management	Mr. von Bargaen	bremenports / Director Environment & Sustainability
Ecological port infrastructure (incl. compensation sites)	Mr. von Bargaen	bremenports / Director Environment & Sustainability
Energy management	Mrs. Müller	bremenports / Energy Management Commissioner

⁴³ For Bremerhaven

⁴⁴ For Bremen

5.5 Resources allocated specifically to port environmental management

The three institutions described as sharing the environmental tasks and duties have the following human resources to fulfill those duties:

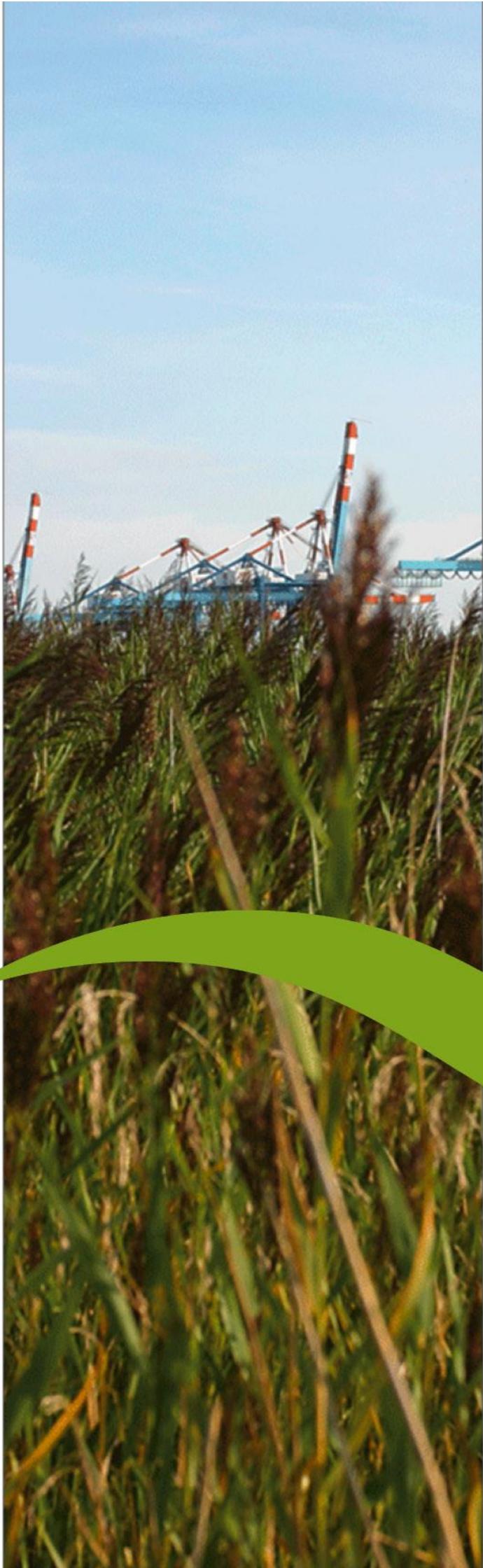
Ministry of Economic Affairs, Labour and Ports: 2 full-time staff; annual costs: 190,000 €

bremenports: 14.66 full-time staff (3 full-time staff and one part time staff on the strategic level: environmental and sustainable affairs; 11 full-time staff on the operational project level: 7.5 of which for licensing planning, implementation of compensation measures; 0.5 on the waste management and 3 full-time staff on management of dredged material); annual costs: 1,088,000 €.

Harbour Master: 10.5 full-time staff are concerned with port and ship inspections and monitoring of dangerous cargo; annual costs: 790,000 €.

In addition to the human resources, financial resources are provided for projects like treatment and disposal of dredged material, the environmental ship index, compensation measures, research and development projects etc. The total environment protection expenditures and investments by type in 2014 can be found in the sustainability report 2014 of bremenports GmbH & Co. KG and the special assets Port and Fishing Port (Waterside).⁴⁵

⁴⁵ Link to the sustainability report 2014 of bremenports GmbH & Co. KG and the special assets Port and Fishing Port (Waterside): <https://www.bremenports.de/en/greenports/daring-to-go-green>



Environmental Report

CHAPTER 6



6 SELECTED EXAMPLES OF BEST PRACTICE AND PLANNED ACTIVITIES

Examples of best practice are positive indications of the port management's ability to deliver environmental protection and sustainable development. They provide the reviewer with tangible evidence of achievement and contribute to the "Green Guide" by the ESPO that contains port-sector derived solutions for the mutual benefit of participating port members and to inform the public (see www.ecoport.com).

The PERS application in 2011 described the

- sustainable water depth and
- nature compensation management

in the ports of Bremen.

Within the PERS report of 2013 two further best practice examples have been presented:

- noise management and
- Liquefied Natural Gas (LNG) as an alternative marine fuel.

In the following, two further best practice examples will be explained which underline the competitive strength of the ports of Bremen:

- environment-related port discount and the greenports Award
- from carbon-neutral ports management company to carbon-neutral port

6.1 Environment-related port discount and the "greenports Award"

6.1.1 Environmental discounts for low-emission vessels

In accordance with the self-imposed obligation resulting from the World Port Climate Declaration (2008), the ports of Rotterdam, Antwerp, Le Havre, Bremen/Bremerhaven, Hamburg and Amsterdam have developed an incentive scheme which will enable them to grant discounts on their port charges on the basis of a common standard. The Environmental Ship Index, generally abbreviated to ESI, was developed to target the emissions caused by shipping. The ESI breaks down into sub-points for the emission of nitrogen, sulphur and carbon dioxides and each ship has an individual overall score of between zero and 100. Zero means that the vessel is in full conformity with the statutory limits specified in IMO MARPOL 73/78 Annex VI. Any score which is higher than zero means the vessel has surpassed these requirements. The target is to create advantages for ships with particularly low emission figures, e.g. they pay lower tonnage charges than ships which cause more environmental pollution.

The formula used to calculate the index is regularly modified in line with changing statutory requirements and emission limits. The ESI has met with broad acceptance from both shipowners and ports: amongst other things, this is evident from the steadily rising number of ship registrations and participating ports. This wide acceptance can be attributed to the close and continuous cooperation between shipowners, ports and the EU.

Implementation

Ships can register free of charge and are allocated an individual ESI score calculated according to the index formula on the basis of various certificates and documentation (details

of the requirements, formula, audit methods are published at www.environmentalshipindex.org).

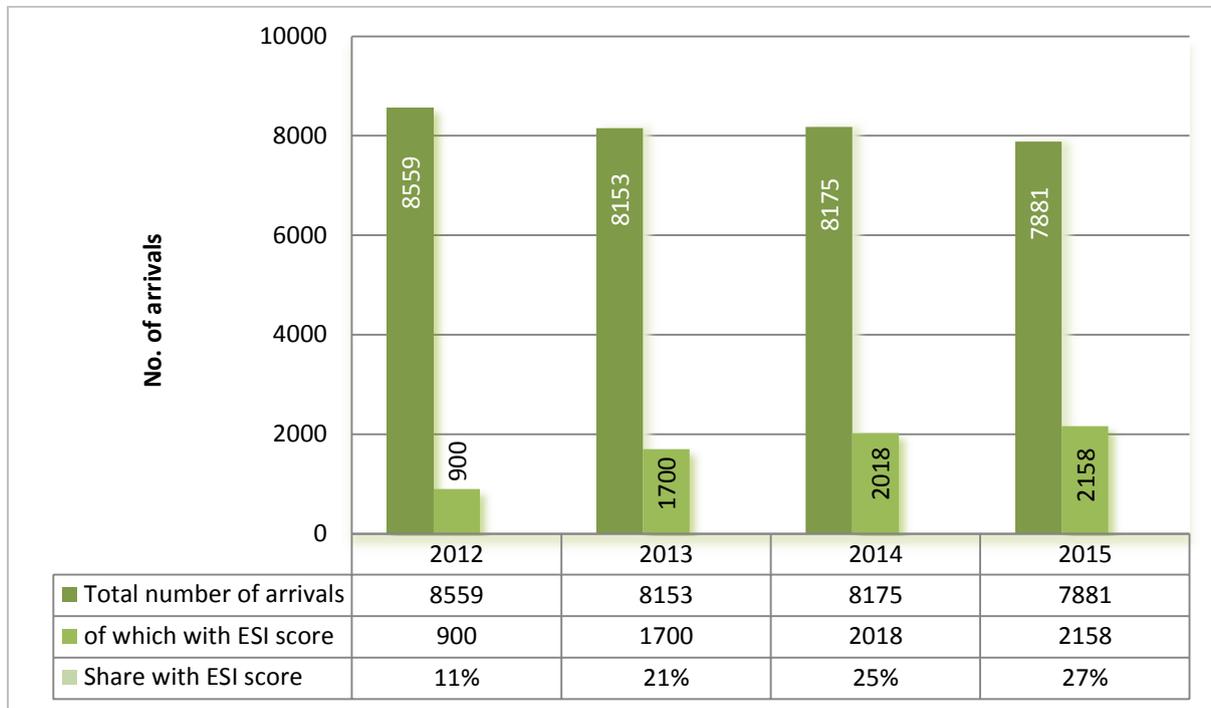


Fig. 19: No. of arrivals (total) and share of arrivals with ESI score

The number of registered ships worldwide is steadily rising. As Fig. 19 shows, the share of vessels with an ESI score in the total number of ships arriving at the ports of Bremen and Bremerhaven has more than doubled since 2012, despite a decline in the total number of arrivals.

Ports that wish to participate in the system and are able to grant bonuses in the form of discounts accept the ESI in principle, but are free to design their own “bonus programmes”, i.e. to specify their own conditions for granting discounts to ships. The ports of Bremen, for example, introduced their bonus programme in 2012. It is reviewed every year and adjusted if necessary. The following rule has applied since the beginning of 2016: every quarter, the 25 vessels with the best ESI scores ≥ 40 points are granted a 15% discount on each call at the port.

The programmes which apply at the individual ports differ in various ways, such as different discount percentages and the corresponding ESI scores (sub-points) or the number of vessels. The participating ports are increasingly introducing a number of special discounts, e.g. for individual emission categories such as nitrogen oxide or the use of liquefied natural gas (LNG) as fuel.

The ports of Bremen have also decided to promote the use of LNG in particular and offer high incentives for vessels with LNG or methanol propulsion:

- Vessels powered solely by LNG and methanol receive the following discounts:
 - during the first year 50 %
 - during the second year 25 %
 - during the third year 15%

- Vessels with a dual fuel system receive the following discounts on the tonnage charge:
 - during the first year 25 %
 - during the second year 12.5 %
 - during the third year 7.5%

The intention is to provide clear incentives and conditions for ship operators to use these low-emission fuels and thus accelerate the introduction and changeover process.

6.1.2 Presentation of the greenports Award



The ports of Bremen/Bremerhaven launched the “greenports” slogan in 2009 as the umbrella brand for their sustainability strategy. The *greenports Award* goes to the ship with the lowest emissions which calls at the ports of Bremen and Bremerhaven in any given year. It has been presented every year since it was first introduced in 2014. An award also goes to the shipping company or charterer which can prove to have the fleet with the lowest emissions.

