Current port market dynamics in the Baltic and tackling environmental challenges in maritime transport

Baltic Sea Ports & Shipping 2017,
28 September 2017, Tallinn, Estonia

BPO – who we are?

BPO – Baltic Ports Organization

established
October 10, 1991
Copenhagen

nearly 50 members
major ports in the 9 countries

registered in Estonia
Port of Tallinn headquarter

office in Gdynia
Poland

BPO – who we are?

BPO's mission

The BPO's mission is to **contribute to sustainable development** of maritime transport and the port industry in the Baltic Sea Region, thereby **strengthening its global competitiveness**.

BPO 25th Anniversary

Go Baltic.

BPO
Tag Map

What we deal with?

Go Baltic.

Content

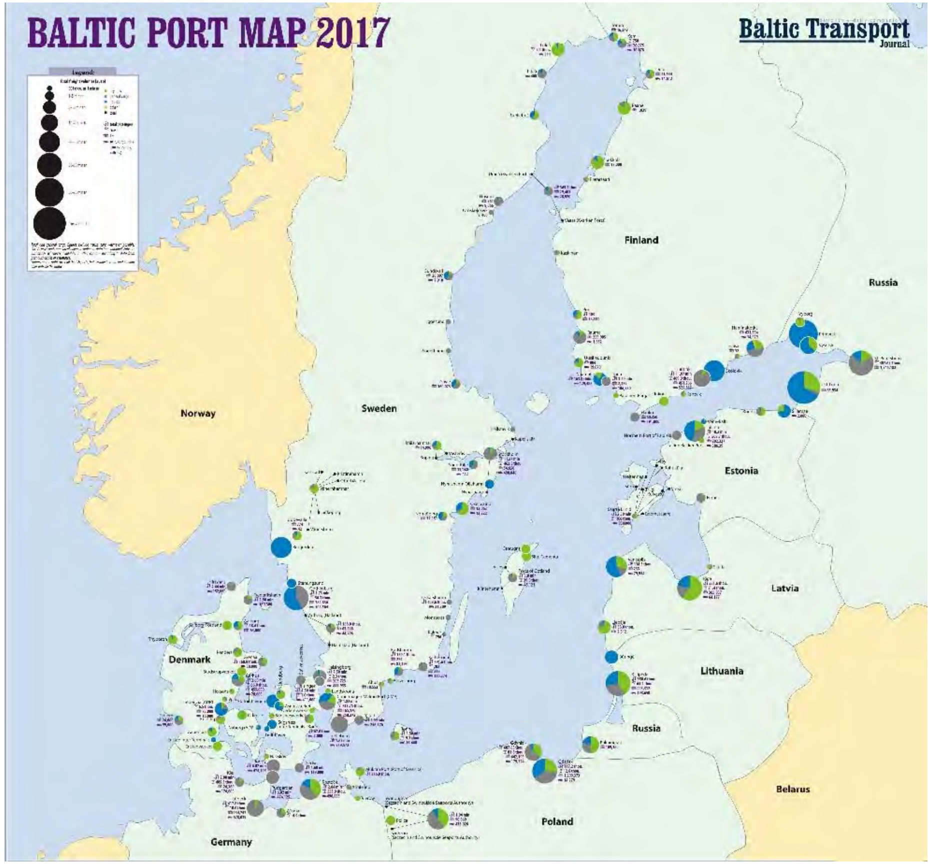
- What is BPO?
- Baltic port market
  - Container market
  - Ro-Ro and ferry market
- Environmental challenges
  - LNG as a new fuel
- Summary

Baltic port market

BPO

Total freight

2010 (mln t)	814.1
2016 (mln t)	881.2
2010/2016 (%)	**+8.24**



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Baltic Yearbook 2016/17

- statistics
- analyzes
- infographics & infomaps

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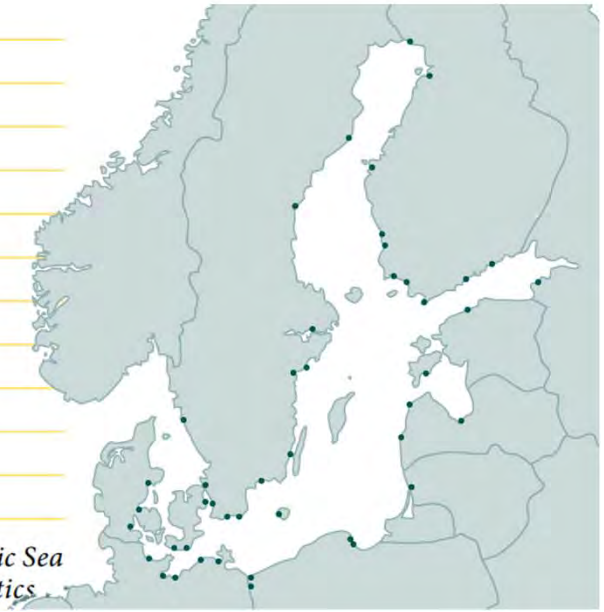
Baltic port market

Tab. 1. BSR countries' seaports total freight turnover [thou. tn][1]

№	Country	2015	2016	Yoy
1	Russia[2]	230,742	236,599	+2.5%
2	Sweden	169,711	171,324	+1.0%
3	Finland	99,949	105,016	+5.1%
4	Denmark[3]	95,099	96,150	+1.1%
5	Poland	69,736	72,934	+4.6%
6	Latvia	69,569	63,116	-9.3%
7	Germany[2]	52,938	53,048	+0.2%
8	Lithuania	45,749	49,440	+8.1%
9	Estonia	34,962	33,623	-3.8%
	Total	**868,455**	**881,250**	**+1.5%**

[1] *Including domestic shipping;*
[3] *All of Denmark*
[2] *Only ports on the coast of the Baltic Sea*
Source for Tabs. 2-7: National statistics



