Port Environmental Review System (PERS)

Port of Rotterdam Authority, April 2020 (concept - 1.0)

PERS was developed by the
European Sea Ports Organisation and the Ecoports Foundation

Contents

Picture Frontpage : ECODELTA: first Dutch Liquid Natural Gas fueled dredging vessel

1. Introduction

1.1 Port of Rotterdam Authority & Corporate Social Responsibility

The Port of Rotterdam Authority regards Corporate Social Responsibility (CSR) as the key to a favourable future. CSR is a crucial precondition for a healthy development of the port in harmony with the surrounding area. In 2016, the Port of Rotterdam Authority replaced its 2006 CSR statement with a new one. In this CSR-statement, the authority commits itself to working on a future-proof port where economic enhancement goes hand in hand with improving the environment. The authority also commits itself to working in a socially responsible manner with respect to people and safety.

Since 2009, the report of the Executive Board and the CSR report have been integrated within the Annual Report. The Port of Rotterdam Authority decided to do so because CSR is an integral part of its business operations. Each manager has been delegated a responsibility for CSR within his/her own department. As of 2016, CSR has been given an definite place within the organization, where:

- The CEO is portfolio holder of CSR within the executive board.
- The department Environmental Management is coordinating and stimulating CSR developments, and oversees the entire organization's commitment to CSR. The CSR program manager within this department, addresses the CSR statement. And in addition, encourages and supports all departments of the organization to fulfil their CSR responsibility.
- A core team consisting of the CEO and representatives of Environmental Management, Communications & External Affairs and Human Resources coordinates the establishment of the CSR statement and monitors the awareness of CSR within the company by a set of KPI's such as the corporate carbon footprint .

The Port of Rotterdam Authority currently ranks fifth in 2019's Dutch Transparency Benchmark – a year-end review of the content and quality of CSR reporting within Dutch companies. The Port Environmental Review System (PERS) fits into our ambition to be transparent regarding our environmental initiatives and urges other ports to do the same.

1.2 Aim of PERS

The Port Environmental Review System (PERS) is designed to assist ports to implement an environmental management program in line with the recommendations of ESPO. The ESPO Environmental Code of Practice (2004) recommends that ports should:

- contribute to the development of a sustainable logistics chain;
- encourage wide consultation, dialogue and cooperation with relevant stakeholders at local level (port users, public and NGOs);
- generate new knowledge and technology and develop sustainable techniques which combine environmental effectiveness and cost efficiency;
- enhance cooperation between port authorities in the field of environment, facilitate the exchange of experiences and implementation of best practices on environmental issues;
- prepare a publicly available environmental policy to increase awareness of environmental concerns and integration of sustainable development;
- conduct appropriate environmental impact assessments for both port projects and port development plans;
- stimulate continuous improvement in the port environment and its environmental management;
- promote monitoring, based on environmental performance indicators, in order to measure objectively identifiable progress in environmental port practices;
- promote environmental reporting as a means of communicating environmentally good behaviour to stakeholders;
- intensify the communication about environmental improvements achieved by ports.

PERS is based on internationally recognized best practice, and yet remains a port-specific system developed by ports – for ports. It is formulated to be flexible and capable of evolution so that it can be adapted to future changes in legislation and priorities for action. The system defines a fundamental standard of good practice for the port sector.

2. Port profile

2.1 Introduction

The purpose of this section is to provide a summary of the major characteristics of the port of Rotterdam in terms of its legal status, commercial activity and environmental setting.

The information provides useful background information about the port because it indicates the range and scope of activity, the geography of the location and general facts concerning ownership and organization.

It is acknowledged that each port is unique. It is important to be aware of the local circumstances in which the port's environmental management program is operated.

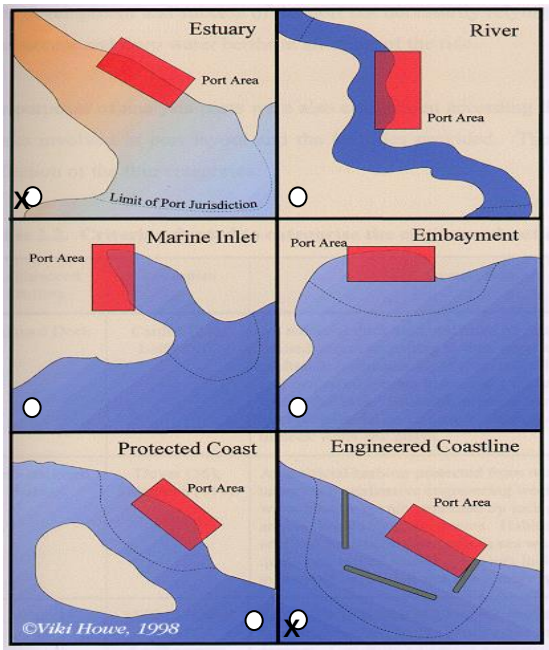
2.2 General port information

2.2.1 Legal Status and Port Operators

What is the port authority's legal position?	▪ Municipality	▪ State	▪ Private Company
	X other: Unlisted public limited company		
Who is the owner of the land?	**X** Municipality	▪ State	▪ Private Company
	▪ other		
Who operates the terminals?	▪ Public Companies	**X** Private Companies	
	▪ other		
Who does the stevedoring?	▪ Public Companies	**X** Private Companies	
	▪ other		
Who carries out cargo handling?	▪ Public Companies	**X** Private Companies	
	▪ other		

2.2.2 Port Location and Port Area

Please tick the geographic setting of the Port



The port is located in an estuary and has an engineered coastline (Maasvlakte)

Please describe the area of the Port

Area of port's land (km^2 or specify units): 12,643 hectares

Further detail (2018):
7.903 hectares land area of which 6.275 ha rentable sites

Port jurisdiction limit onshore (km or specify units): none

Area of port's navigable water (km^2 or specify units): 4,810 hectares

Port jurisdiction limit offshore (nautical miles): 30 km (circa 16 nm)

Further detail:
The harbour master of the Port of Rotterdam is also the state harbour master (national jurisdiction).

Total quayage Rotterdam (km): 77,3
Draught, largest vessel (m): 21,5 .
Tidal range (m): 1.65
Maximum draught (m): 22,55

2a. Use of Surrounding Land

X Agricultural land
X Conservation / Protected Areas
▪ Forestry / Woodlands
X Nature
X Open water (lakes, rivers, reservoirs)
X Urban / City
X Industry
X Recreational
▪ other

2b. Coastal and Marine Characteristics

▪ Boulders	▪ Offshore Islands
▪ Cliff	**X** Offshore Banks
▪ Rocky foreshore	**X** Rivers
X Tidal flats (mud)	**X** Sandy Beach
X Sea Walls / Coastal defence	▪ Shingle Beach
X Dune Systems	▪ Salt Marsh
	▪ other

2.2.3 Port Business

Tonnage:(million tons / year)	▪ < 5	▪ 5 < 15	▪ 25 < 50
	▪ 50 < 100	▪ 50 < 100	**X** > 100
	Further detail: ± 469,4million tons (in 2019)		
TEU* –containers:(thousands / year)	▪ < 250	▪ 250 < 500	▪ 500 < 1000
	▪ 1000 < 2000	▪ 2000 < 3000	▪ 3000 < 5000
	X > 5000		
	Further detail: ± 14,5 million TEU's (in 2019)		
Passengers: (thousands / year)	▪ < 1000	▪ 1000 < 3000	▪ 3000 < 7000
	X > 7000		

* TEU: container equivalent to 20 feet

2.2.4 Throughput (Port of Rotterdam, 2019)

(brutoweight x 1.000 metric tons)	**2019**
Iron ore and scrap	30.006
Coal	22.449
Agribulk	9.809
Biomass	887
Other dry bulk	11.333
Subtotal dry bulk	**74.485**
Crude oil	104.200
Mineral oil products	68.164
LNG	7.149
Other liquid bulk	31.697
Subtotal liquid bulk	**211.211**
TOTAL BULK GOODS	211.211
Deepsea	95.782
Feeder	30.510
Shortsea	26.613
Containers	**152.905**
Roll on/roll off	24.253
Other general cargo	6.548
Breakbulk	**30.801**
TOTAL BREAKBULK	183.706
TOTAL THROUGHPUT	**469.402**
Total amount of containers	8.781.185
Total amount of TEU	14.810.804

