

MITIGATING THE EFFECTS OF EMERGENCIES IN THE BALTIC SEA REGION PORTS 2016–2019



Photo: Lauri Ojala

HAZARD project aims at mitigating the effects of emergencies in major seaports in the Baltic Sea Region. The types of safety and security emergencies include, for example, leakages of hazardous materials, fires on passenger ships at port, oil spills in port areas as well as explosions of gases and chemicals. The project enables better preparedness through joint exercises, improved communication between authorities in emergencies, better compliance of regulatory framework and better use of risk assessment methods as well as faster adoption of state-of-the-art technologies.

HAZARD FINAL CONFERENCE IN TALLINN, ESTONIA, 14–15 March 2019

The HAZARD project held its Final Conference in Tallinn, Estonia during 14–15 March. The first day was dedicated to a partner event and the second day was reserved for project related presentations held by different representatives of high-level institutions and organizations.

Thursday's program contained a lunch, a visit to the Port of Muuga and a dinner at Restaurant Cru. Friday's program included the series of presentations followed by a joint lunch.

Friday's presentations began with a presentation from the Secretary General of the Baltic Ports Organisation, Mr. Bogdan Oldakowski. He offered insights on Current Issues in BSR Seaports.

Mr. Oldakowski was followed by Mr. Markku Mylly who is the Former Executive Director of the European Maritime Safety Agency. With years of experience on the matter, Mr. Mylly presented his views on Current Maritime Safety Issues.



Photo: VisitTallinn

Mr. Christopher Ross joined from Brussels as the Deputy Head of the Security Unit at the Commission's Directorate-General for Mobility and Transport (DG MOVE). He spoke about Seaport Security Issues.

Rescue Director of Eastern-Uusimaa (FI) Emergency Services Department, Mr. Peter Johansson, spoke on Mitigating Emergencies in Seaports.

Professor Wolfgang Kersten, representing the Hamburg University of Technology held his presentation about the subject of Risk Management in Seaports.

Ms. Tiia Lohela, a Special Advisor for the European Centre of Excellence for Countering Hybrid Threats, continued with the topic of Maritime & Seaport Hybrid Threats.

After Ms. Lohela, it was the turn of Mr. Eeli Friman and Professor Lauri Ojala who revealed the Baltic Sea Region Logistics 2030 Foresight Study.

An Award Ceremony that rewarded the best www-sites of North European Seaport Authorities concluded the conference.

FORESIGHT STUDY ON TRANSPORT AND LOGISTICS IN THE BALTIC SEA REGION BY 2030

The purpose of the study was to map the transport and logistics outlook of the Baltic Sea Region (BSR) till year 2030 by surveying a carefully selected and authoritative expert panel from the entire region (excluding Belarus). Data was gathered through a two-round Delphi survey in late 2018 and early 2019. The purpose of this method is to allow consensus to be achieved between the participants.

Totally 97 respondents used a survey questionnaire comprising 52 questions, which were organised under 10 themes. See Table 1.

Survey themes	Number of questions	Average score by theme
Advanced logistics services	4	4,11
Transport and logistics related technology	6	3,85
Competitiveness of the transport and logistics sector	6	3,54
Road freight transport and logistics	9	3,40
Maritime freight transport and logistics	7	3,38
Rail freight transport and logistics	5	3,35
Air freight transport and logistics	3	3,31
Environmental aspects related to transport and logistics	3	3,19
Social aspects related to transport and logistics	4	2,88
Supply chain safety and security	5	1,98

Table 1. Aggregate Foresight Survey Results by Theme (scale 1 – 5; the higher the value, the more positive the anticipated outlook by year 2030)