Baltic port market

Tab. 7. Top 12 Baltic ports in 2016 [thou. tn]

№	Port	2015	2016	Yoy
1	Ust-Luga	87,868	93,323	+6.2%
2	Primorsk	59,606	64,429	+8.1%
3	St. Petersburg	51,514	48,624	-5.6%
4	Gothenburg	37,827	40,831	+7.9%
5	Klaipėda	37,070	40,139	+8.3%
6	Riga	40,056	37,070	-7.5%
7	Gdańsk	31,738	31,575	-0.5%
8	Sköldvik	20,631	24,832	+20.4%
9	Szczecin-Świnoujście	20,055	21,475	+7.1%
10	Brofjorden	22,000	21,000	-4.5%
11	Rostock	20,328	20,959	+3.1%
12	Tallinn	22,255	19,937	-10.4%
	Total	**450,928**	**464,194**	**+2.9%**

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Baltic port market

Tab. 3. BSR countries' seaports total dry bulk turnover [thou. tn]

№	Country	2015	2016	Yoy
1	Russia	46,351	48,542	+4.7%
2	Finland	28,000	33,798	+20.7%
3	Latvia	35,028	31,356	-10.5%
4	Denmark	29,325	31,026	+5.8%
5	Sweden	30,199	26,987	-10.6%
6	Poland	25,877	26,442	+2.2%
7	Lithuania	16,659	16,617	-0.3%
8	Germany	12,300	12,980	+5.5%
9	Estonia	5,700	6,476	+13.6%
	Total	**229,439**	**234,224**	**+2.1%**

Tab. 2. BSR countries' seaports total liquid bulk turnover [thou. tn][1]

№	Country	2015	2016	Yoy
1	Russia	142,935	146,844	+2.7%
2	Sweden	63,877	67,011	+4.9%
3	Finland	28,000	33,220	+18.6%
4	Denmark	32,262	30,065	-6.8%
5	Lithuania	18,092	20,470	+13.1%
6	Latvia	25,654	19,375	-24.5%
7	Poland	18,913	19,133	+1.2%
8	Estonia	16,976	14,413	-15.1%
9	Germany	3,410	3,710	+8.8%
	Total	**350,119**	**354,241**	**+1.2%**

[1] *Including domestic shipping*
Sources: National, regional, city councils', port associations' and ports' statistics

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Container market

Source: Baltic yearbook

Container market

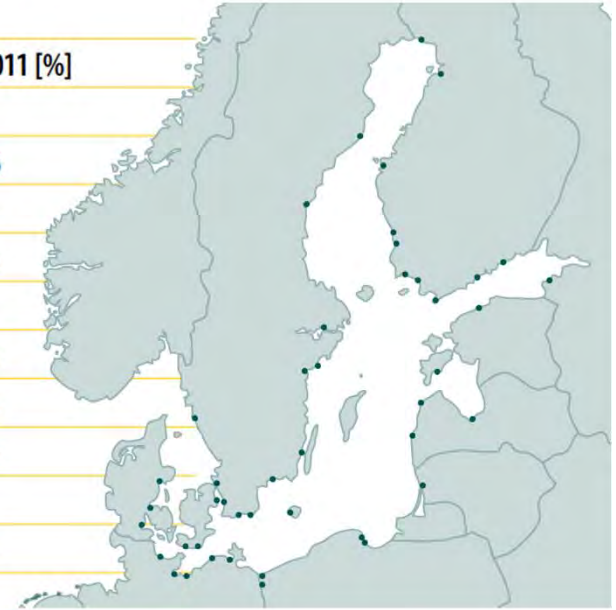
Tab. 5. Baltic seaports' total container traffic turnover in 2015-2016 [TEU]

№	Country	2016	2015	2016/2015 [%]
1	Poland	2,042,870	1,790,256	+14.1%
2	Russia	2,018,296	1,984,337	+1.7%
3	Finland	1,510,314	1,417,436	+6.6%
4	Sweden	1,506458	1,450,796	+3.8%
5	Denmark	764,000	756,000	+1.1%
6	Lithuania	441,665	392,674	+12.5%
7	Latvia	388,482	359,393	+8.1%
8	Estonia	204,368	209,118	-2.3%
9	Germany	105,000	105,898	-0.8%
	Total	**9,239,675**	**8,496,442**	**+6.1%**

Container market

Tab. 11. Top 10 containerised cargo ports in the Baltic in 2011-2016 [mln tn]

№	Country	Port	2016	2011	2016/2011 [%]
1	RU	St. Petersburg	20.8	22.0	-5.5%
2	PL	Gdańsk	8.5	4.6	+84.8%
3	SE	Gothenburg	7.2	8.8	-18.2%
4	PL	Gdynia	5.8	4.4	+31.8%
5	FI	HaminaKotka	4.6	4.5	+2.2%
6	LT	Klaipėda	4.1	3.6	+13.9%
7	LV	Riga	4.1	3.2	+28.1%
8	FI	Helsinki	3.6	3.2	+12.5%
9	DK	Aarhus	3.0	2.9	+3.4%
10	FI	Rauma	2.0	1.8	+11.1%
		Total	**63.7**	**59.0**	**+8.0%**



Container market

Annex 3. Baltic Sea region's container handling ports in 2015-2016 – TEU and tonnage [thou. tn]