2.2.5 Environmental Management

Who is the designated officer for Environmental Management (name and job title):	Head of Department Environmental Management (Eric van der Schans) Harbour Master (René de Vries)
How is environmental management organised in the Port? **X** Designated personnel: If **yes,** how many employees: ± 254, of which ± 208 within the harbour master's division. ▪ Environmental committee ▪ Environmental working group ▪ External consultants **X** Environmental department	Does the Port have environmental review tools? **X** Environmental management plan ▪ ISO 14000 certification ▪ EMAS certification Is environmental responsibility defined at board level? **X** Yes ▪ No

Other remarks:

- The activities regarding the Slufter (the depot for contaminated dredging sludge) are ISO 14001 certified.
- Environment is part of the general process of port management. As stated in part 1.1, the CSR report has been integrated within the annual report, as well as being the guiding principle in the business strategy. Besideds being in compliance with environmal rules ans regulations, PoR decided to go even furthert because of its CSR-policy including a People, Planet Profit approach as an integral part of its business operations.

3. Environmental policy

3.1 Introduction

The Port of Rotterdam Authority aims to strengthen its ports' competitive position as a logistics hub and world-class industrial complex. Not only in terms of scale, but especially in terms of quality. The core tasks of the port authority are the sustainable development, management and operation of the port area and ensuring that shipping traffic in the port area is handled safely and efficiently. In addition, the port authority aims to combat climate change. It has the ambition to be frontrunner in the energy transition by lowering the carbon footprint of the industry while developing renewable energy, biobased production and circular initiatives. Also, it aims to ensure that the port area continues to make a major contribution to prosperity and employment in the Netherlands.

3.2 Corporate Social Responsibility Statement

We work to build a vital, future-proof port where economic growth and improving the living environment go hand in hand. We conduct our operations in a socially responsible way, with respect for people and the environment. Our efforts are focused on the port and on our own organisation. Safe & Healthy Environment, Climate & Energy and People & Work are our key themes in this respect.

In which areas do we create social value?

Safety & Healthy Environment
Safety is a top priority in our port. In addition, we constantly work to provide a healthy and attractive living environment.

Climate & Energy
We are dedicated to clombatting climate change. The Port of Rotterdam is the place where the energy transition is taking place.

People & Work
We are committed to socially responsible employment.

How do we do this?

Moral Compass
We act with integrity and transparency, and conduct our business in a fair and honest manner based on our joined moral compass. The principals and rules of conduct as laid down in our company code are at the basis of this.

Core values
We are passionate about what we do, we work together with our clients and stakeholders, we seek to constantly improve ourselves and we are a trusted neighbour. We are considered a conscientious and reliable partner.

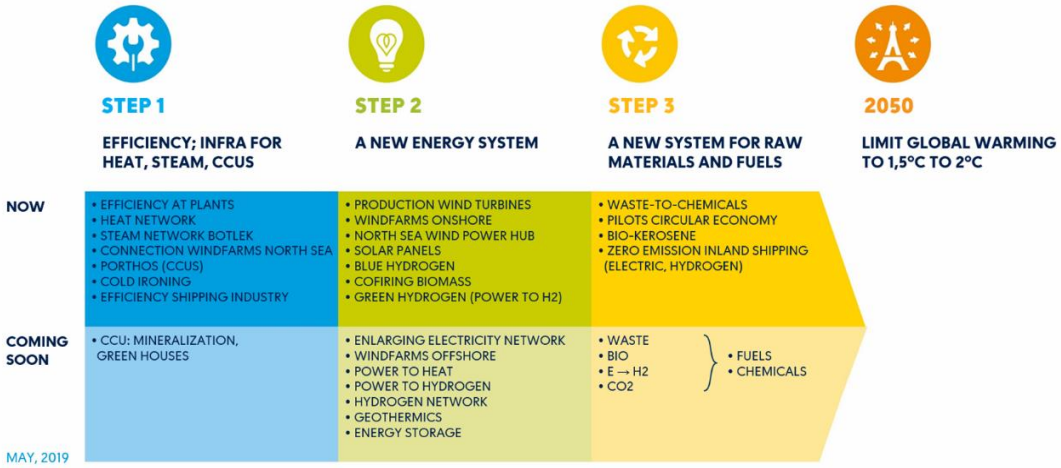
Laws and regulations
We comply with all applicable laws, rules and regulations wherever we do business.

Climate change and energy transition

Approximately 20% of the CO_2 emissions in the Netherlands are released through fossil fuel based activities in the port of Rotterdam. Specifically, it is the industrial and energy cluster of the port that depends largely on a fossil based economy. The Paris Agreement on climate change is therefore of significant importance to the port. The agreement calls for accelerated action to reduce the emissions of greenhouse gases such as CO_2 by 95% in 2050. The Port of Rotterdam Authority developed a strategy to develop the port into the heartland of the energy transition so that the port can continue to thrive in the future.

Rotterdam achieves the climate goals in 3 steps: the first step. The industry takes efficiency measures. Residual warmth is used to heat homes, commercial buildings and greenhouses. CO_2 is captured and stored under the North Sea. Step 2: a new energy system. In the long term, electricity and hydrogen will play a major role in making the port sustainable. This requires affordable electricity from sustainable sources such as sun and wind. Step 3: a new raw materials and fuels system. Fossil resources are being replaced through the use of biomass, recycled materials and green hydrogen.

Figure 1: 3 steps to a Carbon neutral Port in 2050



The Port Authority pursues this through invest in carbon capture storage and use, as well as enabling electrification of existing industrial activities. Additionally, the port is investing in an infrastructure that is used to transport residual heat generated by industrial activity in order to supply households in cities like Rotterdam, the Hague and Leiden with district heating (energy infrastructure under the Delta Plan). The port also looks to attract new businesses that fit a profile for a climate neutral port, often associated with the offshore wind industry, bio-based chemical industry, circular industry and clean fuels. Looking at the transport sector, the authority encourages green shipping (through LNG, biofuels, infrastructure, shore power and discounts for green vessels).

3.3 International frameworks

The CSR-statement is based on the core business of the Port of Rotterdam Authority, the interests and concerns of stakeholders, and international frameworks such as the United Nations Global Compact (UNGC), the OECD-guidelines and the UN Sustainable Development Goals (SDGs).

UN Sustainable Development Goals

The CSR statement takes the SDGs into account. The Port of Rotterdam Authority contributes to practically all SDGs – directly or indirectly. However, given our core business and the interests of our stakeholders, SDG's 3, 7, 8 and 9 are of most importance to the authority. The relation between the CSR statement and the SDGs is displayed in table 1:

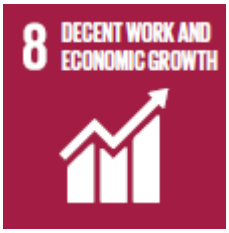
Sustainable Development Goal	Relevance for Port Of Rotterdam Authority	In what way do we contribute?
	Safety is a top priority in our port. Additionally, we are continuously working on a healthy and attractive living environment.	• Ensuring nautical safety. • Collaboration with authorities on other safety domains such as security of port objects, external safety, occupational safety, road safety and port safety. • Efforts towards better air quality and a reduction of odor and noise.
	We want to develop the port of Rotterdam into thé place where energy transition takes shape.	• Investing in smart energy infrastructure. • Encourage growth in renewable energy. • Stimulate clean shipping.
	We develop, manage and operate the port and industrial area as efficiently and sustainably as possible. The port offers employment to approximately 180,000 people.	• Investing in issueable sites and in port infrastructure. • Facilitate social dialogue about the labor market.
	We are increasing the competitiveness of existing sectors in the port and are working hard to attract new markets too.	• Attract and facilitate start-ups. • Innovation with customers by developing networks. • Improving systems and making data available.