Although no money comes with the greenports Award, it guarantees an extremely positive public image for the vessel itself and, of course, for her shipping company or charterer, and also for the shipping company or charterer as prizewinners in their own right. Whenever possible, the presentation ceremony takes place on board the winning vessel. This underlines the importance of environmental protection to the crews and reminds them that they, too, can play an important role. Moreover, presentation of the award on board frequently leads to unexpected encounters that would probably otherwise never have taken place.

bremenports purchased ‘Moorland Certificates’ to offset its carbon dioxide emissions for the first time in 2013 (cf. Sec. 6.2). This option was later symbolically practised for the emissions generated by the winning vessel “Wilson Dover” when it called at the port in 2014 and the prizewinners were presented with a certificate as confirmation. This additional symbolic award is intended to raise awareness of previously unexploited scope for emissions avoidance and identify opportunities for subsequent neutralisation of carbon emissions at regional level.

Implementation

The prizewinning ships and fleets are selected on the basis of their ESI scores. All vessels are reassessed at six-monthly intervals according to the type of fuel they are carrying and the individual values are used to calculate an average for the year concerned for the greenports Award. Vessels also have to call at the ports of Bremen on more than one occasion to be eligible for the greenports Award, to ensure that regular port customers have an advantage over vessels which call at the ports only once. The crucial factor in deciding who wins the shipowner/charterer Award is the average value for the entire fleet. The following two boxes show the winners of the past years:

Presentation and winners in 2013

The first greenports Awards went to the car carrier “Morning Linda” for the ship with the lowest emissions and to EUKOR Car Carriers for the lowest-emission fleet.

The car carrier, which flies the Panamanian flag and has a mainly Korean crew, calls at Bremerhaven three or four times a year. With a capacity of more than 8000 CEU (Car Equivalent Units), the Panamax ship is one of the largest PCTCs (Pure Car/Truck Carrier) in the world and operates on routes between Europe and Asia.



Fig. 20: Presentation ceremony on board the Morning Linda

The following two tables show the Top 10 in the two different categories (vessel and shipowner/charterer) of the greenports Award:

Top 10 Ships 2013				
Rank	IMO No.	Name	Shipowner/charterer	ESI-Score
1	9383106	Morning Linda	EUKOR	45,4
2	9316139	Aida	Wallenius Wilhelmsen Logistics	44,2
3	9383417	Morning Lisa	EUKOR	43,1
4	9377523	Tirrana	Wallenius Wilhelmsen Logistics	41,5
5	9383429	Morning Lynn	EUKOR	41,5
6	9332925	Faust	Wallenius Wilhelmsen Logistics	40,9
7	9383431	Morning Lucy	EUKOR	40,5
8	9377494	Aniara	Wallenius Wilhelmsen Logistics	38,9
9	9357303	Graceful Leader	NYK Line	38,8
10	9441570	Heroic Leader	NYK Line	38,7

Top 10 Shipowners 2013		
Rank	Charterer	ESI-Score
1	EUKOR Car Carriers INC.	35,6
2	Wilson Euro Carriers AS	32,7
3	Hanjin Shipping	31,8
4	hjh shipmanagement GmbH & Co KG	30,2
5	Flinter	29,3
6	Jr Shipping BV	28,1
7	Seaspan Corporation	28,1
8	NYK Line	28,1
9	Hamburg Süd	27,9
10	Wallenius Wilhelmsen Logistics	27,2

Various EUKOR vessels have made it into the Top Ten list. They have good sub-points for sulphur and nitrogen oxides thanks to the use of fuels with a relatively low sulphur content and the comparatively low nitrogen oxide scores for their propulsion plant. The shipping company confirmed that it wishes to make its own contribution towards environmental protection and added that good ecological performance also satisfies customer demand for eco-friendly supply chains.

Presentation and winners in 2014

The award for the ship with the lowest emissions to call at the ports of Bremen in 2014 went to the general cargo vessel "Wilson Dover". It belongs to the Wilson ASA shipping company which simultaneously won the award for the most eco-friendly shipowner. The award was presented at the Sustainable Shipping Conference in Bremen.



Fig. 21: The award is presented to the Wilson Dover and the Wilson shipping company

The following two tables show the Top 10 in the two different categories (vessel and shipowner/charterer) of the greenports Award:

Top 10 Ships 2014				
Rank	IMO-No.	Name	Shipowner/charterer	ESI-Score
1	9005754	Wilson Dover	Wilson EuroCarriers AS	41,8
2	9377494	Aniara	Wallenius Wilhelmsen Logistics	40,7
3	9383106	Morning Linda	EUKOR Car Carriers INC.	40,2
4	9320245	Gerd Maersk	Maersk Line	40,1
5	9332937	Fidelio	Wallenius Wilhelmsen Logistics	39,8
6	9332925	Faust	Wallenius Wilhelmsen Logistics	39,7
7	9383431	Morning Lucy	EUKOR Car Carriers INC.	38,4
8	9357327	Garnet Leader	NYK Line	37,7
9	9605798	Tosca	Wallenius Wilhelmsen Logistics	37,2
10	9316139	Aida	Wallenius Wilhelmsen Logistics	35,8

Top 10 Shipowners 2014		
Rank	Charterer	ESI-Score
1	Wilson EuroCarriers AS	34,2
2	Rederi AB Veritas Tankers	33,9
3	EUKOR Car Carriers INC.	31,7
4	Splitt Chartering ApS	26,3
5	Wallenius Wilhelmsen Logistics	24,2
6	NYK Line	23,7
7	Finnlines Deutschland GmbH	23,1
8	Flinter	22,5
9	CMA CGM	20,9
10	Mediterranean Shipping Company S.A.	20,4

The 87-metre long general cargo vessel 'Wilson Dover' flies the Barbados flag and calls at Bremen at irregular intervals. Wilson vessels are used for short-sea European traffic. The Wilson Dover is part of a fleet of more than 100 ships, which includes bulk carriers and general cargo vessels ranging from 1500 to 8500 DWT, as well as container and system ships.

Even before the more stringent sulphur limits were introduced in the SECAS at the beginning of 2015, the 'Wilson Dover' was already using marine diesel oil with a sulphur content of only 0.1%, thus achieving high sub-points for its sulphur emissions. The ship also has a shore-to-ship electric power supply.

6.1.3 Environmental aspects

Emissions generated by seagoing shipping are increasingly recognised and identified as a problem in the efforts to mitigate or avoid air pollution in ports and coastal areas. Sulphur and nitrogen oxides in particular as well as particulate matters have a direct effect on ambient air quality. Reducing carbon dioxide emissions is therefore an essential factor in the global war on climate change, as ports and shipping are key elements of the global transport chains.

6.1.4 Actors involved

Since the first discounts were introduced by the ESI member ports in 2011/2012, the scheme is meanwhile endorsed by no fewer than 41 ports and other providers of incentive systems all over the world. The database now includes and assesses a total of 3810 seagoing vessels.

Representatives from the ports of Bremen attend the working group meetings of the World Port Climate Initiative (WPCI – under the umbrella organisation of the International Association of Ports and Harbours), whose agenda includes items such as the ongoing development and application of the ESI. The discount scheme offered by the ports of Bremen is agreed between SWAH and bremenports and approved by Bremen's Senate.

Contact name: **Karina Wieseler**
Job title/position: Port Development, Sustainable Shipping
Postal address: bremenports GmbH & Co. KG
Am Strom 2
27568 Bremerhaven
Germany

Telephone: +49 (0) 471 / 30901-154
Fax: +49 (0) 471 / 30901-532
E-mail: Karina.Wieseler@bremenports.de

Website: www.bremenports.de
www.greenports.de

6.2 From carbon-neutral ports management company to carbon-neutral port

Using fossil sources as an energy supply has long since become a globally significant topic and initially attracted public attention owing to specific effects such as air pollution, respiratory diseases, acid rain, dying forests and the limited availability of fossil resources.⁴⁶

For many years, the global increase in the CO₂ content of the atmosphere has been seen as one of the prime causes of global climate change, which triggers highly diverse effects in different parts of the world (melting polar ice sheets and glaciers, rising sea levels, changing climatic conditions). This leads to social risks for entire regions, the consequences of which are of existential importance.⁴⁷ The Stern report entitled “Review on the Economics of Climate Change” made it clear that precautionary, early investments in climate protection to mitigate climate change are far, far lower than the costs required to fund the social adjustment measures that are needed to counteract the effects resulting from climate change.⁴⁸

Various Climate Protection Declarations have paved the way for concerted action in an effort to limit climate change. These also led to the stipulation of national⁴⁹ and regional⁵⁰ climate change targets and the sectoral declarations of the IAPH (World Ports Climate Declaration⁵¹) and PIANC (Think Climate⁵²).

In 2008, Bremen’s Senator for Economic Affairs, Labour and Ports signed the World Ports Climate Declaration in Rotterdam on behalf of the Free Hanseatic City of Bremen. In 2009, Bremen’s port management company bremenports rolled out its greenports sustainability strategy, in which climate protection also plays a central role.⁵³

bremenports has set itself the mid-term goal of becoming a carbon-neutral port and is pursuing that objective with the support of Bremen’s Senator for Economic Affairs, Labour and Ports.

6.2.1 Project description

Subject matter / objective

Effective climate protection can only succeed if the protagonists are aware of their own emissions, energy consumption and scope for influencing future developments. First items on the agenda were therefore fundamental analyses of the carbon footprint of the port management company itself and of the port infrastructure. To date, these analyses have formed part of the Sustainability Report which the company has published since 2012 in accordance with the Global Reporting Initiative (GRI) standard. Each Sustainability Report undergoes an external audit.⁵⁴

⁴⁶ MEADOWS et al. (1972): Die Grenzen des Wachstums – Bericht des Club of Rome zur Lage der Menschheit.

⁴⁷ <http://www.ipcc.ch/>

⁴⁸ STERN REVIEW (2006): The Economics of Climate Change

⁴⁹ <http://www.bmub.bund.de/themen/klima-energie/klimaschutz/nationale-klimapolitik/>

⁵⁰ http://www.bauumwelt.bremen.de/umwelt/klima_und_energie/klimaschutz-24312

⁵¹ <http://www.wpci.nl/docs/Declaration.pdf>

⁵² <http://www.pianc.org/thinkclimatesupport.php>

⁵³ <http://www.i2b.de/fileadmin/Media/i2b/pdf/greenports.pdf>

⁵⁴ <http://www.bremenports.de/unternehmen/unsere-kompetenzen/greenports>

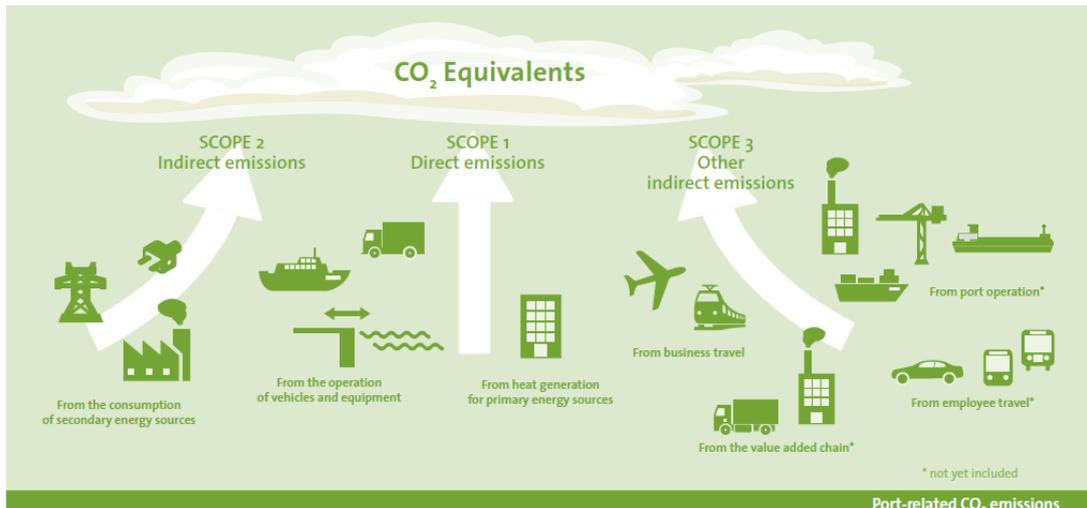


Fig. 22: Recorded emission areas⁵⁵

As the company already began in 2010 to change over its corporate fleet to low-consumption or alternatively electric vehicles and procure its electricity from renewable energy sources⁵⁶, the first carbon footprint analyses already reveal significant reductions in CO₂ emissions.