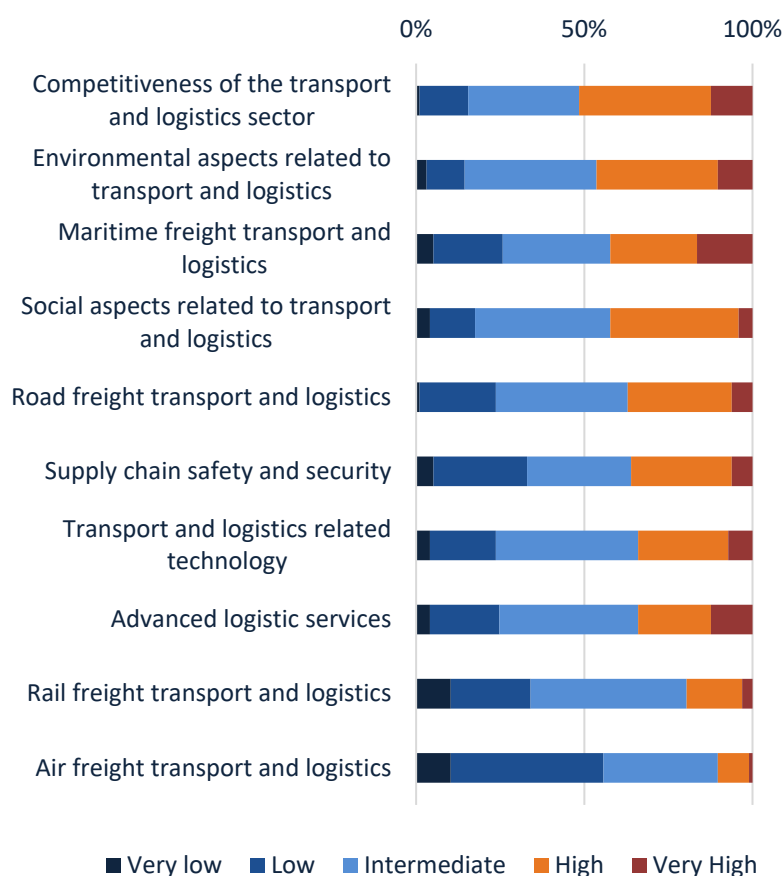


Figure 1. Aggregate Level of Expertise as Indicated by Respondents by Theme

Initially, participants evaluated their level of expertise on each of the ten themes. Figure 1 illustrates the panel's aggregate level of expertise in each of the themes in descending order.

The respondents seem to be most knowledgeable with competitiveness and environmental aspects in BSR transport and logistics. However, air and rail freight rank the lowest and significantly below, for example, maritime and road transport.

Figure 2 depicts the weighted average answers and standard deviations for each of the ten themes. A five-level scale was used in the questionnaire.

With the environmental theme, the respondents were rather hopeful that greenhouse gas emissions could be lowered in the future. This goes hand-in-hand with the expectation of increased demand for environmentally friendly logistics services.

High values (around 4 or above) were received also with advanced logistics and technology themes.

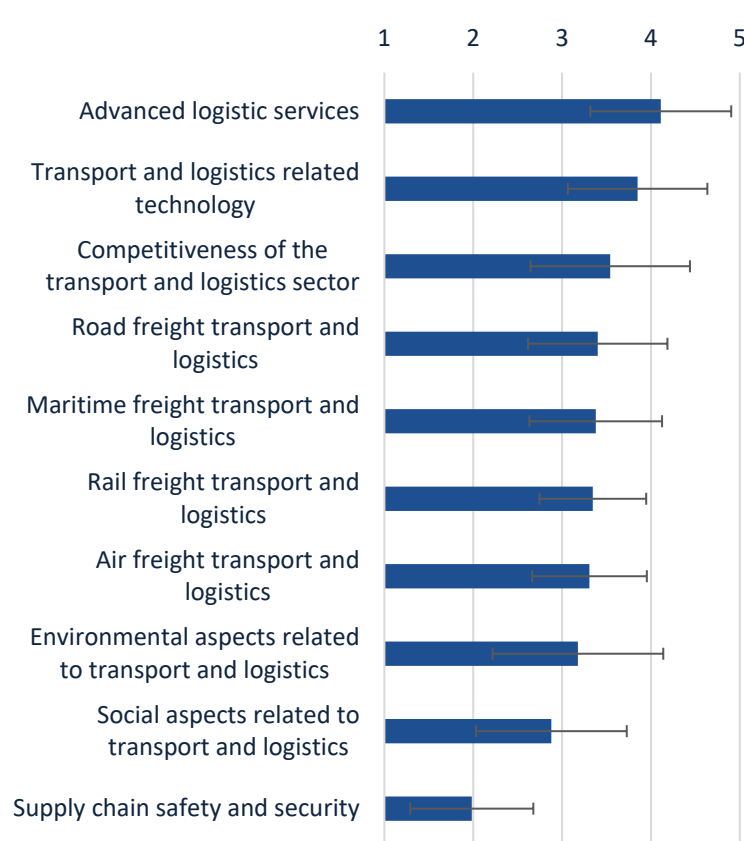
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The safety and security theme was the only one scoring below two, due to elevated expectations of higher costs to improve security measures and to counter the anticipated increase in logistics related criminality. Especially cyber threats were expected to increase.