Table 1: Relation between the CSR statement and the SDGs

4. Register of Environmental Aspects, Legal Requirements and Performance Indicators

4.1 Introduction

Effective management of environmental performance requires awareness and knowledge of the environmental aspects in relation to the activities, products and services of the port. This chapter intends to identifiy the significant aspects, to manage them in line with policy and legal requirements, to use them as basis to identify environmental objectives and to be able to report on the performance. Throughout, an environmental aspect register has been created in 2017 and newly reviewed by an independent legal expert from KWA Bedrijfsadviseurs.

Amersfoort, May 1st, 2020

Hereby we declare that KWA Bedrijfsadviseurs, represented by independent legal expert Miss M.J. (Marlies) Huijbers, has reviewed whether the most suitable and relevant legislation for the main environmental aspects of the port is included in the Register of Environmental Legislation of Port of Rotterdam.

Please note that we did verify the register based on publicly accessible sources. We only verified the European and Dutch legislation. We did not verify local legislation, such as policies and agreements and European and Dutch subsidy legislation.

Yours sincerely,
KWA Bedrijfsadviseurs B.V.

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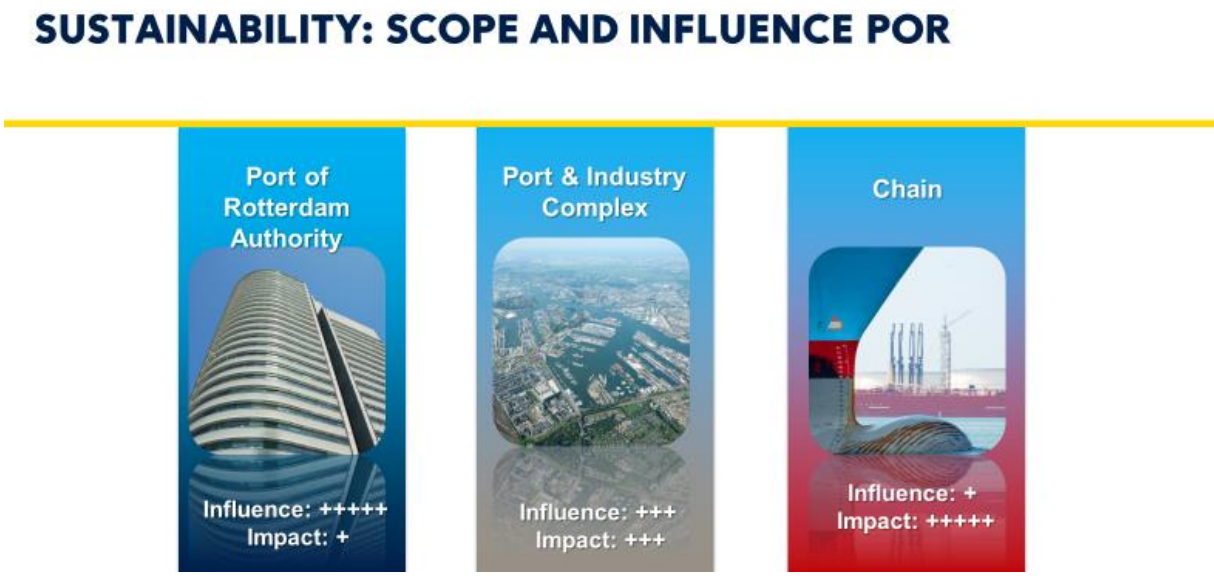
Normec ISO 9001 ISO 9001

4.2 Significance of environmental aspects

The Port of Rotterdam Authority manages and develops the Rotterdam port area, and likes to maintain and strengthen its position as a world-class port. The authority can influence a sustainable development of the port in three levels: 1) the corporate company scope, 2) on the port area and 3) on the the logistic chain. The degree of influence and the sustainable impact on the port can vary per level, as shown by figure 2.

Figure 2: Influence and impact per area



The impact of the authority's business operations on the port area and the chain is limited. However, we exert our influence on the port area and the logistic chain through cooperation and dialogue with stakeholders. Therefore, the impact of our investments in the port area and on transport to and from the area is possible more effective than displayed.

The CSR Statement highlights the authority's focus on its corporate organisation as well as the port area. The authority puts effort into keeping the environment safe, healthy and attractive, as well as combatting climate change and pioneering in the energy transition (monitoring results in the Progress Report Port Vision 2030 and Facts and Figures Port of Rotterdam, 2019). It also aims to comply with all applicable laws, rules and regulations wherever business is being done. Moreover, the authority wishes to cooperate with other fronrunner ports. The determination of the significance of environmental aspects hence takes into account activities by the Port of Rotterdam Authority and activities in the port. Table 2 displays an assessment of significant environmental aspects.

An assessment of significant environmental aspects has been performed as shown in table 2.

Activity	Frequency (A)	Aspect duration (B)	Extent of Influence (C)	Extent of impact (D)	Severity of Impact (E)	Stakeholders interest (F)	Legal Compliance (G)	Significant score Environmental aspect (A+B+C+D+E+F+G)
Activities by the Port of Rotterdam Authority								
Dredging								
Sediment relocation	10	10	5	8	5	1	1	40
Sediment disposal release into water of contaminants	10	10	10	8	1	5	1	45
Sediment storage landfills -"Slufter"- release of contaminants	10	10	10	8	1	5	1	45
Disposal waste water (dredging) (recirculation) to Water	10	10	10	8	1	1	1	41
Maintenance and projects								
Quay walls, piers, embankments, road, rail, pipelines)	10	10	10	8	5	1	1	45
Energy consumption								
Port buildings	10	10	10	4	5	5	1	45
Vessels and fleet	10	10	10	8	5	5	1	49
Personal (work-home)	10	10	5	4	1	1	1	32
Activities in the Port								
Renewable energy								
- Wind - Sun	10	10	10	4	1	10	1	46
Air emissions and air quality (Global Hub)								
Ships/vessels	10	10	5	4	5	10	1	45

Handling container/cargo (ships/vessels)	10	10	1	4	5	5	1	36
- Use of Energy (shore) - Use of LNG (bunkering)	10	10	5	4	5	10	1	45
Transport by road	10	10	10	4	5	5	1	45
Air emissions and air quality (Industrial Cluster)								
Industry	10	10	1	10	10	5	1	47
Noise								
Industry	4	4	5	4	10	10	1	38
Odor								
Industry	4	4	1	8	10	10	1	38

Table 2: Assessment of significant environmental aspects

Evaluation and quantification of above mentioned issues:

Issue	**Quantification Aspect**
Frequency (A)	**10**: More than once a day; **4**: At least once a day; **2**: At least once a week; **1**: Less than once a week
Aspect duration (B)	**10**: More than 1 day or continuous; **8**: Between 8 hours and 1 day; **4**: Between 3 and 8 hours; **2**: Between 1 and 3 hours; **1**: Less than 1 hour
Extent of Influence (C)	**10:** High**; 5:** Moderate/partly; **1:** Minimal or low
Extent of impact (D)	**10:** Effects are spread outside the port boundaries and it is located next to a sensitive place (e.g. city, protected area, or heritage);**8:** Effects are spread outside the port boundaries, however it is not located next to a sensitive place; 4: Effects are spread only within the port boundaries; 2:

	effects are located exactly in one point; 1 no effects or impacts associated to this aspect ; Score 8-10: High , Score 4: partly impact; Score 1- 2: low impact
Severity of Impact (E)	**10:** High or severe**; 5:** Moderate; **1:** Minimal or low
Stakeholders interest (F)	**10:** High or severe**; 5:** Moderate; **1:** Minimal or low or **10**: Five or more complaints; **5**: Between two and four complaints;**2**: One complaint; **1**: no complaint
Legal Compliance (F): aspect affected by legal requirements	**10**: Yes and permissible levels are exceeded, receiving fines for this; **5**: Yes and permissible levels are exceeded, but no fine has been received for this; **1**: Yes and permissible levels are not exceeded.
SIGNIFICANT ENVIRONMENTAL ASPECT SCORE > 35	**A+B+C+D+ E +F+G;**