➤ **Status and trend for carbon emissions**

Fig. 23 shows the total figures for direct (Scope 1) und indirect (Scope 2) emissions for bremenports and the port infrastructure for the years 2012 to 2014, which reveal a clear reduction of the carbon footprint by 21 %. The port management company bremenports had therefore already reached its target of carbon neutrality by the year 2013.

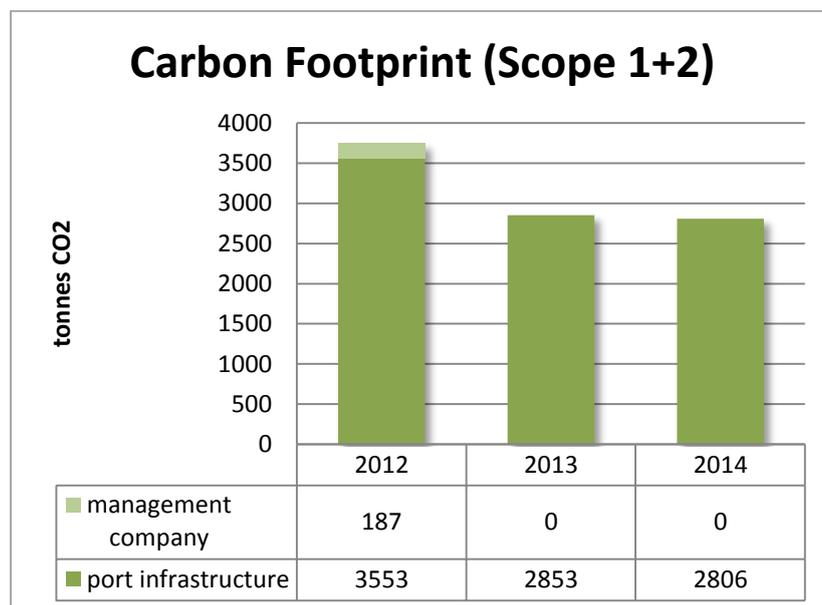


Fig. 23: CO₂ emissions by the ports of Bremen (public sector)

⁵⁵ bremenports (2015): Sustainability Report

⁵⁶ bremenports (2011): Sustainability – in our policies and in practice 2010/2011; <http://www.bremenports.de/en/company/media-centre/downloads>

The emission reductions achieved in the years 2012 to 2014 break down as follows (the changeover to green power had a particularly significant effect on reducing emissions):

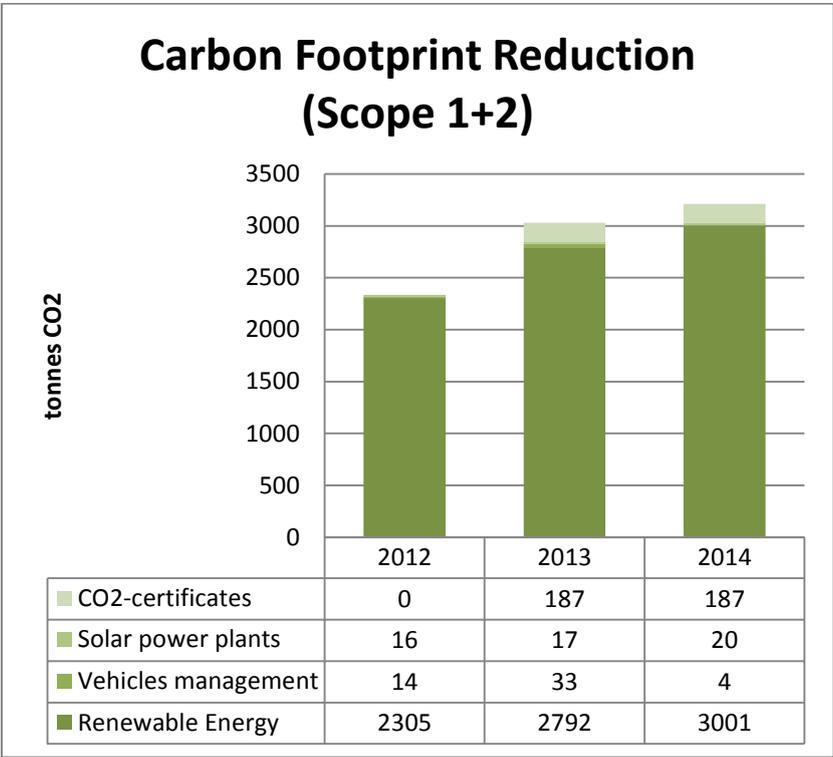


Fig. 24: Reduction of carbon emissions at the ports of Bremen (public sector)

Fig. 25 shows the resulting significant effect of more than 50% in emission reduction, which is also already noticeable for the high-consumption port infrastructure sector.

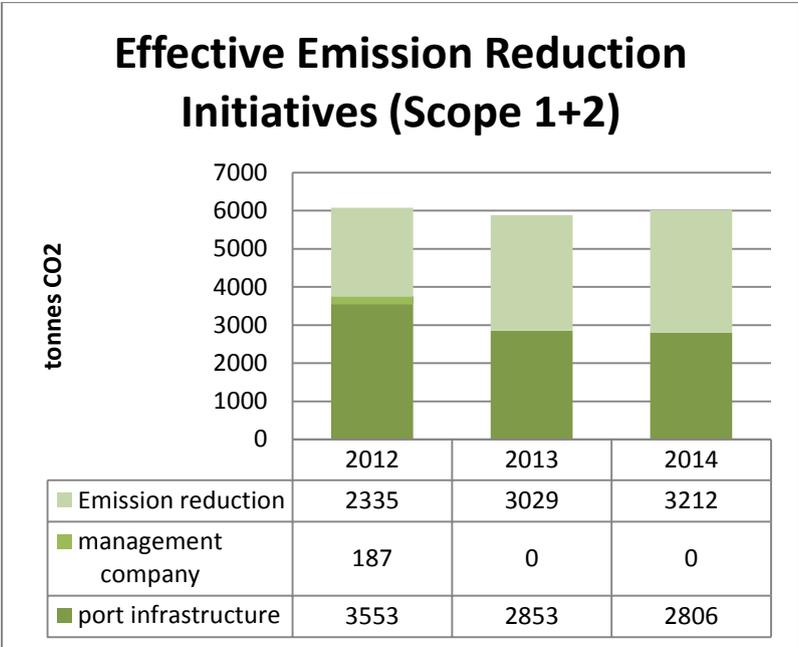


Fig. 25: Avoided carbon emissions at the ports of Bremen (public sector)

➤ **The target is to become a carbon-neutral port**

We have followed the objective of working towards carbon-neutrality at the port since 2014. In addition to further reductions of direct and indirect energy consumption and raising the share of renewable energy sources, we intend to achieve this target by implementing local measures to offset greenhouse gas emissions. The goals and the corresponding measures are stated in further detail in the greenports programme⁵⁷:

ASPECT	GOAL	MEASURE	STATUS 2014	DEAD-LINE	
Climate protection & energy management	Work towards CO ₂ neutrality in the port by reducing direct and indirect energy consumption, increasing the share of renewable energies and local offsetting of greenhouse gas emissions	Introduction of an energy management system in accordance with ISO 50001	Initiated	2016	
		Implementation of energy controlling software as an analysis tool	Initiated	2017	
		Measures in Scope 1			
		Regulation to give priority to the use of electrical vehicles in city traffic at the respective location	Planned	Open	
		Replacement of further conventional vehicles with electrical, hybrid and natural gas vehicles	Planned	Open	
		Measures in Scope 2			
		Commission new energy-saving method for cathodic corrosion protection at the riverside quay	Initiated	2016	
		Replacement of wave chamber lighting at the riverside quay with LED	Initiated	2016	
		Installation of a test route with LEP/LED lighting	Initiated	2017	
		Identify systems which are still operated using conventional electricity (e.g. street lighting in Bremen) and convert these to green electricity	Planned	Open	
Climate protection & energy management	Work towards CO ₂ neutrality in the port by reducing direct and indirect energy consumption, increasing the share of renewable energies and local offsetting of greenhouse gas emissions	Measures in Scope 3			
		Promote cycling to work through the health day events and the annual "Cycle to work" campaign (AOK/ADFC).	Initiated	2015	
		Conduct a staff survey on commuter traffic	Planned	2016	
		Analysis of possible CO ₂ reductions in connection with business travel (e.g. via a cut in the number of kilometres flown, purchasing of green electricity for rail travel in Germany)	Planned	Open	
		Optimise the accessibility of bremenports' service business via public transport	Planned	Open	
		Successive expansion of the GHG Scope 3 to cover the entire port	Planned	Open	

Fig. 26: Extract from the greenports programme

➤ **Neutralisation of unavoidable emissions for the port management company (carbon-neutral management company)**

However, our commitment to climate protection should not end simply because these initiatives have been successful, although we are still generating residual emissions which accelerate climate change. In its role of port management company, bremenports wishes to act responsibly and set a good example by neutralising the remaining emissions which are unavoidable. As these are essentially generated at local level, we believe it is important to implement a local solution, in the form of local compensation, which makes sense to the general public. We have therefore opted for Moorland Climate Protection Certificates⁵⁸, a project which was awarded a prize by the Metropolitan Region of Bremen/Oldenburg in North-West Germany and which enables regional compensation in compliance with generally recognised quality standards (cf. Fig. 27). Accordingly, Moorland Climate Protection

⁵⁷ bremenports (2015): Sustainability Report; p. 85 & 86

⁵⁸ http://www.moor-land.de/fileadmin/user/pdf/Moorland_Steckbrief-Klimamoor-Dorumer-Moor_final_web.pdf

Certificates were purchased for all carbon emissions (Scope 1, 2 & 3) caused by bremenports in the years 2013 and 2014 (cf. Fig. 28).

Each certificate stands for the symbolic purchase of a piece of moorland and the proceeds from sale of the certificates are invested in re-waterlogging the sites. Each plot of moorland corresponds to an achieved reduction of approx. 1 tonne of greenhouse gases over the 20-year course of the project. The plots are located in moorland areas around Bremerhaven which, like 95% of all moors and bogs, had been drained in the past and are now being re-waterlogged.