The study is a follow-up of an almost identical study by Ojala et al. (2013) which focused on year 2025. This follow-up gave us the opportunity to see how the attitudes have changed.

Table 2 shows the four questions with the highest and lowest average values in view of 2030 and compares these with the identical questions in Ojala et al. (2013).

The highest and lowest scoring questions were largely the same in both studies. The costs to comply with environmental regulation were deemed most problematic in both studies. Comparing the two studies, the largest single deterioration was dealing with border crossings between EU and non-EU countries by road freight.

Figure 2. Average Survey Results by Theme

A comprehensive report on these findings, with all the 52 questions reviewed individually, will be published in April 2019. The full questionnaire with scores can already be found at <https://blogit.utu.fi/hazard>.

Author: Eeli Friman

Table 2. Questions with the Highest and Lowest Scores in both Studies (scale 1 – 5; the higher the value, the more positive the anticipated outlook by years 2025 and 2030)

The four questions with the highest and lowest average values in view of 2030	By 2025	By 2030	Diff.
The use of TRACKING AND TRACING TECHNOLOGIES in logistics in the BSR will increase	4,65	4,76	0,11
The demand for ENVIRONMENTALLY SUSTAINABLE logistics services in the BSR will increase	4,36	4,74	0,37
The importance of the logistics and transport sector for the COMPETITIVENESS of the BSR will increase	4,35	4,48	0,14
Fuel/energy efficiency in ROAD FREIGHT TRANSPORT in the BSR will be significantly improved	4,31	4,44	0,13
BORDER CROSSING CONTROL OF CARGO, DOCUMENTS, VEHICLE AND DRIVER in road freight between EU and non-EU countries in the BSR have become easier	3,22	2,55	0,67
Due to DEMOGRAPHIC CHANGES the AVAILABILITY OF SKILLED LABOUR for logistics jobs in the BSR will increase	2,61	2,41	-0,20
TAXES, USER FEES AND OTHER OFFICIAL CHARGES paid by the logistics and transport sector in the BSR will decrease	1,75	2,03	0,28
The costs to comply with ENVIRONMENTAL REGULATION in the transport sector in the BSR will decrease	1,60	2,00	0,40

Reference: Ojala, L. – Kersten, W. – Lorentz, H. (2013) Transport and Logistics Developments in the Baltic Sea Region until 2025. *Journal of East-West Business*, Vol. 19, 16–32.

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NORTH EUROPEAN PORT AUTHORITIES' WEBSITE CONTENT AND USABILITY EVALUATION

- A total of 97 Port Authorities within the scope, which manage 116 seaports
 - All TEN-T Core seaports north of Le Havre + British Isles
 - TEN-T Comprehensive seaports in the Baltic Sea Region and selected Norwegian & Russian seaports with annual cargo turnover >2 M tonnes or >1 M passengers
- In total 88 websites with content available in English were evaluated and ranked

Websites are an important display window for any organisation. Hence, the websites of 97 main North European Port Authorities were evaluated in the end of 2018. The selection consisted of Trans European Transport Network (TEN-T) Core seaports north of Le Havre incl. the British Isles, and TEN-T Comprehensive seaports in the Baltic Sea Region (BSR) together with selected Norwegian & Russian seaports with over 2 million tonnes of cargo or over 1 million passengers annually.