№.	COUNTRY	PORT	TEU 2016	TEU 2015	2016/2015 [%]	TONNES 2016	TONNES 2015	2016/2015 [%]
1	RU	St. Petersburg	1,745,182	1,715,139	+1.8%	20,811	19,841	+4.9%
2	PL	Gdańsk	1,299,373	1,091,202	+19.1%	8,549	7,611	+12.3%
3	SE	Gothenburg	782,936	805,468	-2.8%	7,173	7,808	-8.1%
4	PL	Gdynia	655,831	684,796	-4.2%	5,794	5,631	+2.9%
5	FI	HaminaKotka	627,826	551,053	+13.9%	4,630	4,418	+4.8%
6	DK	Aarhus	455,000	445,000	+2.2%	2,956	2,896	+2.1%
7	FI	Helsinki	450,764	431,746	+4.4%	3,643	3,449	+5.6%
8	LT	Klaipėda	443,312	392,674	+12.9%	4,080	3,611	+13.0%
9	LV	Riga	385,937	355,241	+8.6%	4,059	3,823	+6.2%
10	FI	Rauma	250,777	262,567	-4.5%	2,017	2,073	-2.7%
11	SE	Helsingborg	203,723	192,612	+5.8%	2,007	1,847	+8.7%
12	EE	Tallinn	202,327	208,784	-3.1%	1,778	1,741	+2.1%
13	RU	Kaliningrad	189,180	179,378	+5.5%	946	934	+1.3%
14	DK/SE	Copenhagen Malmö	165,170	156,000	+5.9%	1,592	1,592	+/-0%
15	SE	Gävle	160,073	135,193	+18.4%	1,260	1,191	+5.8%
16	PL	Szczecin-Świnoujście	87,666	87,784	-0.1%	498	570	-12.6%
17	RU	Ust-Luga	83,934	89,820	-6.6%	760	809	-6.1%
18	DE	Lübeck	80,000	81,774	-2.2%	1,778	1,749	+1.7%
19	SE	Norrköping	77,151	41,348	+86.6%	606	325	+86.5%
20	DK	Fredericia (Associated Danish Ports)	73,000	77,000	-5.2%	690	719	-4.0%

Container market

Tab. 8. Baltic seaports' containerised cargo turnover in 2011-2016 [mln tn]

No.	Country	2016	% of general cargo	2011	% of general cargo	2016/2011 [%]
1	Russia	22.5	55%	23.2	61%	-3.0%
2	Poland	14.8	54%	9.4	21%	+57.4%
3	Sweden	13.6	18%	14.0	17%	-2.9%
4	Finland	12.3	32%	12.0	25%	+2.5%
5	Denmark	5.7	16%	5.3	14%	+7.5%
6	Lithuania	4.1	38%	3.5	32%	+17.1%
7	Latvia	3.9	31%	3.2	30%	+21.9%
8	Germany	2.0	5%	2.1	6%	-4.8%
9	Estonia	1.8	14%	1.3	16%	+38.5%
	Total	**80.6**	**28%**	**74.0**	**25%**	**+8.9%**

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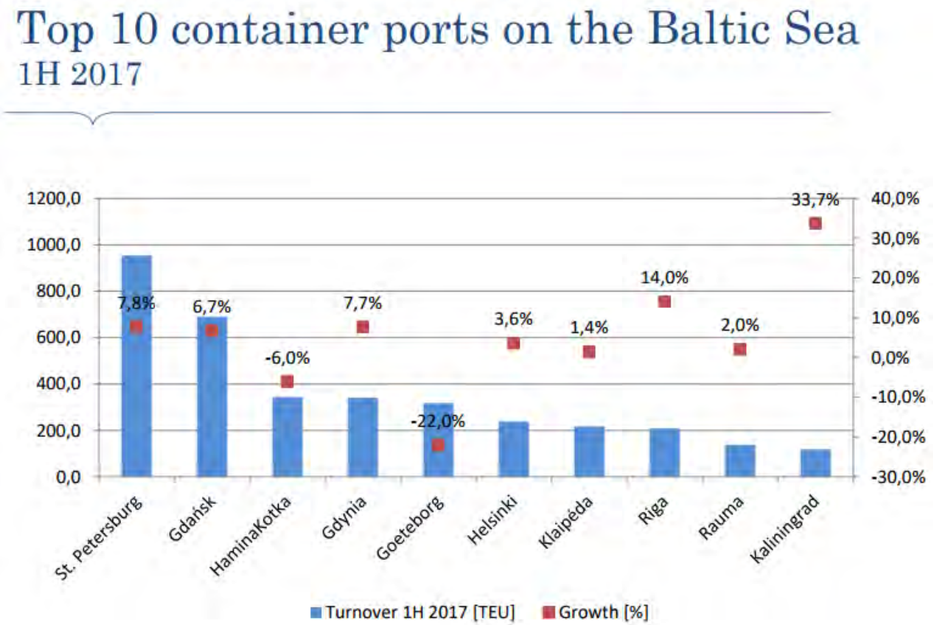
Container market