Fig. 27: Re-waterlogged moorland sites in Dorumer Moor



Fig. 28: Moorland Climate Protection Certificates purchased on behalf of bremenports

This approach has led to the following effects for the port management company (cf. Fig. 29): its carbon emissions, which – excluding the share caused by business travel – amounted to a comparatively steady level of 187 tonnes of CO₂, have now settled at this low level thanks to various initiatives to reduce emissions (downgrading the corporate fleet, use of renewable energy at the offices ...). The purchase of the CO₂ certificates completely neutralises these emissions.

The company also signed an agreement to purchase electricity exclusively from renewable energy sources for the requirements of all leased office premises as from 2015, so that the previous emissions resulting from electricity no longer occur as from that year.

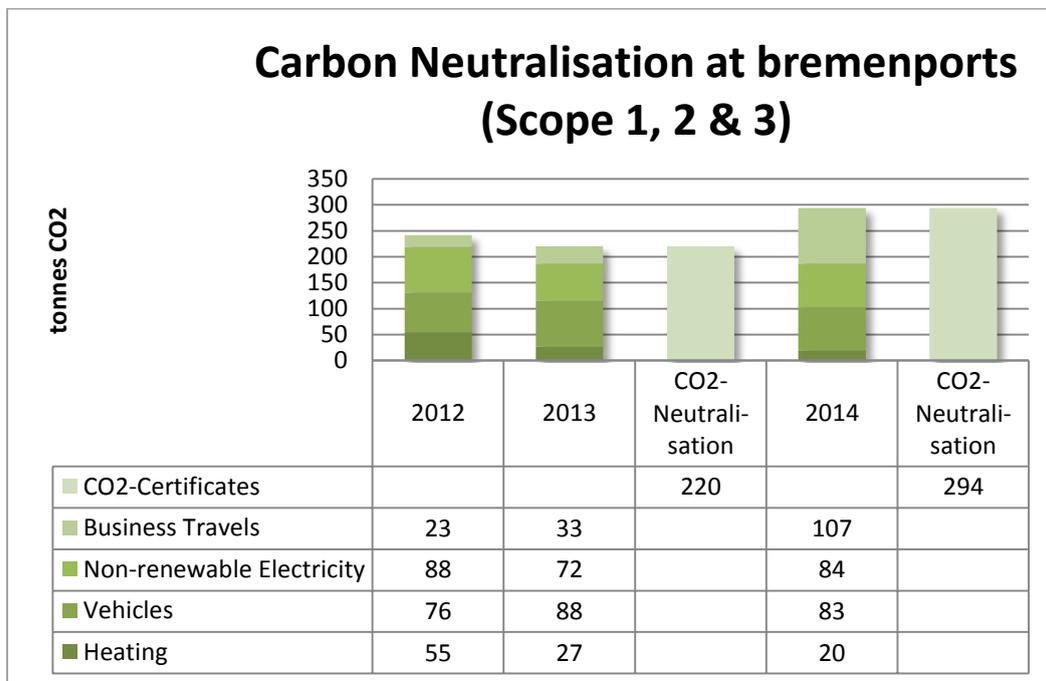


Fig. 29: Emission sources and carbon neutralisation at bremenports (all scopes)

➤ Other initiatives

As already evident from the extract from the greenports programme (cf. Fig. 26), there are also a number of other initiatives which are intended to bring us closer to our goal of becoming a carbon-neutral port. One important factor in that connection is the company's support for the introduction of liquefied natural gas (LNG) as a low-emission fuel for shipping. We believe that this provisional technology will be necessary for many years until hydrogen propulsion systems or liquefied gas from renewable sources can provide a suitable alternative. In the interests of pushing ahead with this technology, we designed and commissioned the construction of the first LNG-powered German barge, which is scheduled to go into operation as part of our corporate fleet before the end of this summer.



Fig. 30: Launch of the LNG-powered greenports 1

We have introduced an energy management system to identify further potential for saving energy and raising efficiency and to provide us with a basis which will enable us to specify a target timeline for achieving carbon-neutrality. Initial certification pursuant to the DIN ISO 50001 standard will be completed before the end of 2016.

An innovative plasma lighting system is to be tested for use at the ports, especially as the first trials with such a system at port locations in North America proved successful.

With regard to carbon emissions in the transport chain, in addition to supporting the new fuels as stated above by granting environmental discounts on the port charges (based, for example, on the ESI) and the presentation of an annual greenports Award (cf. Sec. 6.1), we also plan to offer incentives for reducing emissions. We will also be expanding our emissions model, which covers not only carbon, but also sulphur oxide, nitrogen oxide and particulates, as we believe that the acquired data will facilitate the development of suitable solutions. This includes providing a carbon tool which will give business enterprises a reliable source of information about certain types of transport (container, car etc.) and thus enable them to consider climate protection aspects when designing their transport processes.

6.2.2 Environmental aspects

With these selected procedures and actions, we not only wish to make an effective contribution towards climate protection and prevent many negative concomitant phenomena, but simultaneously protect our valuable fossil resources and develop an economy and society which is based on renewable energy supply and therefore consequently also reduces other adverse impact on the environment. Neutralising or offsetting unavoidable carbon emissions also play an important role in restoring degraded habitats and reducing further harmful emission sources.

6.2.3 Actors involved

The activities described above rely on close consultation between the port management company and the shareholder, which in our case represents the general public through the local government. This constellation means we repeatedly have to canvass the necessary public support and also make every effort to pursue the public objectives. While we have to pay due attention to the wishes of the port customers, on the other hand we also have to point out the opportunities resulting from progressive, innovative approaches as well as the risks resulting from missed opportunities. Scientific institutes in particular are helpful partners in these efforts. We also enjoy constructive discussions with a number of NGOs, who not only monitor the targets that have been set, but are occasionally important partners for achieving these targets (e.g. Moorland Project).

Contact name: **Uwe von Bargaen**
Job title/position: Director Environment & Sustainability
Postal address: bremenports GmbH & Co. KG
Am Strom 2
27568 Bremerhaven
Germany

Telephone: +49 (0) 471 / 30901-550
Fax: +49 (0) 471-30901-532
E-mail: Uwe.vonBargaen@bremenports.de

Website: www.bremenports.de
www.greenports.de

6.3 Achievements and planned activities

Chapter 4.1 shows the environmental impacts and the legal basis of port-related activities in Bremen/Bremerhaven. So far, the public port administration has been able to meet the legal standards of environmental legislation. This is documented for instance by the various licensing documents for port extensions which have been cited in this chapter and which have been affirmed by court decisions in some cases. Furthermore, according to the environmental policy, the ports of Bremen will as well take steps over and beyond the legally required environmental standards. This was stated already in the application for PERS in 2011, 2014, the following reapplication and is still valid. In the following, general achievements, achievements with respect to the former declaration and planned activities will be mentioned:

Measures in line with legal standards:

- The constructional compensation measures for container terminal CT4 were finished with flooding of tidal polder on the Luneplate in 2012. Until 2027, the area should develop in the targeted manner. The whole area was classified as nature reserve in 2015. Furthermore, requirements regarding compensational and nature protection aims are included in an integrated management plan and will be implemented. For instance a concept and the infrastructure (watch tower and footpaths) for experiencing nature have been implemented.
- The expiry of the development period on the last large-scale sub-measure on the Tegeler Plate was the conclusion of the commitment for compensation measures of the expansion of container terminal CT3. The formal assessment of the achievement has been stated in Oct. 2015.

Environmental priorities according to our “greenports” programme (2014):

Sustainable development is characterized by a process of continuous improvement. The goals which we have set ourselves en route to a sustainable port as well as the specific measures in place for achieving the former have been bundled in the “greenports” programme. This programme includes concerning environmental compatibility the following priority goals:

Goal 1: Work towards CO₂ neutrality in the port by reducing direct and indirect energy consumption, increasing the share of renewable energies and local offsetting of greenhouse gas emissions

Goal 2: Minimization of use of materials as far as possible and avoidance of waste

Goal 3: Minimization of land consumption and the negative impacts of business activities on biodiversity

Goal 4: Promotion of environmentally friendly shipping

Goal 5: Reduction of negative effects within the framework of water depth maintenance

To realize these goals targeted measures have to be developed and implemented.

Progress compared to the last statement/measures beyond legal standards:

- The intent to give priority to the conversion of existing properties over further land consumption has been established.
- The preservation of the functionality of the biotope area (~30% of the entire port area) has been ensured.
- The intent to foster the partnership with the Lower Saxony Wadden Sea National Park Authority was reached.
- bremenports has enhanced effectiveness and minimised the amount of used space by bundling compensation measures.
- The calculation of emissions from ships by the Bremen ports' emissions model has been completed for Bremerhaven.
- The Environmental Ship Index (ESI) has been further developed. The index distinguishes vessels whose environmental performance is better than the legal requirements with respect to SO_x, NO_x and CO₂. Shipping companies which dock at the ports of Bremen with particularly environmentally friendly ships can receive a discount on port fees. In 2015 74 ships qualified for this discount. Those ships called Bremen/Bremerhaven 121 times, so that for 1.5% of all ships calling the ports of Bremen a discount was granted. In total about 27% of all calls in 2015 were made with ships holding an ESI score.
- The presentation of the "greenports Award" to the ocean vessel with the lowest emissions and the shipping company with the most environmentally friendly fleet has been accomplished for 2014.
- The promotion of the use of LNG as an environmentally friendly fuel has been started and will also play an important role in the future.
- The development of alternative drive concepts/fuels in bremenports own working vessel fleet has been initiated and will be further developed in the future.
- Further berths for inland waterway vessels have been equipped with shore power connectors.
- bremenports is continuously undertaking efforts to prevent sedimentation (e.g. via water injective devices and irrigation via the bypass channel).

- bremenports is continuously working on possible entry paths for pollutants in order to avoid/reduce pollution of sediments.
- bremenports is working towards the extensive reutilisation of dredging spoils in order to retain valuable landfill capacities.
- Sustainable development is an important goal for the Senate of Bremen. Like most ports in the North, the port of Bremerhaven is located on an estuary. Estuaries belong to the most valuable habitats and therefore enjoy extensive protection under the Natura 2000 provisions. On the other hand, intensive uses such as shipping are important and the ports play a major role in the regional and national economy. An international project has been devised to harmonise ecological and economical needs and to enhance sustainability within estuarine regions. The Interreg Project TIDE (Tidal River Development) was finished in September 2013 (for results see www.tide-project.eu). An expression of interest has been given for a follow-up project called “Immerse” at the Interreg secretariat where SWAH and bremenports want to work together on port-environment related topics.
- In April 2011, a LNG working group was established, involving the Ministry of Economic Affairs, Labour and Ports, the Ministry of Environment, Construction and Transport, the Harbour Master and bremenports, in order to facilitate prospective LNG infrastructure projects in Bremen and Bremerhaven. This means, amongst others, the support of the realisation of LNG bunker facilities. The bunker facility for Bremen shall provide LNG to be available in 2016.
- In 2009, bremenports GmbH & Co. KG published its greenports initiative for sustainability (in economic, ecologic and social matters) in the ports of Bremen and Bremerhaven. This status report was followed in September 2011 by a special sustainability booklet including information about further improvements. As the first German port, the Port of Bremen/Bremerhaven, together with the management company bremenports, was certified based on its Sustainability Report 2012 according to the standards of the Global Reporting Initiative (GRI) in June 2013. In 2014, bremenports achieved the recertification for the year 2013 and in 2015 for the sustainability report 2014, this time in accordance with the ambitious GRI G4 standard. With sustainability becoming a business objective, this is a long term task that will be monitored continuously.
- As announced in the Environmental Report 2010, the launch of a CO₂-footprint was realized in the Sustainability Report 2012. In association with the environmental indicators of GRI, the emission of green house gases had to be determined and measures to reduce them were documented. The reporting was made according to the requirements of GRI and was verified by KPMG. These reflections have been updated regularly within the sustainability reporting. Furthermore, it is intended to extend carbon footprint reporting to the supply chain together with the port and logistics industry.
- The German research project “Nordwest 2050” on climate change adaptation strategies ended in May 2014. Together with regional scientific partners and the related port and transport industry, bremenports developed innovations which will help to be prepared for climate change. The English summary can be seen at <http://www.nordwest2050.de>

- SWAH has successfully applied for a project subsidised by the North West Metropole region. The focus of this project was the networking of relevant partners to boost the use of hydrogen in the maritime industry of the North West of Germany. The project ended in December 2015 (for results see <http://maritimerwasserstoff.de/>).
- SWAH has successfully applied for a project subsidised by the North West Metropole region. The focus of this project is the establishment and testing of LEP lamps in ports. The installation of LEP lamps can lead to enormous savings in electricity consumption. Together with bremenports and niedersachsenports, a variety of partners of the North West region are active within this project.