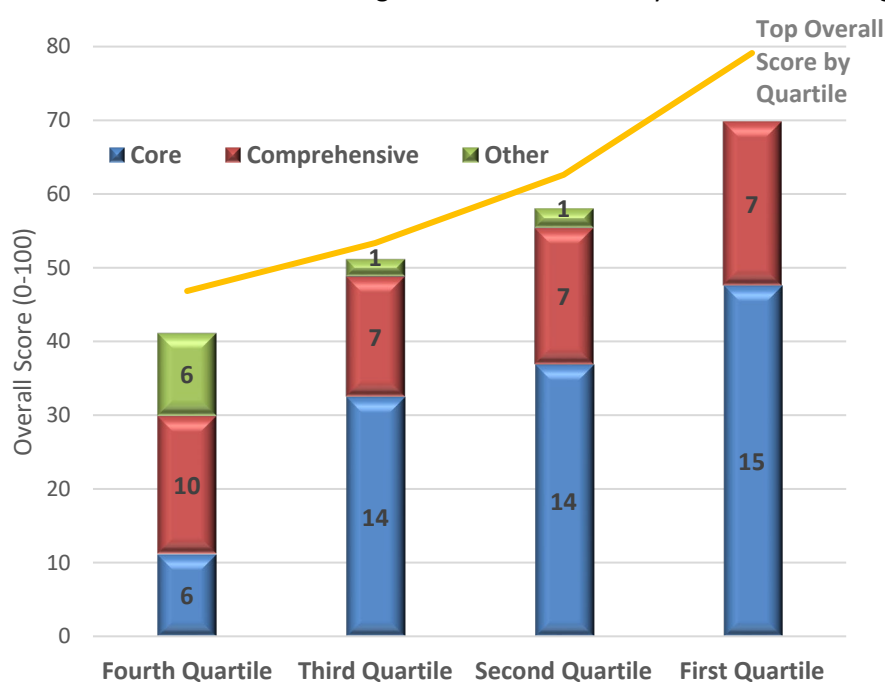
The evaluation focused on safety and security issues communicated via public websites of the Port Authorities but it also took into account general information about the Port Authority, alongside with evaluation of usability and quality of the websites. Each website available in English was assessed by at least two individual evaluators. In addition, website Quality Assurance tool Silktime was used evaluate the technical performance of the websites.

Category	Point of view	Sub-category & the no. of dimensions	Code
Content	Passenger Operations (n = 30)	Basic information (18)	B1
		Safety and Security Information (24)	B2
	Cargo Operations (n = 88)	Basic Information (42)	B3
		Safety and Security Information (31)	B4
	General Information on Port Authority	General Information on Port Authority (15)	B5
Usability	User opinion	General usability and quality (6)	B6
	Silktime Quality Assurance Tool	Quality assurance (144)	B7

Table 1. The structure and Categories used in the evaluation

The evaluation criteria were divided into two main Categories: Content and Usability sorted under seven (7) sub-categories. In total, the evaluation comprised 280 content, usability and website quality dimensions. The Overall Score was calculated as the average of the scores in every relevant sub-category, each on a scale from 0 to 100.

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Port of Helsinki scored the highest followed by Port Authorities in Dover/Folkestone (2nd), Rauma (3rd and the best among Comprehensive ports), Pori (4th) and Tallinn (5th).

15 of the seaports in the 1st Quartile were Core seaports, while the 4th Quartile had only six. The distribution by type of seaport in the 2nd and 3rd Quartiles, respectively, was identical. The average Overall Score of 1st Quartile was almost 30 points higher than that in the 4th Quartile.