4.3 Environmental Aspect Register

Activity	Aspects and Impact (Direct-Indirect)	Responsible person/ organisation	Legal and other requirements	Applicable legislation	Control measures
Activities by Port of Rotterdam Authority					
Dredging					
Sediment disposal	Water/Soil Indirect	Asset Management Ports & Fairways	Directive 2000/60/EC establishing a framework for Community action in the field of water policy Water Act	Water Act - Chapter 5	Yearly monitoring and reporting
Sediment disposal release into water of contaminants	Soil Direct	Asset Management Ports & Fairways	Directive 2000/60/EC establishing a framework for Community action in the field of water policy Water Act/Water Decree Water Rule Decree on Soil Quality Rule on Soil Quality Temporary framework for the reuse of PFAS-containing soil and dredging sludge (Tijdelijk handelingskader voor hergebruik van PFAS- houdende grond en baggerspecie	 Water Act/Decree Water Rule – Chapter 6 Decree on Soil Quality Rule on Soil Quality – Chapter 4	Monitoring before disposal and reporting amount (%) of disposal Use of Slufter for the storage of PFAS contaminated dredge material

Activity	Aspects and Impact (Direct-Indirect)	Responsible person/ organisation	Legal and other requirements	Applicable legislation	Control measures
			Policy Rule on the Application and Disperse of Dredge Spoil on the North Sea (Beleidsregel Toepassen en verspreiden baggerspecie op de Noordzee)		
Sediment storage landfills -"Slufter"- release of contaminants	Soil Direct	Asset Management Ports & Fairways	Environmental Licensing (General Provisions) Act Decree on Environmental Licensing Rule on Environmental Licensing Act on Environmental Management Soil Protection Act Decree on Soil Quality Rule on Soil Quality Temporary framework for the reuse of PFAS-containing soil and dredging sludge (Tijdelijk handelingskader voor hergebruik van PFAS- houdende grond en baggerspecie Water Act Directive 2000/60/EC establishing a framework for Community action in the field of water policy	Environmental Licensing (General Provisions) Act (Article 2.1, clause 1, subsection e), Decree on Environmental Licensing and Rule on Environmental Licensing. Soil Protection Act Decree on Soil Quality Rule on Soil Quality – chapter 4 Water Act - Chapter 5	Periodic monitoring level of leaching.

Activity	Aspects and Impact (Direct-Indirect)	Responsible person/ organisation	Legal and other requirements	Applicable legislation	Control measures
Disposal Waste water (dredging) (recirculation) to Water	Water Direct	Asset Management Ports & Fairways	Directive 2000/60/EC establishing a framework for Community action in the field of water policy Water Act Water Decree Water Rule	 Water Act Water Decree Water Rule - Chapter 6	Monitoring before disposal
Maintenance and projects					
Quay walls, piers, embankments, road, rail, pipelines)	Energy use and CO_2 emissions	Asset Management: port infrastructure maintenance. Port Development: Port infrastructure development.	Environmental Management Act	Environmental Management Act – Chapter 1 and 10	Control by maintanance dredging contract (Green Contracting). Carbon Footprint of Projects (not public)
Energy consumption					
Port buildings	Energy-Emission Direct	Asset Management Real Estate	Directive 2012/27/EU on Energy Efficiency	EED-report every 4 years.	Periodic monitoring CO_2 footprint and energy usage.

Activity	Aspects and Impact (Direct-Indirect)	Responsible person/ organisation	Legal and other requirements	Applicable legislation	Control measures
			Directive 2010/31/EU on the energy performance of buildings Decree on the Energy Performance of Buildings Rule on het Energy Performance of Buildings Buidling Decree 2012 Regulation on Building Decree 2012	Al offices Label C by 2023	EED-report to DCMR Promotion of BREEAM-NL certification
Vessels and fleet	Energy Emission Direct	Asset Management Equipment	Directive 2012/27/EU on energy efficiency Directive 2008/50/EC on ambient air quality and cleaner air for Europe (CAFÉ Directive). Environmental Management Act Regulation (EU) 2015/757 on the monitoring, reporting and verification of carbon dioxide emissions from maritime transport, and amending Directive 2009/16/EC Commission Implementing Regulation (EU) 2016/1927 on templates for monitoring plans, emissions reports and documents of compliance pursuant to Regulation (EU) 2015/757	Environmental Management Act – Chapter 5	Periodic monitoring corporate CO_2 footprint.

Activity	Aspects and Impact (Direct-Indirect)	Responsible person/ organisation	Legal and other requirements	Applicable legislation	Control measures
			Commission Implementing Regulation (EU) 2016/1928 on determination of cargo carried for categories of ships other than passenger, ro-ro and container ships pursuant to Regulation (EU) 2015/757 Nature Conservation Act Agreement on the Sustainable Maasvlakte (Overeenkomst Duurzame Maasvlakte)	Nature Conservation Act – Chapter 2	Use of deNOx scrubbers, clean fuels and hybride port operated vessels.
Activities in the Port					
Renewable energy					
- Wind - Solar	Emissions (air) Direct	Energy & Process industry	Directive 2009/28/EC on the promotion of the use of energy from renewable sources		Monitoring amount (MW's) renewable Energy. Procurement of renewable energy for Port Authority operations

Activity	Aspects and Impact (Direct-Indirect)	Responsible person/ organisation	Legal and other requirements	Applicable legislation	Control measures
			Directive 2012/27/EU on Energy Efficiency Environmental Licensing (General Provisions) Act Decree on Environmental Licensing Rule on Environmental Licensing Activities Decree Activities Rule Agreement on the Realisation of Wind Energy in the Harbour of Rotterdam (Convenant realisatie windenergie in de Rotterdamse haven) PoR Solar Policy for land lease Policy on the Large-scale Generation of Solar Energy (Grootschalige opwekken van zonne-energie)	Environmental Licensing (General Provisions) Act (Article 2.1, clause 1, subsection e), Decree on Environmental Licensing and Rule on Environmental Licensing. Activities Decree Activities Rule – Chapter 2 and 3	Solar Investement project (PoR-owned assets, PoR-commercial buildings). Business Opportunity for a floating solarpanel initiative at the Slufter (dredgematerial disposal basin located on the Maasvlakte). Agreements with warehouse builders for Solar ready roofs. Tender procedure floating Solar

Activity	Aspects and Impact (Direct-Indirect)	Responsible person/ organisation	Legal and other requirements	Applicable legislation	Control measures
Air emissions and air quality (Global Hub)					
Ships/vessels	Emission (air) Indirect	Environmental Management	Directive 2008/50/EC on ambient air quality and cleaner air for Europe (CAFE Directive). Environmental Management Act Clean Air Agreement (Schone lucht akoord)	Environmental Management Act – Chapter 5	Stimulating clean fuels and noice reduction during ship operations (ESI) Green award Promotion of Shore Power for seagoing vessels
Handling container/cargo (ships/vessels)	Emission/ Spills (water)	Harbour master	Environmental Management Act Harbour Management Regulation Rotterdam 2020 ; (Havenbeheerverordening 2020)	Environmental Management Act, Article 1.1a	Monitoring compliance (SEI index)
- Use of Energy (shore) - Use of LNG (bunkering)	Emission (air)/Noise Direct	Asset Management Constructions for barges & Environmental Management for seagoing ships	Directive 2008/50/EC on ambient air quality and cleaner air for Europe (CAFE Directive). Environmental Management Act Environmental Licensing (General Provisions) Act Decree on Environmental Licensing Rule on Environmental Licensing	Environmental Management Act – Chapter 5 Environmental Licensing (General Provisions) Act (Article 2.1, clause 1, subsection e),	Stimulating use of: Green Energy and alternative fuels in Port procurement Clean fuels (use of low-sulfur fuels for Port patrol vessels)