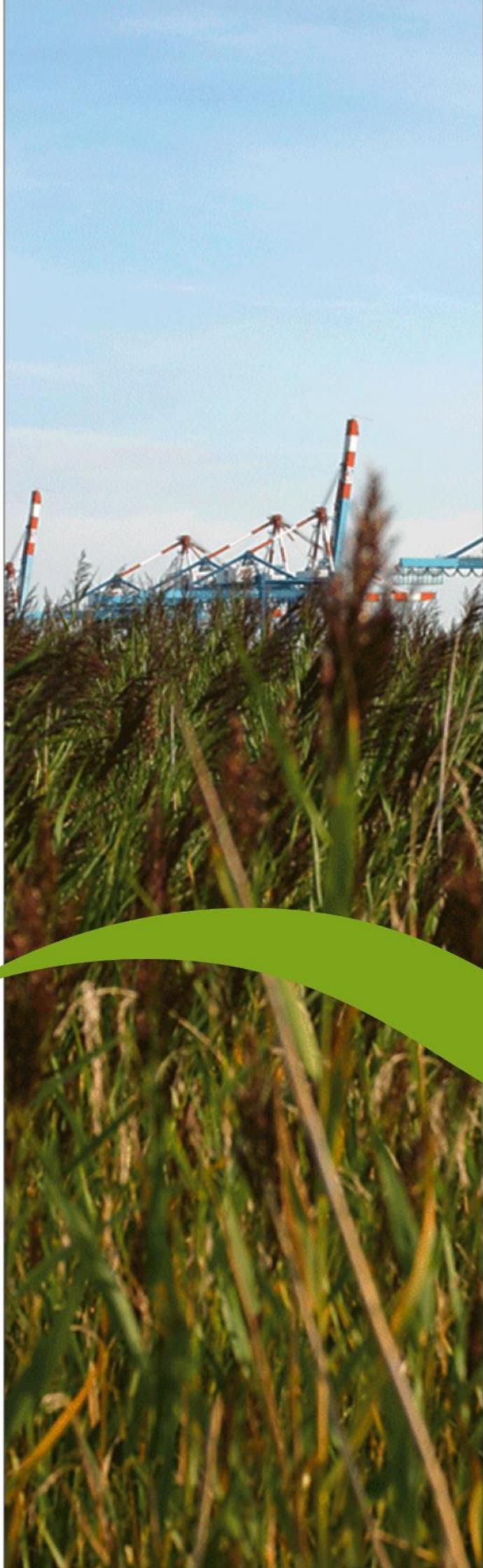
To realize the above-mentioned goals concerning environmental compatibility, the following measures are planned (see “greenports” programme included in the sustainability report 2014).

Planned activities:

- Introduction of an energy management system in accordance with ISO 50001 for bremenports
- Implementation of energy controlling software as an analysis tool for bremenports
- Measures concerning direct GHG emissions (Scope 1):
 - Regulation to give priority to the use of electrical vehicles in city traffic at the respective location
 - Replacement of further conventional vehicles with electrical, hybrid and natural gas vehicles
 - Equipment of bremenports’ own ships, especially the hopper barges, with LNG fuelled propulsion systems. The first new built LNG-fuelled hopper barge is planned to start operation in 2016
- Measures concerning energy indirect GHG emissions (Scope 2):
 - Commission of a new energy-saving method for cathodic corrosion protection at the riverside quay
 - Replacement of wave chamber lighting at the riverside quay with LED
 - Installation of a test route with LEP/(LED) lighting
 - Identification of systems which are still operated using conventional electricity (e.g. street lighting in Bremen) and conversion to green electricity

- Measures concerning other indirect GHG emissions (Scope 3):
 - Promotion of cycling to work through the health day events and the annual "Cycle to work" campaign (AOK/ADFC)
 - Conduct of a staff survey on commuter traffic
 - Analysis of possible CO₂ reductions in connection with business travel (e.g. via a cut in the number of kilometres flown, purchase of green electricity for rail travel in Germany)
 - Optimisation of the accessibility of bremenports' service buildings via public transport
 - Successive expansion of the GHG Scope 3 to cover the entire port
- Systematical record of the amount of material consumed and waste generated during construction and maintenance projects
- Offering of further training opportunities on resource-saving construction methods and the use of recycled materials
- Reduction of the impact on European protected areas/protected species via a sediment management concept
- The Ministry of Economic Affairs, Labour and Ports and bremenports are willing to support a follow-up project on climate adaptations of the Drepte lowland as a typical coastal area which is situated between Bremen and Bremerhaven. By means of various studies, the feasibility of strengthening the resilience of this lowland against the threats of climate change shall be examined, if the studies can be financed. Therefore the involved partners look permanently for national or international subsidies.
- Measures which serve to reduce emissions in shipping:
 - Organisation of additional incentives in Bremen's ports (LNG discount from 2016)
 - From 2016 on, every quarter of a year up to 25 ships with a score of 40 or more ESI points receive a rebate of 15% on port fees.
 - Installation of a LNG filling station shall promote the use of LNG instead of other fuels and therefore reduce emissions (air pollutants, CO₂ and noise)
 - Evaluation of shore-side electricity options for ocean shipping
 - Apart from the already installed shore side electricity facilities further quays for inland water vessels shall be equipped for basic services to shore side electricity in order to reduce emissions (noise and air pollution) from ship related aggregates
- Measures which prevent the disposal of ships' waste in the world's seas:
 - Further extension of initiatives for ships to dispose of waste in ports
- Measures which encourage the market maturity of biocide-free underwater coatings:
 - Usage of biocide-free underwater coatings in our own fleet and involvement in innovative test applications

- The sustainability reporting according to the GRI standard will be continued.
- Eurogate has defined the goal to save 20% energy per handled box until 2020 compared to 2008. This means to save 1% in each of the coming years. Moreover, the proportion of regenerative energy and the investment in wind energy shall be raised.
- Furthermore, Eurogate has started to implement the ISO 50001 energy management. For the coming years, especially from 2018 onwards, big energy savings are expected which are prepared at the moment. In 2015, Eurogate has performed a LED test for a 45 m high lamp pole. If the light performance is persistent, the technology will be implemented on a large scale at Eurogate.



Environmental Report
CHAPTER 7



7 PICTURE CREDITS

Cover picture: Krijn Hamelink

Figure 1: bremenports GmbH & Co. KG

Figure 2: bremenports GmbH & Co. KG

Figure 3: Wasser- und Schifffahrtsverwaltung des Bundes (figure translated by bremenports GmbH and Co. KG)

Figure 4: bremenports GmbH & Co. KG

Figure 5: bremenports GmbH & Co. KG

Figure 6: bremenports GmbH & Co. KG

Figure 7: bremenports GmbH & Co. KG

Figure 8: bremenports GmbH & Co. KG

Figure 9: bremenports GmbH & Co. KG

Figure 10: bremenports GmbH & Co. KG

Figure 11: bremenports GmbH & Co. KG

Figure 12: bremenports GmbH & Co. KG

Figure 13: bremenports GmbH & Co. KG

Figure 14: bremenports GmbH & Co. KG

Figure 15: bremenports GmbH & Co. KG

Figure 16: bremenports GmbH & Co. KG

Figure 17: bremenports GmbH & Co. KG

Figure 18: bremenports GmbH & Co. KG

Figure 19: bremenports GmbH & Co. KG

Figure 20: bremenports GmbH & Co. KG

Figure 21: bremenports GmbH & Co. KG

Figure 22: bremenports GmbH & Co. KG

Figure 23: bremenports GmbH & Co. KG

Figure 24: bremenports GmbH & Co. KG

Figure 25: bremenports GmbH & Co. KG

Figure 26: bremenports GmbH & Co. KG

Figure 27: Henning Kunze

Figure 28: bremenports GmbH & Co. KG

Figure 29: bremenports GmbH & Co. KG

Figure 30: bremenports GmbH & Co. KG



Environmental Report

CHAPTER 8



8 CONTACT INFORMATION AND PUBLISHERS

Published by The Senator for Economic Affairs, Labour and Ports
Zweite Schlachtpforte 3
D-28195 Bremen
www.wirtschaft.bremen.de

bremenports GmbH & Co. KG
Am Strom 2
27568 Bremerhaven
www.bremenports.de

Coordination: Dr. Carola Lampe, SWAH

Texts: Jochen Kreß, SWAH
Uwe von Bargen, bremenports
Teresa Haberberger, bremenports
Karina Wieseler, bremenports

Bremen, Bremerhaven, July 2016

APPENDIX

Annex A: Register of significant environmental aspects

Register of significant environmental aspects						Twin-Ports of Bremen/Bremerhaven					
1	2	3	4	5	6						
Ref. No.	Environmental impact by port activities	Exposure path-way/Impact on	Responsible organisation ⁵⁹	Legal and other requirements ⁶⁰	Remarks						
A.						PORT OWN ASPECTS (INFRASTRUCTURE)					
A. 0	Sustainable port management	All aspects of the environment	bremenports ⁶¹ , Director Environment & Sustainability ⁶²	Port's own greenports strategy (incl. greenports programme), Global Reporting Initiative, PERS, Environmental Partnership Network Bremen (PUU)	Covers all aspects of sustainability: ecology, social welfare and economy						

⁵⁹ Here only operational responsible organisations are mentioned.