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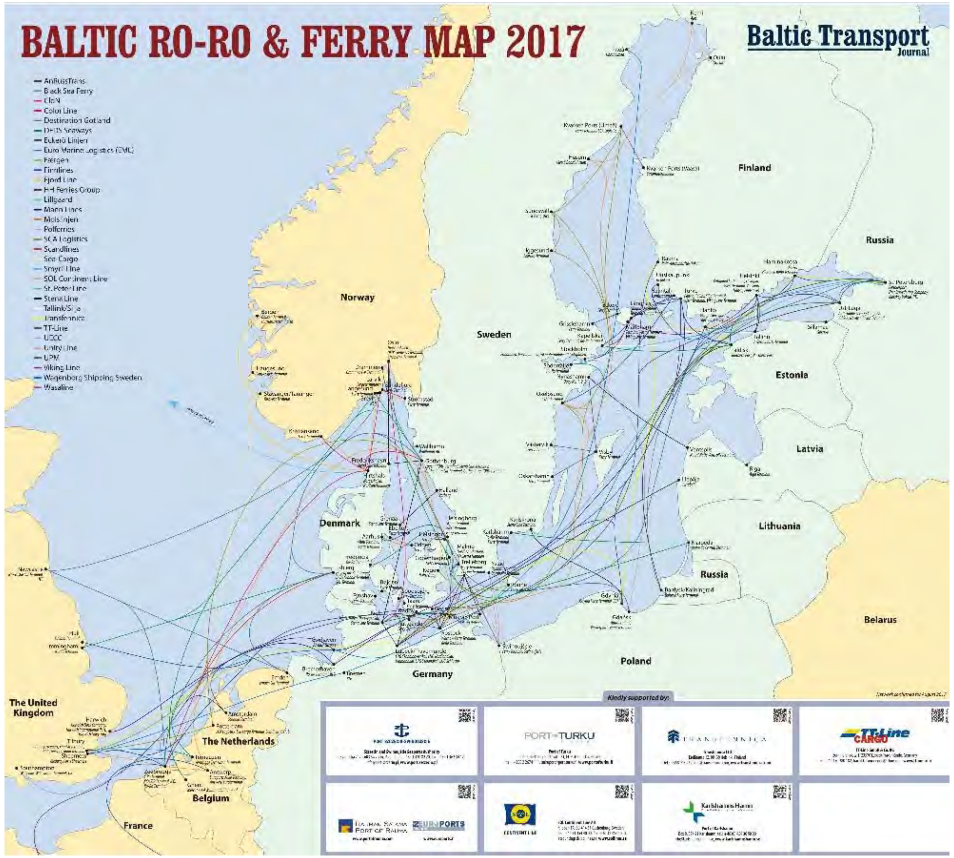
Ro-Ro
and ferry market



Source: Baltic Yearbook

Ro-Ro and ferry market

Tab. 7. Baltic seaports' ro-ro cargo turnover in 2011-2016 [mln tn]

№	Country	2016	% of general cargo	2011	% of general cargo	2016/2011 [%]
1	Sweden	46.2	60%	45.7	55%	+1.1%
2	Germany	28.5	78%	24.9	66%	+14.5%
3	Denmark	24.7	70%	25.6	69%	-3.5%
4	Finland	15.4	39%	14.7	31%	+4.8%
5	Poland	8.4	31%	6.3	33%	+33.3%
6	Estonia	5.9	46%	3.6	44%	+63.9%
7	Russia	3.7	9%	2.7	7%	+37.0%
8	Latvia	2.8	23%	2.9	27%	-3.4%
9	Lithuania	2.8	26%	2.8	25%	+/-0.0%
	Total	**138.4**	**48%**	**129.2**	**44%**	**+7.1%**

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Ro-Ro and ferry market

Tab. 3. Baltic seaports' total ro-ro cargo turnover in 2015-2016 [cargo units]

№	Country	2016	2015	2016/2015 [%]
1	Sweden	3,031,892	2,916825	+3.9%
2	Denmark	2,157,500	2,034,500	+6.0%
3	Germany	1,835,000	1,825,506	+0.5%
4	Finland	1,052,000	1,006,424	+4.5%
5	Poland	626,631	555,000	+12.9%
6	Estonia	519,892	468,795	+10.9%
7	Lithuania	198,716	178,389	+11.4%
8	Latvia	174,596	111,361	+56.8%
9	Russia	n/a	n/a	-
	Total	**9,596,227**	**9,220,256**	**+4.1%**

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Ro-Ro and ferry market

Annex 3. Baltic Sea region's ro-ro & ferry cargo handling ports in 2015-2016 – cargo units and tonnage [thou. tn]

№	COUNTRY	PORT	CARGO UNITS 2016	CARGO UNITS 2015	2016/2015 [%]	TONNES 2016	TONNES 2015	2016/2015 [%]
1	SE	Trelleborg	719,572	715,712	+0.5%	10,902	10,910	-0.1%
2	DE	Lübeck/Travemünde	678,039	712,169	-4.8%	9,954	10,471	-4.9%
3	FI	Helsinki	529,212	516,887	+2.4%	6,656	6,577	+1.2%
4	SE	Gothenburg	529,197	498,227	+6.2%	8,755	8,181	+7.0%
5	SE	Stockholm (Stockholm, Nynäshamn, Kapellskär)	498,175	419,774	+18.7%	6,306	5,949	+6.0%
6	DE	Rostock	496,885	482,308	+3.0%	8,302	8,446	-1.7%
7-8	DE	Puttgarden	487,441	450,886	+8.1%	7,222	6,674	+8.2%
7-8	DK	Rødby	487,441	450,886	+8.1%	7,222	6,674	+8.2%
9	PL	Szczecin-Świnoujście	448,000	423,000	+5.9%	5,698	5,160	+10.4%
10-11	SE	Helsingborg	426,846	391,638	+9.0%	4,805	4,526	+6.2%
10-11	DK	Helsingør	426,846	391,638	+9.0%	4,805	4,524	+6.2%
12	EE	Tallinn	403,000	397,000	+1.5%	4,564	4,331	+5.4%
13	DK/SE	Copenhagen Malmö	258,000	284,335	-9.3%	4,182	4,417	-5.3%
14	SE	Ystad	256,176	243,966	+5.0%	3,330	2,960	+12.5%
15	FI	Hanko	199,526	177,483	+12.4%	3,241	2,878	+12.6%

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Ro-Ro and ferry market

Annex 4. Baltic Sea region's ferry passenger [thou.] and private cars serving ports in 2016-2015