Activity	Aspects and Impact (Direct-Indirect)	Responsible person/ organisation	Legal and other requirements	Applicable legislation	Control measures
			Activities Decree Activities Rule Clean Air Agreement (Schone lucht akoord) Harbour Management Regulation Rotterdam 2020 (Havenbeheerverordening 2020)	Decree on Environmental Licensing and Rule on Environmental Licensing	
Transport by road	Emission (air) Direct	Network Planning & Capacity	Directive 2008/50/EC on ambient air quality and cleaner air for Europe (CAFE Directive). Environmental Management Act Clean Air Agreement (Schone lucht akoord) Policy concerning the Decree on Exemptions of the Road Traffic Decree Maasvlakte Euro VI 2014 (Beleid Besluit Ontheffingen Verkeersbesluit Maasvlakte Euro VI 2014) (Ontheffingenbesluit en –beleid Verkeersbesluit Maasvlakte 2015 (Ontheffingenbesluit 2015)		Monitoring NO_x, CO_2, fine dust Restriction (only clean trucks (Euro 6) allowed on Maasvlakte.
Air emissions and air quality (Industrial Cluster)					
Industry	Emission (air) Indirect	Environmental Management	Directive 2008/50/EC on ambient air quality and cleaner air for Europe (CAFE Directive).		Monitoring amount of emissions NOx, CO_2, fine dust.

Activity	Aspects and Impact (Direct-Indirect)	Responsible person/ organisation	Legal and other requirements	Applicable legislation	Control measures
			Nature Conservation Act Nature Conservation Decree Nature Conservation Rule Emergencies Act approach to nitrogen (Spoedwet aanpak stikstof) and the Rule for to emergency approach to nitrogen concerning construction and infrastructure (Regeling spoedaanpak stikstof bouw en infrastructuur) implemented in, amongst others, the Nature Conservation legislation (see above) Environmental Management Act Clean Air Agreement (Schone lucht akoord)		Apropiate Assement of the deposition of Nitrodioxides using Aerius-tool.
Noise					
Industry	Noise Indirect / Direct (partly)	Environmental Management	Act on Noise Pollution Regional Framework Agreement on Nosie and Spatial Planning (Regionaal afsprakenkader geluid en Ruimtelijke Ordening (RAK)(policy)	Act on Noise Pollution – Chapter 5	Controling Noise zoning plan Monitoring complaints I^2 -(monitoring).

Activity	Aspects and Impact (Direct-Indirect)	Responsible person/ organisation	Legal and other requirements	Applicable legislation	Control measures
					New Program Actualisation Noise management
Odour					
Industry	Air quality (Odour) Indirect	Environmental agency DCMR	Environmental Licensing (General Provisions) Act Decree on Environmental Licensing Rule on Environmental Licensing Activities Decree/ Rule	Environmental Licensing (General Provisions) Act (Article 2.1, clause 1, subsection e), Decree on Environmental Licensing and Rule on Environmental Licensing Decree on Environmental Licensing (Article 5.4) Activities Decree, Article 2.7a	Controling E-nose and Monitoring complaints.

Table 3: Environmental Aspect Register

4.4 Environmental performance indicators

This section identifies several environmental performance indicators relevant to the major environmental aspects in order to facilitate monitoring of the environmental performance.

In order to continue CSR efforts into keeping the environment safe, healthy and attractive, as well as CSR efforts into combatting climage change and pioneering the energy transition, the port of Rotterdam Authority invests resources in the MOI-partnership (a Regional Environmental Information database, elaborated upon in section 5.3), where environmental performance indicators are monitored. The authority reviews the monitored results in several reports, of which the most significant being the Progress Report Port Vision 2030. Several environmental performance indicators have been identified to review, based on their ability to address CSR efforts as described above, as well as their availability in the Progess Report Port Vision 2030.

Safe environment

A safe environment means an environment where incidents do not occur or if they occur, do not have big impact on people or the environment. The indicator allocated to safety is the number of significant nautical incidents. A nautical incident is significant when there is an occurance of fatal or seriously injured victims; major damage to the fairway, shipping, cargo or the environment; or when there has been a complete block of 1 hour or more.

Healthy and attractive environment

A healthy and attractive environment means an environment with low air emissions and where there is a good quality of life for the people living in the surroundings of the port. The indicators allocated to healthy and attractive air emissions are:

- nitrogen dioxide (NO2) concentration annual average in the Rijnmond region in microgram/m3;
- particulates concentration annual average in the Rijnmond region in microgram/m3.

Climate change and energy transition

The authority is dedicated to combatting climate change and wants the Port of Rotterdam to be the place where the energy transition is taking shape. The indicators allocated to this objective are:

- CO_2 emissions Rotterdam region in kiloton.
- Share of energy produced from renewable sources within port in percentage, capacity of wind energy generation within port in kilowatt and capacity of solar energy generation within port in kilowatt.

See section 6.3 for a review of the environmental performance based on the chosen environmental performance indicators.

5. Responsibilities and resources related to environmental aspects

5.1 Introduction

The purpose of this section is to demonstrate that the Port of Rotterdam Authority has an adequate and appropriate management organization and personnel in place to deliver the objectives specified in the policy statement.

5.2 Environmental responsibility within Port of Rotterdam Authority

The environment is incorporated in different departments of the Port of Rotterdam Authority; the overall organizational structure is displayed in figure 3.

Environmental Management department is responsible for the development and implementation of policies in the field of environment, spatial planning and the promotion of sustainable port development. Within these fields, we provide advice on different levels and scopes such as advice and formulating environmental requirements for new companies, and greening our procurement activities. The focus is to achieve a sustainable growth of the port industrial complex, including related transport, coupled with an improvement in the quality of the environment.

The main tasks are to:

- ensure an efficient and systematic management of the environmental space of the Rotterdam port area using spatial tools such as Port Maps or a noise management scheme;
- develop the Global Hub and Europe's Industrial Cluster as a leader in the field of sustainability by attracting companies active in the circulair economy;
- provide environmental advice on permits and plans for an optimal allocation of customers and activities in the port area including the necessary licensing procedures.