⁶⁰ In the current version

⁶¹ Responsible administration

⁶² Authorized unit in management company

A. 1	Port development planning	All aspects of the environment	bremenports, Staff Division Manager Port Development	<p>Legal requirements Habitat Directive 92/43/EWG (1992) and Birds Directive 2009/147/EG (2009) transposed in Federal Nature Conservation Act from 29.07.2009 (entered into force on 01.03.2010)⁶³; Nature Conservation Act of Bremen (2010)⁶⁴. Water Framework Directive 2000/60/EG transposed in Federal Water Act from 31.07.2009 (entered into force on 01.03.2010)⁶⁵, Nature reserve by-laws Weserportsee (21.03.1997, last amendment 13.12.2011)⁶⁶ and Luneplate (17.02.2015)⁶⁷</p>	Prevention, mitigation & compensation concepts to avoid negative effects on the environment by port planning, targets sustainability as objective
------	---------------------------	--------------------------------	--	---	---

⁶³ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/bnatschg_2009/gesamt.pdf

⁶⁴ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.74482.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

⁶⁵ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/whg_2009/gesamt.pdf

⁶⁶ Find the current version at http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.72203.de&template=20_gp_ifg_meta_detail_d#jlr-

WeserpNatSchGebVBRahmen

⁶⁷ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.68633.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

				<p>Planning schemes Master Development and Town Planning Scheme Bremen (new edition 17.02.2015), Master Development and Town Planning Scheme Bremerhaven (2006) and amendments, Landscape Programme Bremen (new edition, published 29.04.2015); Landscape Planning Scheme No. 1 Bremerhaven (1999), Municipal Town Planning Scheme No. 441 (Westlicher Fischereihafen), No. 445 (Offshore Terminal Bremerhaven), Regional Planning Scheme Cuxhaven (2012), Traffic Development Scheme Bremen (23.09.2014), Agreement of the governmental parties of the Federal State of Bremen (2015), Integrated Management Plan Weser (2012)⁶⁸</p> <p>Master plans/strategies greenports strategy, port development concept 2020/25, Port railway, Ports left hand side of the River Weser, Industrial ports, Car handling Bremerhaven, Inland navigation</p>	
--	--	--	--	---	--

⁶⁸ See <http://www.weser-in-bewegung.de/infothek/>

A. 2	Noise of the port area	Air, neighbouring population	Ministry of Economic Affairs, Labour and Ports, units 02&32; bremenports, Director Environment & Sustainability	<p>Legal requirements EU-Directive 2002/49/EG (2002) transposed in Federal Immission Control Act as amended and promulgated on 17.05.2013⁶⁹, §§ 47a-f; Strategic Noise Mapping Bremen (2007), Action plan for noise reduction Bremen (2009, amended 2014)⁷⁰, Strategic Noise Mapping Bremerhaven (2012), Action plan for noise reduction Bremerhaven (2014); Federal Immission Control Act §§ 22, 50⁷¹; Authorizations - in particular extensions of CT 4, CT IIIa, CT III Court judgement as regards the extension of CT 4 (OVG 1 D 224/04) and CT IIIa (OVG 1 D 299/01), settlement in court as regards the determination of constitutionality of the development plans CT II and III (OVG 1 N 7/89)</p> <p>Other requirements greenports strategy</p>	Containment and reduction of industrial port noise
------	------------------------	------------------------------	---	---	--

⁶⁹ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bimschg/gesamt.pdf>

⁷⁰ Find the current version at <https://ssl5.bremen.de/transparenzportal/sixcms/detail.php?gsid=bremen213.c.49768.de&asl=bremen02.c.732.de>

⁷¹ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bimschg/gesamt.pdf>

A. 3	Air pollution	Air, neighbouring population, animals, plants	bremenports, Director Environment & Sustainability; Ministry of Economic Affairs, Labour and Ports, units 02&32	<p>Legal requirements Federal Immission Control Act as amended and promulgated on 17.05.2013, particularly § 22⁷²</p> <p>Other requirements Environmental Shipping Index (ESI, started 2012 in the ports of Bremen/Bremerhaven); greenports strategy</p>	Containment and reduction of air pollution
	Air pollution	Air, neighbouring population, animals, plants	Harbour Master Office, units 21&31	<p>Legal requirements Directive 2012/33/EC (implemented by § 28 a of Bremen Port Bye Laws⁷³, § 6 of Bremen Port Operation Law⁷⁴)</p> <p>Other requirements greenports strategy</p>	Ship inspections

⁷² Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bimschg/gesamt.pdf>

⁷³ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.67352.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

⁷⁴ Find the current version at http://transparenz.bremen.de/sixcms/detail.php?gsid=kogis_tp_berlin01.c.85849.de&_article_id=1459&fulltext=hafenbetriebsgesetz

A. 4	Climate protection/ energy efficiency	Climate & all aspects of the environment	bremenports, Director Environment & Sustainability	<p>Legal requirements Act on Energy Services and Further Energy Efficiency Measures (EDL-G)⁷⁵, Bremen's Act on Climate Protection and Energy (BremKEG)⁷⁶</p> <p>Other requirements Climate protection and energy saving programme 2020 for the Free Hanseatic City of Bremen, Environmental Shipping Index (started 2012 in ports of Bremen/Bremerhaven); World Port Climate Declaration (2008); greenports strategy; Environmental Partnership Network Bremen (PUU)</p>	Green logistic, promotion of renewable energies/ increase/maximization of energy efficiency
A. 5	Climate change adaptation	Climate, water, port infrastructure, neighbouring population	bremenports, Director Environment & Sustainability	Coastal Protection Plan 2007, R+D-Project Nordwest 2050; greenports strategy	Green logistic, increase of resilience to climate change

⁷⁵ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/edl-g/gesamt.pdf>

⁷⁶ Find the current version at https://ssl.bremen.de/senatskanzlei/sixcms/media.php/13/2015_03_26_GBI_Nr_0040_BremKlimaschutz%2Bund%2BEnergieG_signed.pdf

A. 6	Warranty of service capability of nature and landscape (negative influences on nature and land consumption)	All environmental aspects	bremenports, Director Environment & Sustainability	<p>Legal requirements Habitat Directive 92/43/EWG (1992), Birds Directive 2009/147/EG (2009) transposed in Federal Nature Conservation Act from 29.07.2009 (entered into force on 01.03.2010)⁷⁷; Federal Environmental Impact Assessment Act as amended and promulgated on 24.02.2010⁷⁸, Federal Nature Conservation Act from 29.07.2009 (entered into force on 01.03.2010)⁷⁹, Nature Conservation Act of Bremen (2010)⁸⁰, Environmental Impact Assessment Act of Bremen (2008)⁸¹, Landscape Programme Bremen (new edition 29.04.2015), Tree preservation bye-laws of Bremen (2002)⁸², Nature reserve bye-laws (e.g. Weserportsee (1994))</p> <p>Other requirements greenports strategy</p>	Ecological sustainability and safeguarding of “green infra- structure” (support for the greenports strategy), conservation of nature and landscape, safeguarding nature capacity
------	---	---------------------------	---	---	--

⁷⁷ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/bnatschg_2009/gesamt.pdf

⁷⁸ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/uvpg/gesamt.pdf>

⁷⁹ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/bnatschg_2009/gesamt.pdf

⁸⁰ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.74482.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

⁸¹ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.70214.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

⁸² Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.65663.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

A. 7	Port construction ⁸³ (environment-friendly project design)	All environmental aspects	bremenports, Division Manager Port Construction & Port Maintenance	<p>Legal requirements Habitat Directive 92/43/EEG (1992), Birds Directive 2009/147/EG (2009) transposed in Federal Nature Conservation Act, §§ 31- 34 (entered into force in 2009)⁸⁴ and Nature Conservation Act of Bremen (2010), § 24 clause 2⁸⁵; Federal Nature Conservation Act (2009) §§ 13-17, 37-40, 44; Water Framework Directive 2000/60/EG transposed in Federal Water Act from 31.07.2009 (entered into force on 01.03.2010⁸⁶, §§ 27, 68; Federal Environmental Impact Assessment Act (2010)⁸⁷, Environmental Impact Assessment Act of Bremen (2008)⁸⁸; environmental regulations - in particular extensions of CT 4, Water Act of Bremen (2011)⁸⁹, particularly § 20; Federal Immission Control Act as amended and promulgated on 17.05.2013⁹⁰ (§§ 22, 50);</p>	Prevention, mitigation & compensation of negative effects on the environment by construction projects (design and execution)
------	--	---------------------------	---	---	--

⁸³ As far as not subsumed under A. 6

⁸⁴ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/bnatschg_2009/gesamt.pdf

⁸⁵ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.74482.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

⁸⁶ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/whg_2009/gesamt.pdf

⁸⁷ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/uvpg/gesamt.pdf>

⁸⁸ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.70214.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

⁸⁹ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.72128.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

⁹⁰ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bimschg/gesamt.pdf>

				<p>Federal Soil Protection Act (1998)⁹¹; Authorizations with environmental regulations - in particular extensions of CT 4, CT IIIa, CT III; Court judgement as regards the extension of CT 4 (OVG 1 D 224/04) and CT IIIa (OVG 1 D 299/01), settlement in court as regards the determination of constitutionality of the development plans CT II and III (OVG 1 N 7/89)</p> <p>Planning schemes Master Development and Town Planning Scheme Bremen (new edition 17.02.2015), Master Development and Town Planning Scheme Bremerhaven (2006), Landscape Programme Bremen (new edition published on 29.04.2015); Integrated Management Plan Weser (2012)⁹²; greenports strategy; Environmental Partnership Network Bremen (PUU), Transitional instruction on dredged material handling in coastal areas (2009, former HABAK-WSV), Instruction on dredged material handling in inland areas (2000, HABAB-WSV)</p>	
--	--	--	--	---	--

⁹¹ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bbodschg/gesamt.pdf>

⁹² See <http://www.weser-in-bewegung.de/infothek/>

A. 8	Warranty of water depth by prevention of sedimentation and releasing/dredging of sediments	Water habitat/ water quality (e.g. pollutants, turbidity)	bremenports, Division Manager Port Maintenance	<p>Legal requirements OSPAR Convention (1992) transposed in Transitional instruction on dredged material handling in coastal areas (2009, former HABAK-WSV) and Instruction on dredged material handling in inland areas (2000, HAB-AB-WSV) ; Federal Waterway Act (2007)⁹³, Federal Water Act from 31.07.2009 (entered into force on 01.03.2010)⁹⁴; Water Act of Bremen (2011)⁹⁵, Integrated Management Plan Weser (2012)⁹⁶, Regulations as regards maintenance dredging in resp. development authorizations in particular extensions of CT III, CT IIIa, CT 4, port related turning area for ships (use of accredited methods)</p> <p>Other requirements greenports strategy; Environmental Partnership Network Bremen (PUU)</p>	Ecological sediment management, environmental- friendly methods for the maintenance of water depths
------	--	---	--	--	---

⁹³ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/wastrg/gesamt.pdf>

⁹⁴ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/whg_2009/gesamt.pdf

⁹⁵ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.72128.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

⁹⁶ See at <http://www.weser-in-bewegung.de/infothek/>

A. 9	Relocation of dredged material in open water, recycling or disposal	Water habitat/ water quality, hydrology & morphology, soil	bremenports, Division Manager Port Maintenance	<p>Legal requirements OSPAR Convention (1992) trans- posed in Transitional instruction on dredged material handling in coastal areas (2009, former HABAK-WSV) and Instruction on dredged material handling in inland areas (2000, HAB-AB-WSV); Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste transposed in Ordinance on waste disposal sites (2009)⁹⁷, Federal Waterway Act (2007)⁹⁸, Federal Water Act from 31.07.2009 (entered into force on 01.03.2010)⁹⁹, Water Act of Bremen (2011)¹⁰⁰; Federal Soil Protection Act (1998)¹⁰¹; Integrated Management Plan Weser (2012)¹⁰²; Regulations as regards maintenance dredging in development authorizations in particular extensions of CT III, CT IIIa, CT 4, port related turning area for ships (use of accredited methods)</p> <p>Other requirements greenports strategy; Environmental Partnership Network Bremen (PUU)</p>	Relocation of dredged material in the first place, recycling instead of disposal of dredged material, reduction of negative effects on environment, involvement of polluters on dredging with water-sanitation-effect
------	---	--	--	---	---