№	COUNTRY	PORT	PAX 2016	PAX 2015	2016/2015 [%]	PAX CARS 2016	PAX CARS 2015	2016/2015 [%]
1	FI	Helsinki	11,565	11,212	+3.1%	1,473,622	1,387,446	+6.2%
2	SE	Stockholm (Stockholm, Nynäshamn, Kapellskär)	10,767	10,657	+1.0%	1,127,670	1,112,464	+1.4%
3	EE	Tallinn	9,660	9,295	+3.9%	n/a	1,350,000	–
4	DK	Helsingør	7,525	7,643	-1.5%	1,369,986	1,369,986	+/-0%
5	SE	Helsingborg	7,525	7,670	-1.9%	1,336,986	1,369,986	-2.4%
6-7	DE	Puttgarden	6,024	6,139	-1.9%	1,531,754	1,542,330	-0.7%
6-7	DK	Rødby	6,024	6,139	-1.9%	1,531,754	1,542,330	-0.7%
8	FI	Turku	3,290	3,301	-0.3%	226,970	231,091	-1.8%
9	FI	Mariehamn	3,053	3,098	-1.5%	181,619	173,592	+4.6%
10	DK	Odden	2,780	2,690	+3.3%	1,178,613	1,083,773	+8.8%
11	DK	Aarhus	2,629	2,532	+3.8%	1,124,962	1,031,319	+9.1%
12	DK	Hirtshals	2,559	2,568	-0.4%	686,535	679,787	+1.0%
13	DE	Rostock	2,288	2,183	+4.8%	457,000	447,350	+2.2%
14	SE	Ystad	2,087	1,983	+5.2%	552,430	520,067	+6.2%
15	SE	Visby	1,772	1,653	+7.2%	533,947	499,663	+6.9%
16	DK	Frederikshavn	1,679	1,687	-0.5%	269,164	262,386	+2.6%
17	SE	Gothenburg	1,670	1,642	+1.7%	339,874	314,097	+8.2%
18	SE	Trelleborg	1,653	1,713	-3.5%	362,548	366,747	-1.1%
19	DE	Kiel	1,599	1,557	+2.7%	n/a	181,025	–
20	DK	Rønne	1,551	1,491	+4.0%	374,966	356,632	+5.1%

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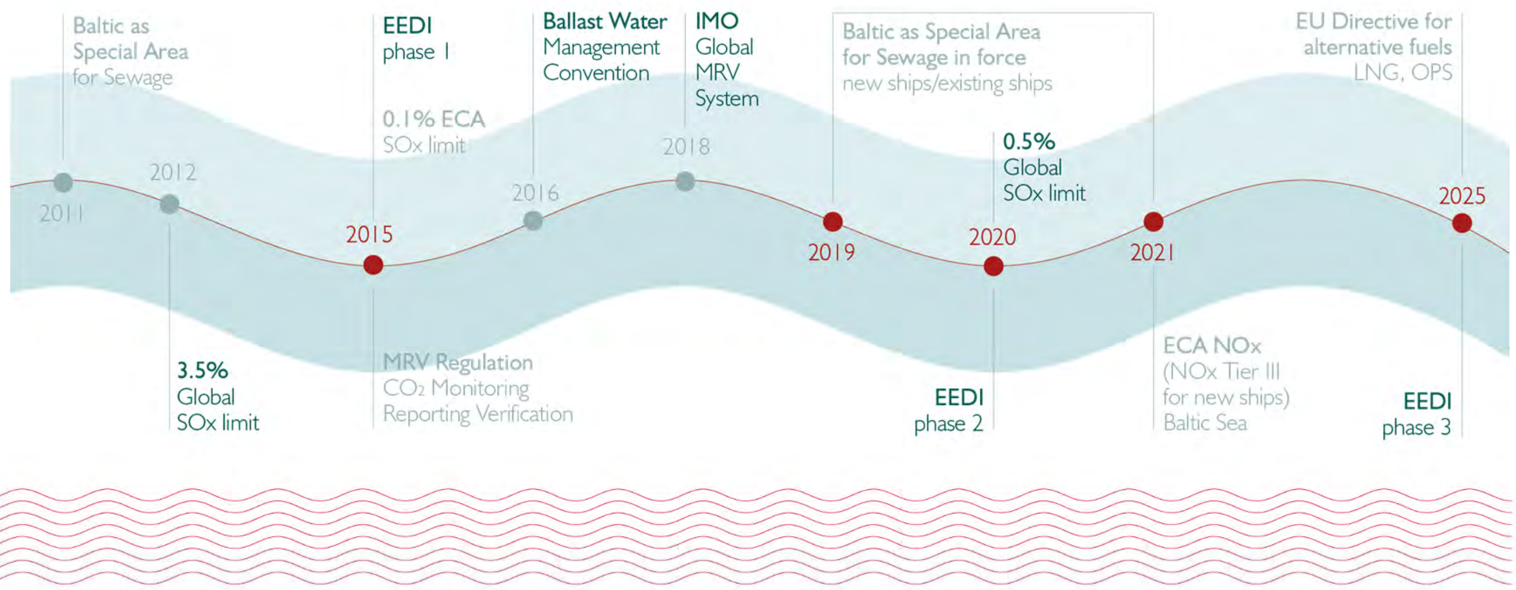
Regulating maritime transport in the Baltic Sea Region



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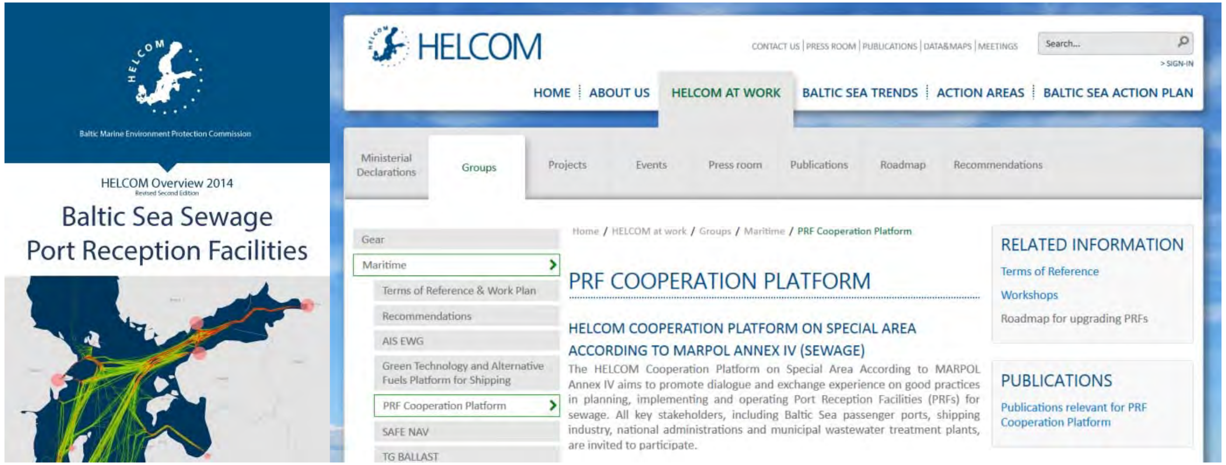
Environmental challenges