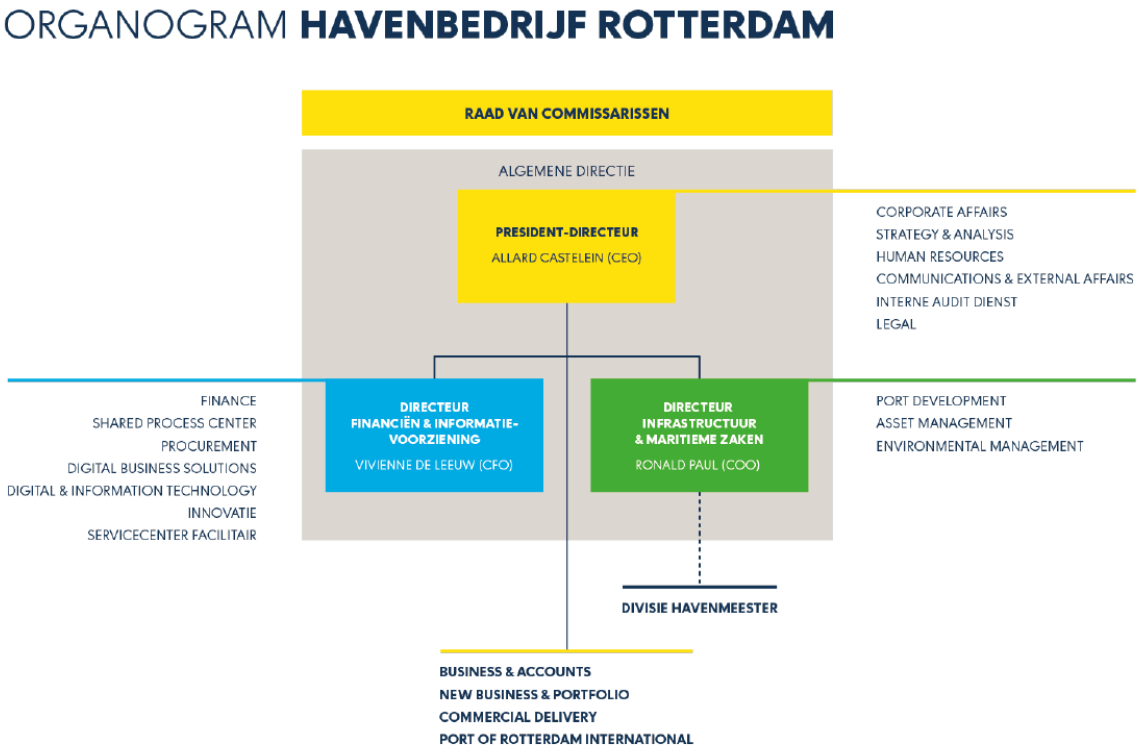


Figure 3: Organogram Port of Rotterdam Authority

As stated in chapter 1.1, a CSR core team consisting of the CEO, representatives of Environmental Management, Communications & External Affairs and Human Resources, monitors and stimulates the awareness of CSR within the company. For example, resources are allocated to short presentations during lunchtime, organized for the employees of the port authority, in order for them to obtain new insights on sustainability topics and to awaken their awareness.

The Harbour Master's Division (figure 4) is responsible for the safe and efficient management of shipping within its control area. In order to fulfil its responsibility, the Harbour Master's Division has been authorized to enforce on behalf of the State, and the municipalities of Rotterdam, Schiedam, Vlaardingen, Dordrecht, Zwijndrecht and Papendrecht. Moreov er, the Harbour Master is the nautical authority for environmental, safety and security issues. In addition to taking care of emergency management on the water, its tasks involve patrolling the waters with its vessels, operating the Harbour Coordination Centre and Traffic Control centres, and carrying out inspections on board of ships.

Figure 4: Organization structure of the Harbour Master's Division

5.3 Environmental responsibility within and/or related to the port area

The Port of Rotterdam Authority is not responsible for all the environmental issues and aspects connected to the use of the port and industrial area. We have already determined that Harbour Master's Division does play a more prominent role in environmental responsibility. Figure 5 presents an overview of other relevant organizations and their involvement as well as responsibilities regarding the environment.

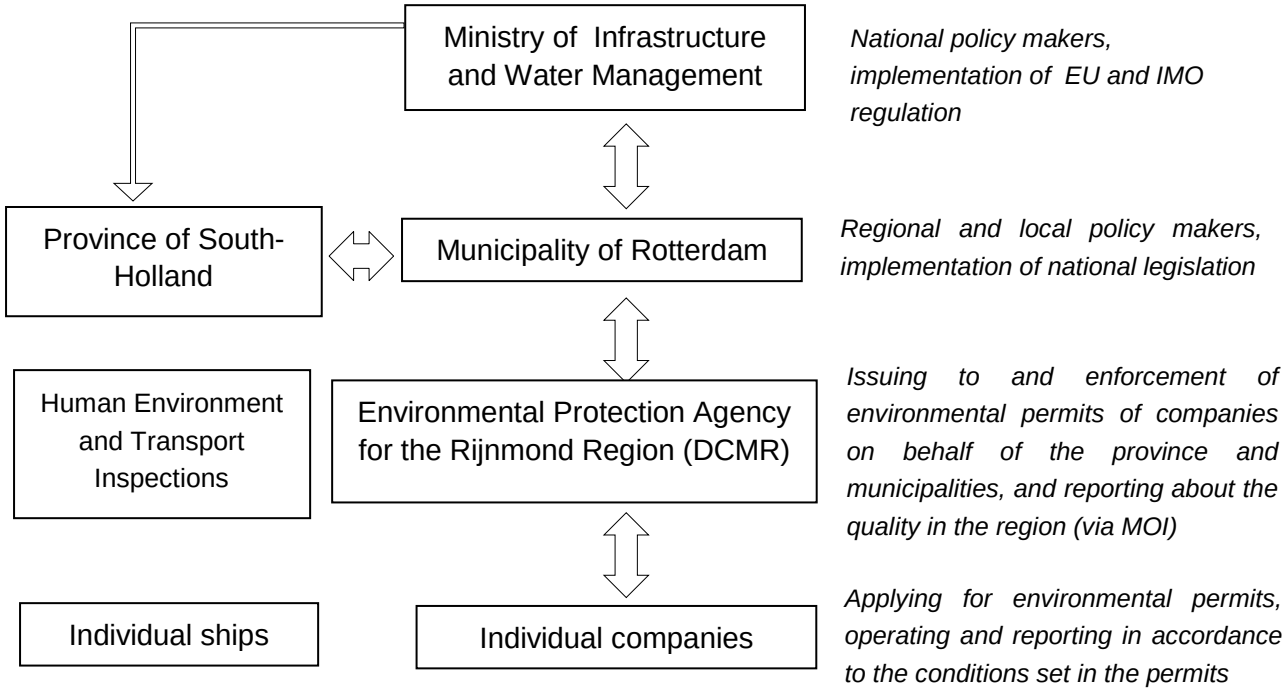


Figure 5: Main responsibilities of other organizations

5.4 Monitoring & Environmental Information

The Port of Rotterdam Authority is part of the MOI partnership, where various governmental organizations, including the DCMR, collect data and information about the impact of strained activities on humans and nature, about the state of the environment and about the effects of protective measures. This data is of importance to the port authority, as well as to policy makers and other governmental organizations such as surrounding municipalities. In order to prioritize actions, and hence allocates resources that support the continuous collection of data and information. The most actual environmental data can be found on the MOI-website (hosetd by DCMR).

6. Conformity Review

6.1 Introduction

The purpose of this section is to identify any major gaps with environmental policy objectives. In order to do so, the section provides a review of the compliance with environmental legislation, a review of the port environmental performance, and a documented summary of priorities for improvement plans based on the above review.

6.2 Compliance with environmental legislation and gap

Based upon the assessment of environmental aspects and the environmental aspect register, it can be stated that the Port of Rotterdam Authority is in compliance with environmental legislation and that it has no direct responsibility regarding the enforcement of legislation. It is organizations such as the Province of South-Holland, the Regional Environmental Protection Agency (DCMR) and the Harbour Master who are mainly responsible for enforcing the legal requirements. Yet, it is important to note that the Port of Rotterdam Authority continuously engages in communication between stakeholders of the port in order to foster compliance with environmental legislation and ensure that environmental ambitions are reached. It is the control measure of monitoring that makes apparent whether or not an activity is in line. The authority will then act upon this by addressing environmental compliance and measures for improvement. Being in a partnership with MOI (section 5.3) who delivers such monitored information is hence of great importance.

Gap

The Port of Rotterdam Authority uses monitoring as a control measure to determine the environmental impact of its own activities as well as those occurring within the port. Despite its greatest efforts, the authority is working in terms of addressing all activities. For example, there is inside information regarding the environmental impact of construction and the maintenance of quay walls, piers, embankments, roads, rails and pipelines. Nonetheless, the authority has made an attempt to control such environmental impact by contracting the most sustainable companies using the Green Deal for Sustainable Road and Waterway approach. Significant aspects with regards to the CSR statement (representing the environmental policy) are being monitored and analysed on a yearly basis within several management reports and published in PoR yearly report.

6.3 Port environmental performance

In section 4.4, the environmental performance indicators were identified. This was based on their ability to address CSR efforts into keeping the environment safe, healthy and attractive, and CSR efforts into combatting climate change and pioneering the energy transition. This was also based on their availability in the Progess Report Port Vision 2030.

6.3.1 Safe environment

Safety is of significant importance to the Port of Rotterdam Authority. We monitor the amount of significant nautical incidents yearly. Since 2012.
significant nautical incidents (table 4).