Figure 1. Average and Top Overall Score and Seaport Type Distribution by Quartile (N = 88)

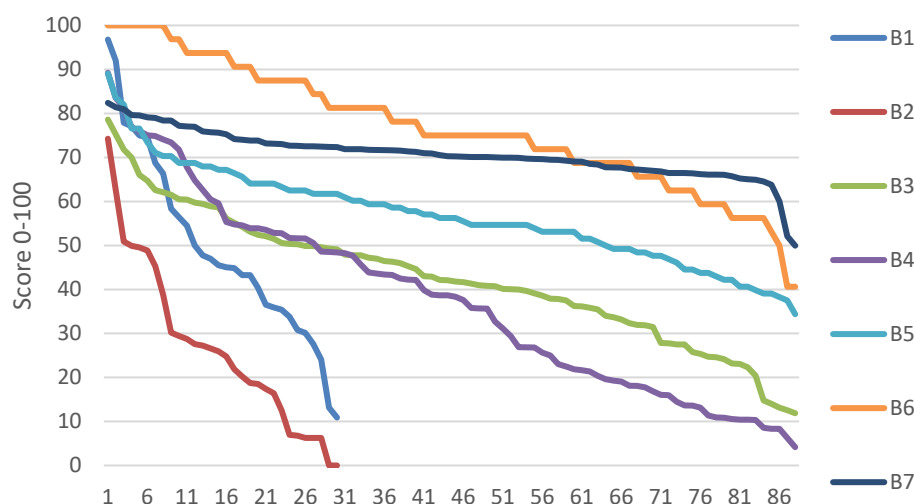
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Websites, which performed well overall, tended to perform well also in all the sub-categories. Worryingly, however, the difference between top and bottom performance in the safety and security category (B2 & B4) was very high. By contrast, the technical performance level (B7) was rather uniform.

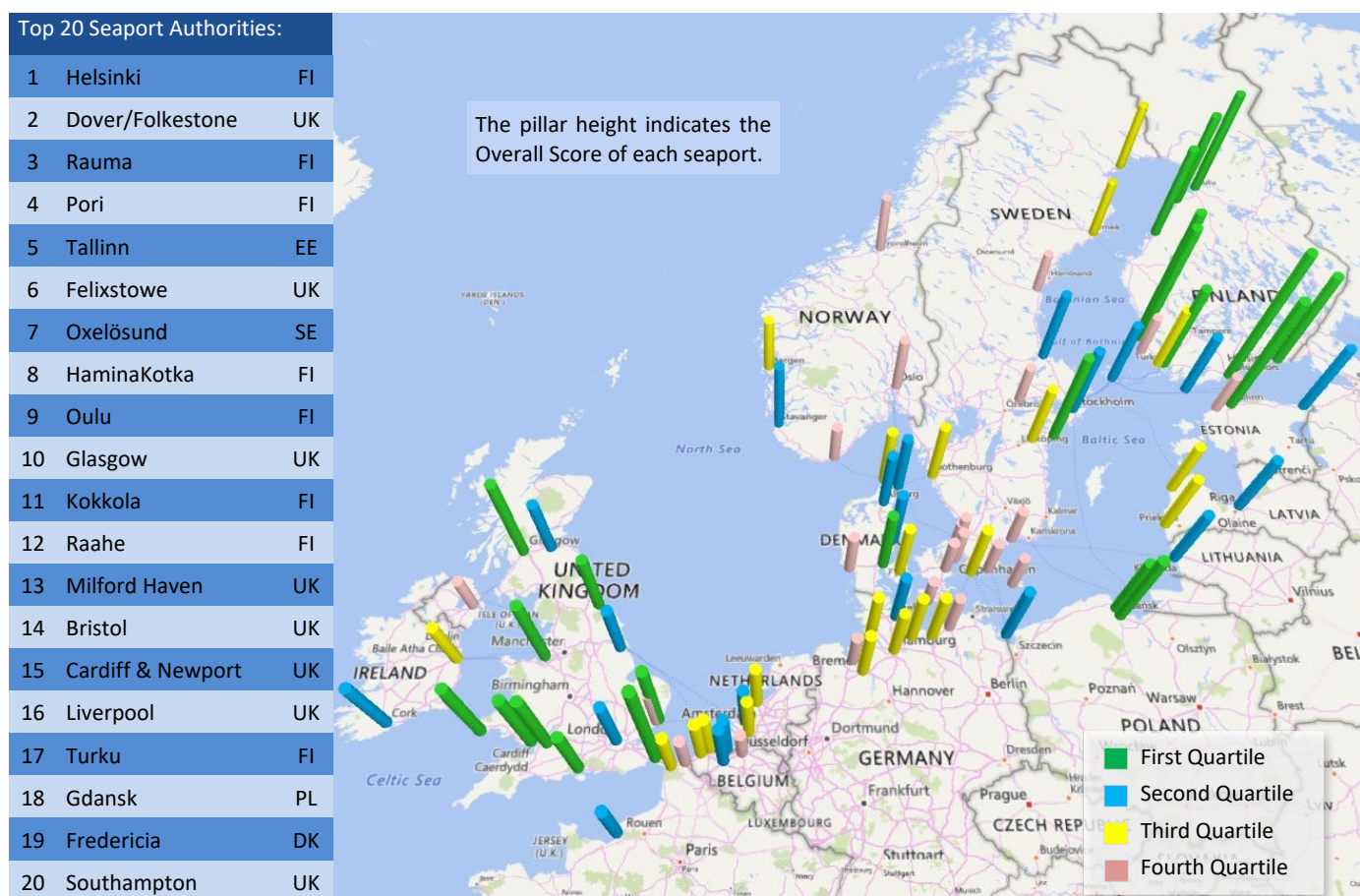
Finnish and British Port Authorities dominated the Top 20 (FI 8, UK 8). Port of Tallinn (EE), Oxelösunds Hamn AB (SE), Fredericia of Associated Danish Ports A/S (DK) and Port of Gdansk Authority S. A. (PL) also made it to Top 20.