- Air pollution
- Sewage
- Waste management

- Port reception facilities
- Scrubbers
- Onshore power supplies
- LNG

Sewage from passenger ships

BPO is a part of PRF Cooperation Platform at HELCOM



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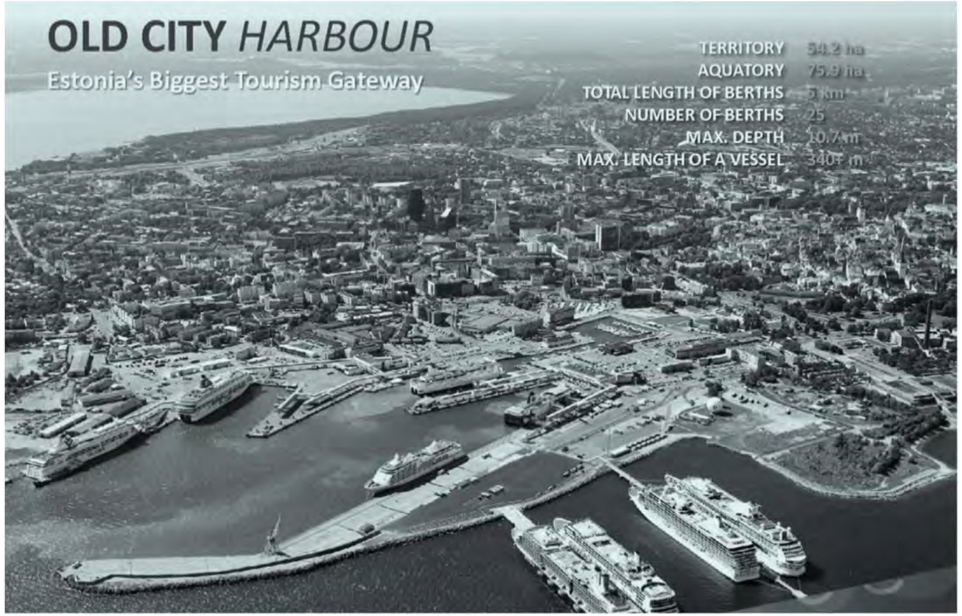
Port of Tallinn – Old City Harbour



Estonia's biggest tourism gateway

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Passengers
- ferries
- cruises
- yachts

Ro-Ro

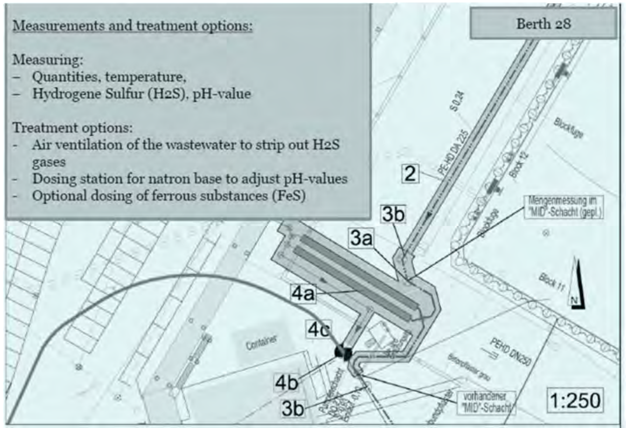
Port of Kiel

Overview

Port of Kiel

PRF for sewage

Port of Kiel



Onshore Power Supply

Case study

Port of Ystad

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Onshore Power Supply

Case study

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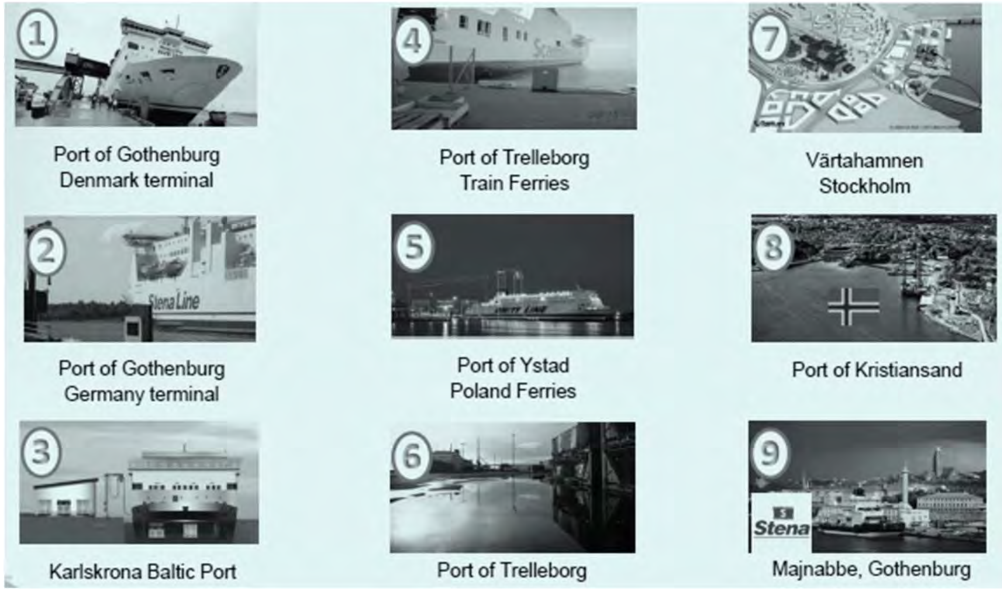
Port of Ystad