Table 4: Significant Nautical Accidents

Report Year	2012	2013	2014	2015	2016	2017	2018	2019
# Significant Nautical Accidents	6	6	6	5	1	1	5	4

6.3.2 Healthy and attractive environment

The annual average concentrations of nitrogen dioxide and particulates are also monitored yearly, as shown by table 4. It is evident that both concentrations have decreased over time and that the air quality in the Rijnmond area has improved. For a while now, the concentrations of these substances have fallen within the air qualitystandards set. This is due to the increasingly clean technology and new applications. Examples are clean engines for trucks and measures to promote clean shipping such as shore power at public berths and the use of liquefied natural gas as a fuel source. This provides a better quality of life and makes the port area a more attractive environment for those surrounding the port.

Table 5: NO_2 and particulates concentration

Environmental Performance Indicator	**Unit**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Nitrogen dioxide (NO2) concentration annual average in the port region	Microgram/m3	33,1	31,5	29,9	29,3	30,0	29,4	27,5
Particulates concentration annual average in the port region	Microgram/m3	21,8	20,8	21,3	19,2	19,0	19,5	21,2

6.3.3 Climate change and energy transition

CO_2 emissions HIC are monitored yearly. It is evident that the CO_2 emissions peaked at 2016 due to the commissioning of two new coal-fired energy generation plants.

Tabel 6: CO_2-emissions region Rotterdam

Environmental Performance Indicator	**Unit**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Annual CO2-emission Rotterdam region	Kiloton	28.160	28.226	30.170	32.758	34.360	31.892	29.891

Table 7: Percentage energy produced from renewable sources within port

Environmental Performance Indicator	**Unit**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Renewable energy production Port Region	%	5,4	4,0	5,0	5,9	5,8	5,6	4,5

A target has been set; specifically, to reduce CO_2 emissions by 49% by 2030. It is a challenge to achieve this goal. However, the Port of Rotterdam Authority is motivated to work even closer with DCMR, the monitoring agency, in this area and be more careful with handing out licenses to operate to the industry.

The share of energy produced from renewable sources within the port, the generating capacity of wind energy and solar have been monitored through the past few years too. The Port of Rotterdam Authority has the ambition to produce 14% of its energy from renewable sources by 2020. Since 2010, an increase has been realised, setting at 5,6% in 2017. More initiatives related to wind and solar energy needs to be engaged in order to reach the 14% renewable energy goal.

The generating capacity of wind energy was 183 MW in 2018 and lower than 2017 due to the repowering of old windparks. It has been agreed with several partners that the total capacity of wind turbines will be 300 MW by 2020. In order to realise this, wind parks ar projected on the outer fronts of Maasvlakte 2 and prepatory action has been taken to meet the goal for wind-energy.

The generating capacity of solar energy in the port has increased from a generating capacity of 0.9 Megawatts in 2015 to 1.68 Megawatts in 2016. The port is expecting a this substantial increase as of 2020 mainly due to the installation of significant amount of new solar panels on roofs of transshipment companies . A test with 120 floating and rotating solar panels in the Slufter will also result in an increase (in potential extra 100 MWp solar power in 2023).

6.4 Improvement plans

Looking at the indicators in the port environmental review, it becomes apparent that the air quality has improved, the amount of industry odor complaints is the lowest 10 years and that initiatives regarding renewable energy sources have been taken. With the regards to the reduction of CO_2 emissions, improvements can be made. Specifically, the port authority has set a corperate CO_2-reduction goal of 20% in 2020 and by 30% in 2030 and takes appropriate action upon achieving them (see section 8, best practices).

Generally, we continue to:

- improve the quality of life in the Rijnmond region by (i) maintaining a high level of safety in the port area and Rijnmond region, (ii) developing the port within the set environmental boundaries, (iii) reducing the nuisance for residents in the Rijnmond region and (iv) having a sustainable and structural dialogue with municipalities surrounding the port area.
- develop the sustainable Global Hub by (i) improving the accessibility of the port area and facilitating clean modes of transport, (ii) promoting the transport of cargo with the lowest carbon emission per ton kilometre and (iii) creating the right conditions for clean and fuel efficient shipping.
- develop a sustainable Industrial Cluster by pro-actively promoting energy efficiency, a transition towards a CO2-neutral industrial cluster based on an biobased and circulair economy, the production and use of sustainable energy and fuels within the port area.

7. Environmental Report

The Port of Rotterdam Authority does not specifically have one environmental report. Our efforts towards keeping the environment safe, healthy and attractive are incorporated in our annual report, CSR statement, building a sustainable port campaign, and the Progress Report Port Vision 2030 report, for which the links can be found in appendix 1.

The aim of the environmental information through such reports is to provide environmental information to the public and other interested parties regarding the environmental impact and performance of the ports' major environmental aspects. It may be regarded as a major communication tool with these parties.

The minimum requirements as listed below can be found in the following reports:

a. *a description of the nature and size of port activities*: annual report
b. *the environmental policy statement*: CSR statement
c. *an overview of major environmental aspects, impacts and the port's performance on these issues, based on the results of the monitoring of environmental performance indicators*: annual report and Progress Report Port Vision 2030 (publication 2018).
d. *a brief description of the environmental management organization*: annual report
e. *identification of relevant stakeholders related to the port environment, their needs and expectations and the engagement of stakeholders with the environmental port activities*: annual report and Progress Report Port Vision 2030.
f. *some examples of environmental objectives, actions and projects*: annual report, building a sustainable port campaign and website Port of Rotterdam Authority, promote innovation.
g. *contact information*: annual report and website Port of Rotterdam Authority

8. Examples of best practice or management solutions

This chapter provides five examples of environmental measures which have been taken within the Port of Rotterdam area to improve environmental conditions, as well as the way of life for the citizens. For more best practices see link to Port of Rotterdam website in Annex 1.

8.1 Energy transition

The energy transition task is clear: We aim to bring the port of Rotterdam in line with the Paris Climate Agreement objectives. Together with companies, we are working in 3 steps towards a carbon neutral port. Steps 1 to 3 are, respectively, 1) efficiency & infrastructure, 2) towards a new energy system and 3) towards a new raw materials and fuel system. For GHG emissions, efficiency measures of the industry are of importance (step 1). Step 2 involves changing the energy system. Instead of using oil and gas for heating, industry will switch to electricity, hydrogen and green hydrogen. This demands a lot of and affordable electricity from sustainable sources such as sun and wind. Step 3 involves the replacement of fossil fuels. This can be done through the use of biomass, recycled materials, green hydrogen and CO_2.

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8.2 New resources of fuel for transport

The port of Rotterdam plays a leading role in the introduction of LNG (liquid natural gas) as a cleaner transport fuel. During the combustion of natural gas, the emissions of CO_2, NO_x and SO_x are considerably lower than when using traditional fuels, such as heavy fuel oil and marine gas oil. Specifically, the use of LNG can achieve a 20% reduction of CO_2 emissions. Additionally, it can be said that LNG complies with the strict sulphur standards, as well as with the future nitrogen emission standards that will apply to new ships from 2021 onwards. This makes the use of LNG an attractive option to enhance the transition towards the zero emission era.

The Port Authority, together with the business community, has invested heavily in all kinds of LNG facilities within the port. Not only sea-going ships and barges can bunker LNG, but trucks can fill up their tanks too. It was 2014 when the port of Rotterdam became the first port in Europe to officially allow bunkering of LNG from ship to ship (from truck to ships had already been allowed). In 2016, Gate terminal opened its breakbulk facilities, providing a possibility to relocate LNG to smaller

ships, such as bunkers. The Port Authority assisted through the construction of a dedicated harbour basin for small scale distribution.