Figure 2. Scores by sub-category from top to bottom (cf. Table 1)

Of the Top 20 seaports, 13 were Core and seven Comprehensive TEN-T seaports. Only five passenger ports made the Top 20. However, the 1st (Helsinki) and 2nd (Dover) overall are also the two biggest passenger seaports in the scope.

Top 20 seaports' cargo volumes ranged from 2 to 50 million tonnes, typically with an annual volume less than 10 million tonnes. There was practically no correlation between the Overall Score and the size of the seaport.

A more detailed report of the results is available at https://blogit.utu.fi/hazard/website_evaluation. Final report of the evaluation will be published in HAZARD publication series later in 2019.



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CHEMICAL INCIDENT EXERCISE AT THE PORT OF TURKU, 28 NOVEMBER 2018

Altogether 10 large-scale exercises have been arranged during the project in the partner seaports in Turku (FI), Naantali (FI), Klaipeda (LT) and Hamburg (DE), which are also part of the TEN-T Core Network Corridors.

The aim of the exercises is to enhance preparedness and co-operation between authorities to mitigate the effect of emergencies in BSR seaports.

The last large-scale exercise in HAZARD project was arranged on 28 November at the Port of Turku in Finland.



Southwest Finland Emergency Services was responsible for the planning and execution of the exercise. In the scenario a leak was detected in a container storing hazardous material.



While checking the leak, fire fighters found around 25 persons in one of the containers. They didn't speak Finnish. Were they victims of human trafficking or asylum seekers who had illegally entered the country? The persons were contaminated with ammonia and they had to be decontaminated before further actions.



Many different authorities are needed in a real incident like this. That is why the co-operation and communication between authorities plays such an important role and has been one of the key elements in the project.

The participating organisations in this exercise were the Southwest Finland Emergency Services, Emergency Medical Services/Hospital District of Southwest Finland, Southwestern Finland Police Department, the Finnish Border Guard and the Port of Turku.



Photos: Mariikka Whiteman

NEW PUBLICATIONS IN 2019

HAZARD Publication no 26

Jenna Ahokas: The Finnish maritime sector and cybersecurity

HAZARD Publication no 27

Mikko Koivumäki:
Laivanselvityspalveluiden nykytilanne ja näkymät Suomessa (available only in Finnish)

HAZARD Publication no 28

A. Nagi, H. Porten, M. Indorf, W. Kersten:
Current Status of Risk Management Process at Major Baltic Sea Region Seaports: An Interview Study

HAZARD Publication no 29

Håkan Torstensson, Daniel Ekwall:
Transport Damage Analysis of Dangerous Goods: State-of-the-art Report for Baltic Ports

All HAZARD publications can be downloaded from
<https://blogit.utu.fi/hazard/publications>



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