Source: Actemium

Onshore Power Supply



Source: Actemium

Compliance with SECA

BPO Report: EU Sulphur Directive

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One year after its entry into force

June 2016

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Compliance with SECA

Fleet operating exclusively or mostly within SECA

600*
bulk carriers

300*
tankers

240
ferries

237
container ships

147
ro-ro vessels

Range of operation:
Ferries, ro-ro, container ships – exclusively in SECA
Bulk carrier and tankers – exclusively or mostly in SECA

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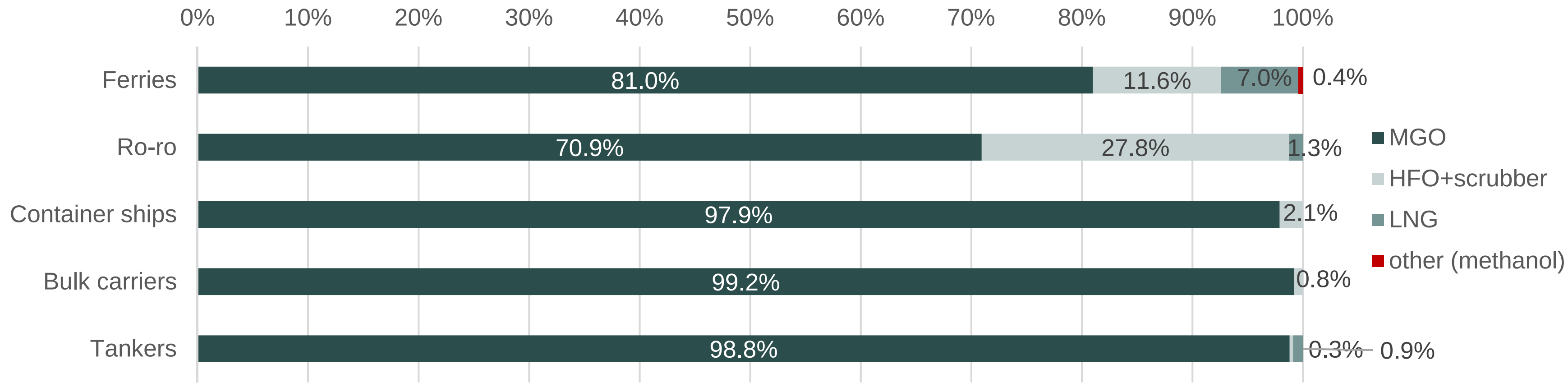
Compliance with SECA

Technology applied in order to meet sulphur regulations by ships operators in short sea shipping in European SECA.



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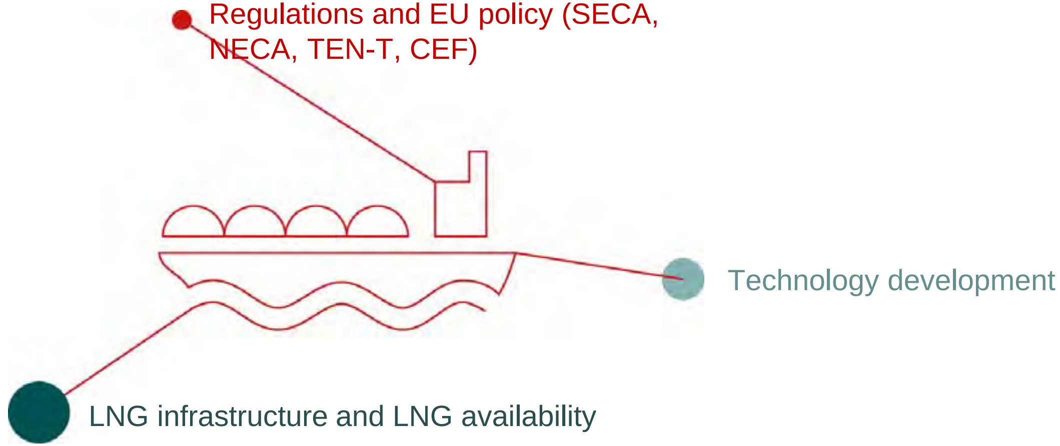
Compliance with SECA

Shipowner	Number of ships equipped with scrubbers	% of total shipowners' ro-ro and ferry fleet operating within SECA
DFDS	21	60.0%
Finnlines2	15	68.2%
Brittany Ferries	6	85.7%
Transfennica	6	60.0%
Color Line	4	66.7%
KESS	4	40.0%
Scandlines	4	33.3%
Condor Ferries	2	50.0%
Wagenborg Shipping Sweden	2	100.0%
Stena Line	2	8.0%
Bore/P&O Ferries	1	7.1%
SOL Continent Line	1	14.3%
TT-Line	1	16.7%
Total	69	43.1%

Number of ships operating in the North Sea, Baltic Sea and English Channel that has installed scrubbers (up to June 2016)

Number of LNG fueled vessels grows

Driving forces:



LNG in the Baltic Sea Ports project I

BPO initiated two EU founded projects with 11 ports involved

Pre-investment studies such as EIA, feasibility analyses for LNG terminals or bunkering vessels, project designs, regional market studies, safety manuals, etc.

Stakeholder platform that facilitated discussions among port authorities, shipowners, gas infrastructure providers, energy traders and bunkering companies.