⁹⁷ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/depv_2009/gesamt.pdf

⁹⁸ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/wastrg/gesamt.pdf>

⁹⁹ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/whg_2009/gesamt.pdf

¹⁰⁰ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.72128.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

¹⁰¹ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bbodschg/gesamt.pdf>

¹⁰² See <http://www.weser-in-bewegung.de/infothek/>

A. 10	Operation of port railway facilities	Air/soil, water, noise	bremenports, Division Manager Port Maintenance ¹⁰³	<p>Legal requirements Federal Soil Protection Act (1998)¹⁰⁴, Federal Water Act from 31.07.2009 (entered into force on 01.03.2010)¹⁰⁵; Water Act of Bremen (2011)¹⁰⁶, Federal Immission Control Act as amended and promulgated on 17.05.2013¹⁰⁷; 16th Federal Immission Control Ordinance (1990)¹⁰⁸; Closed Substance Cycle Waste Management Act from 24.02.2012¹⁰⁹; Bye-laws concerning waste oil (2002)¹¹⁰, Ordinance on the management of waste wood (15.08.2002)¹¹¹; Law on the Transport of Dangerous Goods as amended and promulgated on 07.07.2009¹¹²; Bremen Port Bye Laws (2001) section 4, subsections 1 and 2¹¹³</p> <p>Other requirements greenports strategy; Environmental partnership Network Bremen (PUU)</p>	Oil spills, noise, waste, transport of dangerous cargo; Aim: prevention, mitigation & compensation of negative effects on the environment
-------	--------------------------------------	------------------------	---	---	--

¹⁰³ As far as not subsumed under A. 6

¹⁰⁴ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bbodschg/gesamt.pdf>

¹⁰⁵ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/whg_2009/gesamt.pdf

¹⁰⁶ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.72128.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

¹⁰⁷ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bimschg/gesamt.pdf>

¹⁰⁸ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/bimschv_16/gesamt.pdf

¹⁰⁹ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/krwg/gesamt.pdf>

¹¹⁰ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/alt_lv/gesamt.pdf

¹¹¹ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/alholzv/gesamt.pdf>

¹¹² Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/gefahrgutg/gesamt.pdf>

¹¹³ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.67352.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

A. 11	Contamination of water and soils	Dangerous goods, waste, water, soil	bremenports, Technical General Manager ¹¹⁴	<p>Legal requirements Closed Substance Cycle Waste Management Act from 24.02.2012¹¹⁵, Bye-laws concerning waste oil (2002)¹¹⁶, Federal Soil Protection Act (1998)¹¹⁷, Federal Water Act from 31.07.2009 (entered into force on 01.03.2010)¹¹⁸; Federal Immission Control Act as amended and promulgated on 17.05.2013¹¹⁹, 16th Federal Immission Control Ordinance (1990)¹²⁰; Law on the Transport of Dangerous Goods as amended and promulgated on 07.07.2009, §§ 8 and 9¹²¹; Bremen Port Bye Laws (2001), section 4, subsection 3, §§ 41-44 and section 5, §§ 54-55¹²²; Directive 2000/59/EC implemented by the Waste Management Plan for the Public Ports of the Free Hanseatic City of Bremen as promulgated on 17.08.2015¹²³</p> <p>Other requirements greenports strategy; Environmental Partnership Network Bremen (PUU)</p>	By the use of port's own facilities
-------	----------------------------------	-------------------------------------	---	--	-------------------------------------

¹¹⁴ As far as not subsumed under A. 6

¹¹⁵ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/krwg/gesamt.pdf>

¹¹⁶ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/alt_lv/gesamt.pdf

¹¹⁷ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bbodschg/gesamt.pdf>

¹¹⁸ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/whg_2009/gesamt.pdf

¹¹⁹ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bimschg/gesamt.pdf>

¹²⁰ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/bimschv_16/gesamt.pdf

¹²¹ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/gefahrgutg/gesamt.pdf>

¹²² Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.67352.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

¹²³ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.72967.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

	Contamination of water and soils	Dangerous goods, waste, water, soil	Harbour Master Office, units 21&31	<p>Legal requirements Law on the Transport of Dangerous Goods as amended and promulgated on 07.07.2009, §§ 8 and 9¹²⁴; Bremen Port Bye Laws (2001), section 4, subsection 3, §§ 41-44 and section 5, §§ 54-55¹²⁵; Directive 2000/59/EC implemented by the Bremen Law on Reception Facilities for Ship Generated Waste and Cargo Residues (2002)¹²⁶, § 13; Waste Management Plan for the Public Ports of the Free Hanseatic City of Bremen as promulgated on 17.08.2015¹²⁷</p> <p>Other requirements greenports strategy</p>	By ships and cargo operation; inspections on ships and in terminals
--	----------------------------------	-------------------------------------	------------------------------------	---	---

¹²⁴ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/gefahrgutg/gesamt.pdf>

¹²⁵ Find the current version at http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.67352.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

¹²⁶ Find the current version at http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.67361.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

¹²⁷ Find the current version at http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.72967.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

B. PORT-USERS ASPECTS (SUPERSTRUCTURE) ¹²⁸					
B.I. Terminal operators					
B.I.1	Noise emissions from handling	Neighbouring population	e.g. EUROGATE, (CTB), MSC Gate, NTB, BLG Logistics Group, Weserport	Federal Immission Control Act as amended and promulgated on 17.05.2013 § 22 ¹²⁹ ; Authorizations - in particular extensions of CT 4, CT IIIa, CT III, Court judgement as regards the extension of CT 4 (OVG 1 D 224/04) and CT IIIa (OVG 1 D 299/01), settlement in court as regards the determination of constitutionality of the development plans CT II and III (OVG 1 N 7/89)	Monitoring, noise reduction actions as regards loud events
B.I.2	Contamination of water, soil and air (oil, pesticides, gases)	Dangerous goods, air, water, soil, workers, neighbouring population	e.g. EUROGATE (CTB), MSC Gate, NTB, BLG Logistics Group, Weserport	Approval of installations, particularly authorizations in relation to CT 4, CT IIIa, CT III; Law on the Transport of Dangerous Goods as amended and promulgated on 07.07.2009, §§ 8 and 9 ¹³⁰ ; Bremen Port Bye Laws, section 4, subsection 3, §§ 41-44 (2001) ¹³¹	Particularly by accidents with water pollutants and handling/storage of dangerous cargo

¹²⁸ Relatively low influence of state agencies by approvals in line with legal requirements, as shareholder in relation to the shares or as landlord

¹²⁹ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bimschg/gesamt.pdf>

¹³⁰ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/gefahrgutg/gesamt.pdf>

¹³¹ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.67352.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

B.I.3	Light emissions through cargo handling	Air, neighbouring population/animals	e.g. EUROGATE (CTB), MSC Gate, NTB, BLG Logistics Group, Weserport	Approval of installations, particularly authorizations in relation to CT 4, CT IIIa, CT III, Federal Immission Act amended and promulgated on 17.05.2013, particularly § 22 ¹³²	Prevention and mitigation of light emissions
B.II.	Ocean Carrier/Shipping Lines				
B.II.1	Ship noise emissions	Air, neighbouring population	e.g.: Maersk Line, MSC, CMA CGM, Hapag Lloyd, WWL; OOCL, CSCL, Eukor Car Carriers, NYK Line, Unifeeder, Team Lines, UECC	Conformity with IMO-, EU-, Federal- or State-legal requirements	Monitoring

¹³² Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bimschg/gesamt.pdf>

B.II.2	Contamination of water and air	Dangerous goods, oil, pesticides, gases, water, workers, neighbouring population	e.g.: Maersk Line, MSC, CMA CGM, Hapag Lloyd, WWL; OOCL, CSCL, Eukor Car Carriers, NYK Line, Unifeeder, Team Lines, UECC	Law on the Transport of Dangerous Goods as amended and promulgated on 07.07.2009, §§ 8 and 9 ¹³³ ; Bremen Port Bye Laws section 4, subsection 3, §§ 41-44 (2001) ¹³⁴ , Federal Water Act from 31.07.2009 (entered into force on 01.03.2010) ¹³⁵ , Water Act of Bremen (2011) ¹³⁶	Particularly by accidents with water pollutants and handling/storage of dangerous cargo
B.II.3	Air pollution	Air, neighbouring population, animals, plants	e.g.: Maersk Line, MSC, CMA CGM, Hapag Lloyd, WWL; OOCL, CSCL, Eukor Car Carriers, NYK Line, Unifeeder, Team Lines, UECC	Directive 2005/33/EC (implemented by § 28 a of Bremen Port Bye Laws (2001) ¹³⁷ ; § 6 of Bremen Port Operation Law (2000) ¹³⁸	

¹³³ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/gefahrgutg/gesamt.pdf>

¹³⁴ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.67352.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

¹³⁵ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/whg_2009/gesamt.pdf

¹³⁶ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.72128.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

¹³⁷ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.67352.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

¹³⁸ Find the current version at http://transparenz.bremen.de/sixcms/detail.php?gsid=kogis_tp_berlin01.c.85849.de&_article_id=1459&fulltext=hafenbetriebsgesetz

B.II.4	Ship waste	Water	Harbour Master Office, units 21&31 Shipowners/charterer: e.g. Maersk Line, MSC, CMA CGM, Hapag Lloyd, WWL; OOCL, CSCL, Eukor Car Carriers, NYK Line, Unifeeder, Team Lines, UECC	Directive 2000/59/EC implemented by the Bremen Law on Reception Facilities for Ship Generated Waste and Cargo Residues (2002) ¹³⁹ ; Waste Management Plan for the Public Ports of the Free Hanseatic City of Bremen as promulgated on 17.08.2015 ¹⁴⁰	
B.III.	Shipyards/Dockyards				
B.III.1	Noise emissions	Neighbouring population	e.g. Lloyd Werft, MWB, Bredo, GERMAN DRY DOCKS	Approval of installations, development plans, Federal Immission Control Act as amended and promulgated on 17.05.2013, particularly § 5 and following ¹⁴¹	Monitoring

¹³⁹ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.67361.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

¹⁴⁰ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.72967.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

¹⁴¹ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bimschg/gesamt.pdf>

B.III.2	Contamination of water and soil	Dangerous substances, air/water, soil, workers, neighbouring population	e.g. Lloyd Werft, MWB, Bredo, GERMAN DRY DOCKS	Approval of installations, Ordinance on installations for handling of substances hazardous to waters (2010) ¹⁴² , Federal Soil Protection Act (1998) ¹⁴³	
B.III.3	Risk of explosion and fire	Air, environment, workers, neighbouring population	e.g. Lloyd Werft, MWB, Bredo, GERMAN DRY DOCKS	Approval of installations, Labour Protection Law (1996, last amendment 2009) ¹⁴⁴ , Ordinance on installations for handling of substances hazardous to waters (2005) ¹⁴⁵	
B.III.4	Dockyard waste water	Wastewater, water	e.g. Lloyd Werft, MWB, Bredo, GERMAN DRY DOCKS	Approval of installations, Federal Water Act from 31.07.2009 (entered into force on 01.03.2010) ¹⁴⁶ , Water Act of Bremen (2011) ¹⁴⁷ , Wastewater Charges Act of Bremen (1989) ¹⁴⁸	Monitoring

¹⁴² Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/wasgefstanlv/gesamt.pdf>

¹⁴³ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bbodschg/gesamt.pdf>

¹⁴⁴ Find the current version at https://www.gesetze-im-internet.de/englisch_arbschg/englisch_arbschg.pdf