Besides investing in LNG facilities, the Port Authority stimulates the implementation of national and international regulation favouring LNG, provides financial incentives (such as discounts on port dues) to shipping companies and encourages the development of training facilities. Another important development in the energy transition is the promotion of shorepower for ships. One project is the connection of Heerema's large offshore vessels to shore power. We are working on this area in close collaboration with Eneco, which supplies electricity through wind turbines in the immediate vicinity of the shore-based power location. Together with the Municipality of Rotterdam PoR started a trial to supply small sea-going vessels with electricity in the center of Rotterdam. The vessels will then not need to run their diesel generators to generate power for use on board, resulting in reduced air pollution and noise. The trial will take a half year. During this period five different shorepower systems will be tested. The size and setup of this trial make it unique in the world.

Above developments could allow us to reduce carbon emissions significantly in line with the target for 2030 and at the same time improve the regional airquality even more.

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8.2 LED for public lighting

From the viewpoint of sustainability, fluorescent lighting, halogen and gas discharge lamps are not promoted. LED lighting, however, lasts longer and consumes 50% less electricity than conventional lights.

In 2014, the first durable LED streetlights were introduced in the port of Rotterdam. The Port Authority decided that it will be replacing all public lighting in the port area with LED lights. This has already been completed on the Maasvlakte, and the other port areas will follow by 2021. Overall, it will save energy, maintenance costs and an amount of roadblocks. Using renewable electricity, no CO_2 emissions are released either.

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8.3 Nature in the port: the Bird Valley

Rotterdam's port area is surprisingly rich in animal and plant life. For example, the 'Green Gateway' near the Rozenburg Peninsula is home to 20 hectares of riverbank nature. The Maasvlakte also contains a wealth of nature, such as the Bird Valley. This is the most recent built nature area covering 21 hectares. It has been developed by the Port Authority of Rotterdam in close consultation with Bureau Stadsnatuur (urban nature agency of Rotterdam), HNS Landscape Architects and various nature organisations. The Port Authority has chosen to invest in biodiversity and create a living environment for the birds instead of developing a new industrial area (as could have been done according to law and regulations).

This new nature reserve fits well into the Port Authority's policy to become the most sustainable port of its kind and to encourage the residents to go to the port for recreation and sports. The Bird Valley is 3 hectares larger than the previous valley, and has diverse islands, large water bodies and a wall where sand martins can breed. It is a safe, enclosed area where birds can rest, eat and breed, after exhausted birds have flown in from sea. Due to the diversity of islands and vegetation, many different species of coastal birds – such as terns, common terns and black-headed gulls – and singing birds – such as common whitethroats and blue throats – can be found in the valley. There are two poplar bird-watching stations that offer the opportunity to spot the bird population, accessible by bike and car.

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8.4 Automated terminals

The container terminals on Maasvlakte are the most modern and advanced in the world. It is the Port Authority that sets strict requirements in terms of sustainability for organizations wishing to settle on Maasvlakte. Accordingly, the Port Authority

makes clear agreements with these organizations; about air quality, noise pollution and cleaner hinterland transport, as well as efficient (re)use of energy and each other's residual heat, waste and semi-finished goods.

It is these requirements and agreements that have led to the settled terminals now operating entirely on electrical energy, from the Automated Guided Vehicles (AFVs) to the quay cranes. The operations of APM terminal are carbon neutral and the terminal is fully powered by wind turbines. RWG terminal took it a step further and created energy-neutral buildings through the use of triple glass, a heat-cold storage, and ceiling and underfloor heating – in addition to having a completely electric terminal with a high level of automation.

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8.5 Carbon Footprint of the Port Authority

The Port Authority does not only encourage companies within the port to get involved in sustainability initiatives, but also takes sustainable measures itself. The ambition is to reduce CO_2 emissions through the use of renewable energy, hybrid patrol vehicles and electric and hybrid lease cars. Since 2011, the Port Authority's business operation emissions have been compensated by GoldStandard carbonemission credits.

Between 2010 and 2015, a reduction of 10% in the Port Authority's carbon footprint has been realized. This is mainly the result of a decline in fossil fuel consumption as the authority decided to use residual heat from the port area instead to heat up its buildings. Energy used for Port Authority owned assets comes from renewable recources such as wind and solar power. The Port Authority has set a 20% reduction of the carbon footprint for 2020 compare to 2016 emissions (9,7 kiloton). Therfore there is an increase in renewable fuel consumption by operational ships. Some ships are retrofitted to hybrid patrol vessels. There are more electric and hybrid lease cars instead of diesel-based cars. Additionally, the Port Authority calls on other vessel owners who are active within the port area to make a shift to cleaner and alternative fuels. In our annual report we publish the corporate carbon footprint.

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8.6 Energy infrastructure

The authority has invested in an energy infrastructure for residual heat, steam, and CO_2. Residual heat produced by the industry can be used as district heating for households in the city of Rotterdam, the Hague and Leiden. Additionally, the authority views the capture, reuse and storage of CO2 as a practical solution to reduce the amount of CO2 emitted in the port area in the short term. Reuse takes place on a small scale within OCAP, which collects CO2 from Shell Pernis and supplies it to greenhouse horticulture in Westland. Moreover, the Port of Rotterdam Authority, the Gasunie and EBN are jointly exploring the realization of PORTHOS, a basic infrastructure for the collection and transport of CO2 in the Rotterdam port area where it is pre-storaged in (empty) gas fields under the North Sea. In 2019 four companies made an agreement with PORTHOS to work on preparations for the capture, transport and storage of CO_2. These companies are ExxonMobil, Shell, Air Liquide and Air Products. The capture is to take place at these refineries and hydrogen producers in Rotterdam. Another important development: we are working with sixteen companies and organisations on the hydrogen economy in Rotterdam under the auspices of the H-vision project.

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Appendix I

Link to annual report 2019 (in Dutch)

https://www.portofrotterdam.com/nl/blijvend-werken-aan-de-toekomst

Link to CSR statement:

https://www.portofrotterdam.com/en/port-authority/about-the-port-authority/corporate-social-responsibility

Link to building a sustainable port campaign:

https://www.portofrotterdam.com/en/our-port/our-themes/a-sustainable-port/sustainability

Link to 2019 Fact and Figures

https://www.portofrotterdam.com/sites/default/files/facts-and-figures-port-of-rotterdam.pdf

Link to Progress Report Port Vision 2030:

https://www.portofrotterdam.com/sites/default/files/upload/Port-Vision/Port-Vision-2030/index.html

Link to Register Monitoring & Environmental Information (MOI):

https://www.dcmr.nl/publicaties/het-register-monitoring-omgevingsinformatie.html

Transparantiebenchmark

https://www.transparantiebenchmark.nl/scores#/survey/10

Havenverordening Rotterdam 2020

https://zoek.officielebekendmakingen.nl/gmb-2020-12201.pdf

Appendix II

Environmental aspect: Elements of the Port Authority's activities, products, or services which interact with the environment.

Environmental impact: Any change to the environment, whether adverse or beneficial, wholly or partially resulting from the Port Authority's activities, products or services

Environmental management system: This covers the organizational structure, responsibilities, ways and means of implementing functional and effective environmental management. It ensures that the activities of the Port Authority, and their impacts, conform with environmental policy and associated objectives and targets. It includes the preparation and implementation of a documented system of procedures and instructions providing the basis for a program of continuous environmental improvement.

Environmental objective: Overall environmental goal, arising from the environmental policy and significant environmental aspects, that the Port Authority sets itself to achieve, and which is quantified where practical. An explicit statement of what the Port Authority hopes to achieve e.g. to improve air quality in the port area, to reduce the environmental impact of ship waste

Environmental policy: Statement by the Port Authority of its intentions and principles in relation to its overall environmental performance which provides a framework for action and the setting of its environmental objectives and targets

Environmental Review: An initial comprehensive analysis of the environmental issues, impacts and performance related to activities in the port area

Significant Environmental aspect: A significant aspect is an aspect with a significant impact on the environment.

Stakeholders: Individual or group concerned with or affected by the environmental performance of an organisation, e.g. local community, government, employees, clients, authorities.