Project budget – appr. € 3.5 mln. / Jan. 2012-Dec. 2014

LNG in the Baltic Sea Ports Projects

Partners

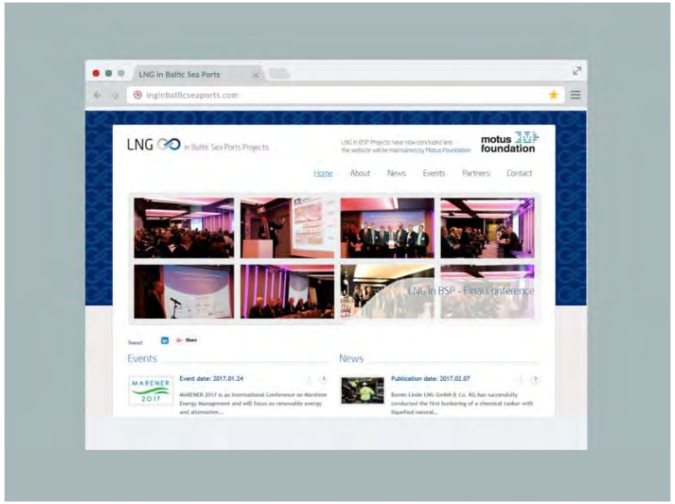
HELSINGBORGS HAMN PORT OF HELSINGBORG
AARHUS HAVN PORT OF AARHUS
COPENHAGEN MALMÖ PORT
PORT OF HELSINKI
PORTS OF STOCKHOLM
PORT OF TALLINN The Port of Good News
PORT OF TURKU
Trelleborgs Hamn AB -Port of Trelleborg-
SUNDSVALL LOGISTIKPARK
ROSTOCK PORT
KN LNG TERMINAL

BPO BALTIC PORTS ORGANIZATION
EUSBSR EU STRATEGY FOR THE BALTIC SEA REGION PRIORITY AREA 'SHIP'

Co-financed by the European Union
Trans-European Transport Network (TEN-T)

LNG in the Baltic Sea Ports projects

Check website and reports



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LNG in the Baltic Sea Ports Projects

Port of Stokholm

—

Ro-pax Viking Grace 1000 plus bunkering operations

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Case studies

Port of Helsinki

Turva – coastal guard vessel
Polaris - the first ever
LNG-fueled icebreaker

Case studies

Port of Oulu

—

LNG-fueled icebreaker Polaris

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Case studies

Port of Gothenburg (offshore)

LNG ship to ship bunkering

Skangas together with Anthony Veder

Case studies

Port of Rostock

Bunkering of Greenland

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LNG fueled ships in the Baltic

Ro-pax Tallink Megastar

LNG bunkering fleet

LNG bunker tanker – Skangass

LNG bunker tanker – Bomin Linde, Klaipeda

LNG bunker tanker – concept design, Helsingborg

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BPO policy

The Baltic Sea as a model region for green ports and maritime transport

BPO voice: The same rules should be applied in all EU

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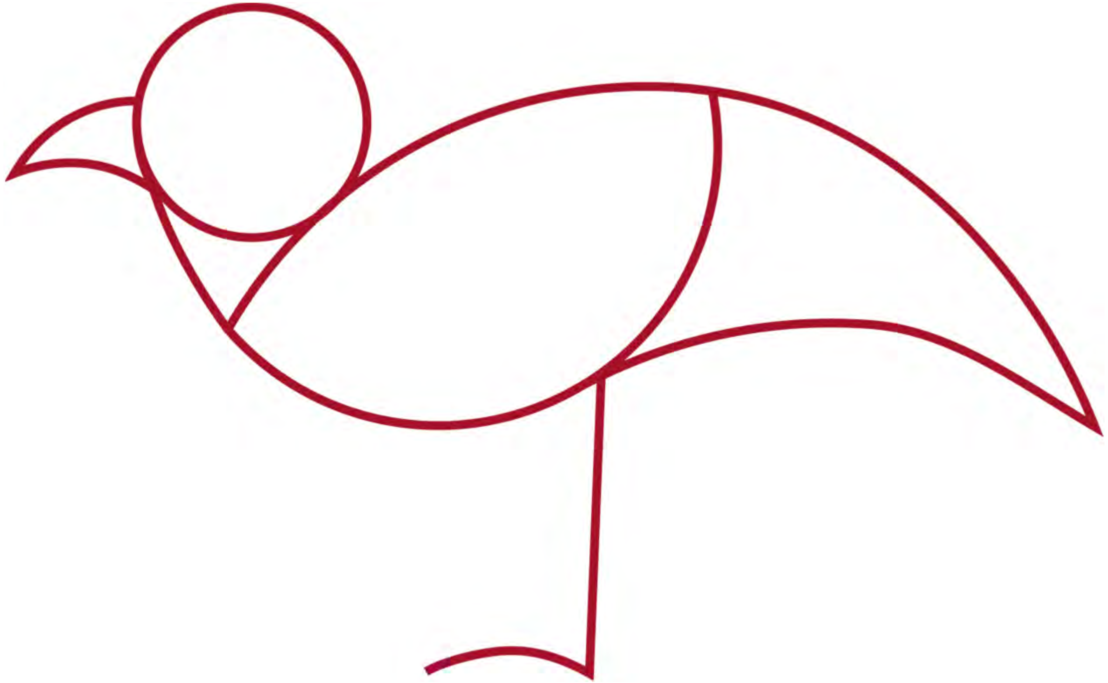
Download a copy:
http://www.bpoports.com/BPC/Helsinki/BPO_report_internet-final.pdf

Summary

- Dynamic port market
  - Russia - largest portion of the cake
  - Growth in CEE countries
  - Recovery in container market
  - Growth in ro-ro and ferry over last years
- Regional specific maritime regulations
  - More LNG fuelled ships coming
- Baltic as a model region for green ports

BPO

Go Baltic!



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