¹⁴⁵ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/wasgefstanlv/gesamt.pdf>

¹⁴⁶ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/whg_2009/gesamt.pdf

¹⁴⁷ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.72128.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

¹⁴⁸ See current version under

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.64149.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

B.III.5	Dockyard waste	Waste, soil, water	e.g. Lloyd Werft, MWB, Bredo, GERMAN DRY DOCKS	Approval of installations, Closed Substance Cycle Waste Management Act from 24.02.2012 ¹⁴⁹ , Bye-laws concerning waste oil (2002) ¹⁵⁰ , Federal Water Act from 31.07.2009 (entered into force on 01.03.2010) ¹⁵¹ , Water Act of Bremen (2011) ¹⁵²	
B.III.6	Application of antifouling paint coating, grit emissions	Environment, air, water, workers	e.g. Lloyd Werft, MWB, Bredo, GERMAN DRY DOCKS	Approval of installations, Labour Protection Law (1996) ¹⁵³ , Federal Immission Control Act as amended and promulgated on 17.05.2013 ¹⁵⁴	

¹⁴⁹ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/kwrg/gesamt.pdf>

¹⁵⁰ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/alt_lv/gesamt.pdf

¹⁵¹ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/whg_2009/gesamt.pdf

¹⁵² Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.72128.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

¹⁵³ Find the current version at https://www.gesetze-im-internet.de/englisch_arbschg/englisch_arbschg.pdf

¹⁵⁴ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bimschg/gesamt.pdf>

B.IV. Storage and distribution (logistics) e.g.: storage of oils, fuels, metals, wood, coal, pet food, cereals and other bulk cargo					
B.IV.1	Noise emissions particularly <ul style="list-style-type: none"> • cargo traffic • company operation 	Air, neighbouring population	e.g. BLG Logistics (PKW, H&H) BLG Coldstore, Heuer, HGM, Diersch & Schröder, Hellmann, Glomb, Oiltanking (Tanklager BHV), Großmarkt	Approval of installations, development plans, Federal Immission Control Act as amended and promulgated on 17.05.2013 particularly § 22 ¹⁵⁵	Monitoring

¹⁵⁵ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bimschg/gesamt.pdf>

B.IV.2	Contamination of water and soil	Dangerous goods, water, soil, workers, neighbouring population	e.g. BLG Logistics (PKW, H&H) BLG Coldstore, Heuer, HGM, Diersch & Schröder, Hellmann, Glomb, Oiltanking (Tanklager BHV), Großmarkt	Approval of installations, Ordinance on installations for handling of substances hazardous to waters (2010) ¹⁵⁶ , Federal Soil Protection Act (1998) ¹⁵⁷ , Federal Water Act from 31.07.2009 (entered into force on 01.03.2010) ¹⁵⁸ , Water Act of Bremen (2011) ¹⁵⁹	Particularly bunkering-spillage of fuel
B.IV.3	Bulk product dust	Air/area, smell nuisance, neighbouring population	see above	Approval of installations, Labour Protection Act (1996) ¹⁶⁰ , Federal Immission Control Act as amended and promulgated on 17.05.2013 ¹⁶¹	
B.IV.4	Waste	Soil, water	see above	Approval of installations, Closed Substance Cycle Waste Management Act from 24.02.2012 ¹⁶² , Bye-laws concerning waste oil (2002) ¹⁶³	

¹⁵⁶ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/wasgefstanlv/gesamt.pdf>

¹⁵⁷ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bbodschg/gesamt.pdf>

¹⁵⁸ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/whg_2009/gesamt.pdf

¹⁵⁹ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.72128.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

¹⁶⁰ Find the current version at https://www.gesetze-im-internet.de/englisch_arbschg/englisch_arbschg.pdf

¹⁶¹ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bimschg/gesamt.pdf>

¹⁶² Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/krwg/gesamt.pdf>

¹⁶³ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/alt_lv/gesamt.pdf

B.IV.5	Risk of explosion and fire	Air/environment, workers, neighbouring population	see above	Approval of installations, Labour Protection Act (1996) ¹⁶⁴ , Ordinance on installations for handling of substances hazardous to waters (2010) ¹⁶⁵ , Bye-laws concerning the minimum safety and health requirements for the use of work equipment by workers at work, the safety with regard to the operation of facilities requiring special supervision and the organisation of safety at work (2015) ¹⁶⁶ ; Bye-laws concerning the protection from dangerous substances (2010) ¹⁶⁷	
--------	----------------------------	---	-----------	---	--

¹⁶⁴ Find the current version at https://www.gesetze-im-internet.de/englisch_arbschg/englisch_arbschg.pdf

¹⁶⁵ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/wasgefstanlv/gesamt.pdf>

¹⁶⁶ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/betrstichv_2015/gesamt.pdf

¹⁶⁷ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/gefstoffv_2010/gesamt.pdf

B.IV.6	Operation of port railway facilities	Air, soil, water, noise	Railway operation companies, transport companies	Federal Soil Protection Act (1998) ¹⁶⁸ ; Federal Water Act from 31.07.2009 (entered into force on 01.03.2010) ¹⁶⁹ ; Water Act of Bremen (2011) ¹⁷⁰ , Federal Immission Control Act as amended and promulgated on 17.05.2013 ¹⁷¹ , 16 th Federal Immission Control Ordinance (1990) ¹⁷² ; Closed Substance Cycle Waste Management Act from 24.02.2012 ¹⁷³ , Bye-laws concerning waste oil (2002) ¹⁷⁴ , Ordinance on the management of waste wood (15.08.2002) ¹⁷⁵ , Law on the Transport of Dangerous Goods as amended and promulgated on 07.07.2009 ¹⁷⁶ ; Bremen Port Bye Laws (2001), section 4, subsection 1 and 2 ¹⁷⁷ ; greenports strategy; Environmental Partnership Network Bremen (PUU)	Oil spills, noise, waste, transport of dangerous cargo; aim: prevention, mitigation & compensation of negative effects on the environment
--------	--------------------------------------	-------------------------	--	---	---

¹⁶⁸ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bbodschg/gesamt.pdf>

¹⁶⁹ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/whg_2009/gesamt.pdf

¹⁷⁰ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.72128.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

¹⁷¹ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bimschg/gesamt.pdf>

¹⁷² Find the current version at https://www.gesetze-im-internet.de/bundesrecht/bimschv_16/gesamt.pdf

¹⁷³ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/krwg/gesamt.pdf>

¹⁷⁴ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/alt_lv/gesamt.pdf

¹⁷⁵ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/alholzv/gesamt.pdf>

¹⁷⁶ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/gefahrgutg/gesamt.pdf>

¹⁷⁷ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.67352.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

B.V. Other port business (particularly A: conditioning facilities e.g. cars, food, fish...B: port service)					
B.V.1	Noise emissions, particularly <ul style="list-style-type: none"> lorries, production processes 	Air, neighbouring population	A: e.g. BLG Autotec, Deutsche See, Weserport, Frozen Fish, Kellogs B: e.g. Graue, HGM Energy, Nehlsen, Protectis	Approval of installations, development plans; Federal Immission Control Act as amended and promulgated on 17.05.013, particularly § 22 ¹⁷⁸	
B.V.2	Contamination of water and soil	Water, soil	A: e.g. BLG Autotec, Deutsche See, Weserport, Frozen Fish, Kellogs B: e.g. Graue, Oiltanking (Tanklager BHV), Nehlsen, Protectis	Approval of installations, Ordinance on installations for handling of substances hazardous to waters (2010) ¹⁷⁹ , Federal Soil Protection Act (1998) ¹⁸⁰ , Federal Water Act from 31.07.2009 (entered into force on 01.03.2010) ¹⁸¹ ; Water Act of Bremen (2011) ¹⁸²	Monitoring

¹⁷⁸ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bimschsg/gesamt.pdf>

¹⁷⁹ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/wasgefstanlv/gesamt.pdf>

¹⁸⁰ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bbodschg/gesamt.pdf>

¹⁸¹ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/whg_2009/gesamt.pdf

¹⁸² Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.72128.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

B.V.3	Wastewater	Wastewater, water	<p>A: e.g. BLG Autotec, Deutsche See, Weserport, Frozen Fish, Kellogs</p> <p>B: e.g. Graue, Oiltanking (Tanklager BHV), Nehlsen, Protectis</p>	Approval of installations, Federal Water Act (2009) ¹⁸³ , Water Act of Bremen (2011), particularly § 103 ¹⁸⁴ ; Wastewater Charges Act of Bremen (1989) ¹⁸⁵	
B.V.4	Bulk product dust	Air/area, smell nuisance, neighbouring population	<p>A: e.g. BLG Autotec, Deutsche See, Weserport, Frozen Fish, Kellogs</p> <p>B: e.g. Graue, Oiltanking (Tanklager BHV), Nehlsen, Protectis</p>	Approval of installations, Labour Protection Act (1996) ¹⁸⁶ , Federal Immission Control Act as amended and promulgated on 17.05.2013 ¹⁸⁷	

¹⁸³ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/whg_2009/gesamt.pdf

¹⁸⁴ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.72128.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

¹⁸⁵ Find the current version at

http://transparenz.bremen.de/sixcms/detail.php?gsid=bremen2014_tp.c.64149.de&asl=bremen203_tpgesetz.c.55340.de&template=20_gp_ifg_meta_detail_d

¹⁸⁶ Find the current version at https://www.gesetze-im-internet.de/englisch_arbschg/englisch_arbschg.pdf

¹⁸⁷ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/bimschg/gesamt.pdf>

B.V.5	Risk of explosion and fire	Air, environment, workers, neighbouring population	<p>A: e.g. BLG Autotec, Deutsche See, Weserport, Frozen Fish, Kellogs</p> <p>B: e.g. HGM Energy, Oiltanking (Tanklager BHV), Nehlsen, Protectis</p>	Approval of installations; Labour Protection Act (1996) ¹⁸⁸ , Ordinance on installations for handling of substances hazardous to waters (2010) ¹⁸⁹ , Bye-laws concerning the minimum safety and health requirements for the use of work equipment by workers at work, the safety with regard to the operation of facilities requiring special supervision, the organisation of safety at work (2015) ¹⁹⁰ ; Bye-laws concerning the protection from dangerous substances (2010) ¹⁹¹	
B.V.6	Waste	Soil, water	<p>A: e.g. BLG Autotec, Deutsche See, Weserport, Frozen Fish, Kellogs</p> <p>B: e.g. Graue, Oiltanking (Tanklager BHV), Nehlsen, Protectis</p>	Approval of installations; Closed Substance Cycle Waste Management Act of 24.02.2012 ¹⁹² ; Bye-laws concerning waste oil (2002) ¹⁹³	

¹⁸⁸ Find the current version at https://www.gesetze-im-internet.de/englisch_arbschg/englisch_arbschg.pdf

¹⁸⁹ Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/wasgefstanlv/gesamt.pdf>

¹⁹⁰ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/betrsv_2015/gesamt.pdf

¹⁹¹ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/gefstoffv_2010/gesamt.pdf

¹⁹² Find the current version at <https://www.gesetze-im-internet.de/bundesrecht/krwg/gesamt.pdf>

¹⁹³ Find the current version at https://www.gesetze-im-internet.de/bundesrecht/alt_lv/gesamt.pdf

greenports

:

www.wirtschaft.bremen.de
www.bremenports.de
www.greenports.de



GOLD Community
bremenports GmbH & Co. KG

2016