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A comparative analysis of CSR disclosure of Polish and selected foreign seaports

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ABSTRACT

In recent years, there has been a growth in interest around the concept of corporate social responsibility (CSR) at seaports. Increasingly, port companies publish their social responsibility policies and the results of their implementation. The following article contains the results of comparative analysis of the ecological and social responsibility of Polish seaports, which are of key importance for the national economy, with the ports of Hamburg and Antwerp as a benchmark. The data used in the article comes from annual reports, official websites, information brochures and interviews with port representatives. The criteria used in the analysis were devised based on selected Global Reporting Initiative (GRI) guidelines and the Sustainable Development Goals as defined in Transforming Our World – the 2030 Agenda for Sustainable Development. The aim of this article is to determine whether and in which areas seaports in Gdańsk, Gdynia, Szczecin and Świnoujście are socially responsible, and to identify any shortcomings - providing insights which may be useful for entities managing these ports. The study found that the authorities of the most important Polish seaports are socially responsible, but also that the activities undertaken as part of CSR are on a smaller scale than in the ports of Antwerp and Hamburg.

1. Introduction

Until the mid-20th century, the topics of environmental protection and the depletion of natural resources were discussed sporadically, with even these discussions being regional in character. Over time, more and more organizations involved in the field of ecology and environmental protection, as well as publications on these subjects, began to appear. Undoubtedly, this translated into an increasing societal awareness of the problem which, along with certain requirements, put pressure on economic entities. Consequently, globalization and growing international competition have forced companies to take more aggressive action in this area. Profits have ceased to be the only important goal of running a business; environmental protection and relations with stakeholders have become equally vital.

The second half of the 20th century was a period of growth for, among others, two concepts – sustainable development and corporate social responsibility (CSR). Both ideas are the result of changes that have occurred in the society's approach to environmental protection and industries' attitude towards conducting business. The vast majority of companies which are currently active in the international markets implement and execute a strategy of sustainable development and corporate social responsibility. These concepts assume integration of business activities in three areas: social, economic, and environmental. Social responsibility should be treated as a way of running a business and, at the same time, as a business management tool that allows it to operate effectively now and in the future (CSR goals and activities should be included in the company's business strategy). CSR becomes a regulator of the relationship between a business and its environment. Stakeholders play an increasingly important role in the management of enterprises, evidenced by the evolution of CSR from 1.0 to 3.0, and even 4.0. From one-sided communication with stakeholders about the activities, through dialogue with them, responding to their needs, involving them in activities and inspiring their needs, up to a totally transformed systemic approach based on multi-faceted integration of the company with its stakeholders (Munro, 2020).

Seaports stand as specific examples of organizations implementing the policy of social responsibility. Due to the high-emission nature of their activities, they create centres that generate considerable

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externalities. Implementation of corporate social responsibility by seaports is a result of a growing openness to dialogue with a large group of stakeholders and the need for protection of the environment. CSR in the port sector is both a fundamental and topical issue, as is evidenced by numerous publications on this subject and the activities of international organizations dealing with the sustainable development of seaports. Among examples are ESPO and EcoPorts, which, since 1996, have been regularly monitoring environmental issues in member seaports and creating reports and publications based on this data (ESPO, 2016). An important initiative supporting the socially and environmentally responsible development of seaports is the World Ports Sustainability Program, which was created on the basis of 17 sustainable development goals (2030 Agenda). The program aims to coordinate the efforts of seaports around the world in the field of sustainable development. Objectives of the program are divided into five areas: Climate and Energy, Community Outreach and Port-City Dialogue, Governance and Ethics, Resilient Infrastructure, and Safety & Security. The World Ports Sustainability Program draws on an earlier initiative of the International Association of Ports and Harbours, namely the World Ports Climate Initiative (WPSP, 2020).

Socially responsible actions undertaken in seaports in countries with an established market economy have a longer tradition than in countries - such as Poland - that entered the market economy only after the political transformation in the 1990s. Only after the start of the systemic transformation in Poland in 1989, did domestic enterprises open themselves to the influence of the countries of Western Europe and the United States, with which Poland entered into broadly understood political, economic and social cooperation. In order to become an equal partner in international relations, as well as to meet the requirements set out by the European Union for its member states, Poland had to adapt to new conditions very quickly, to catch up with Western countries in the future in terms of economic development. This was linked to the implementation of the idea of a free market, the creation of civil society and democratization.

The changes taking place in Poland provided the basis for making the country attractive to foreign investors in the early 1990s. This was related to the dissemination among entrepreneurs of the free-market concept of business ownership, including its social responsibility. There were, however, some obstacles explicitly related to Poland such as subpar quality of technical and social infrastructure, lower – compared to Western European countries – availability of modern technology, as well as the approach of society, which had become accustomed to functioning in a vastly different, non-democratic regime. The transition of the country's economy onto a free-market track created a brand new reality also for Polish seaports, which had to adjust operations to the competitive market under the new conditions. In 1997, the national law regulating the management system and the functioning of Polish ports was changed. It took almost a decade to adapt the port management system to the free market economy.

The units of analysis in this study were the authorities of Polish seaports of primary importance to the national economy, i.e., the management boards of the seaports in Gdańsk, Gdynia, Szczecin and Świnoujście (the latter two have joint management). These ports handle practically all throughputs (approx. 98%) of the Polish port sector. Only after the beginning of the political transformation in Poland - as a result of which ports started functioning according to the principles of the free market - did the unusually fast expansion of the ports' potential in the service sector, along with the pursuit of the global trends in port management, begin. One such trend was the implementation of the concept of corporate social responsibility. Therefore, the main research question of this study is: are the managing authorities of the largest Polish seaports socially responsible? More detailed questions that have been posed are as follows: are the managements of the largest Polish seaports implementing actions in all the areas of corporate social responsibility? Are there differences between the Polish and foreign (recognized as exemplary) port authorities when it comes to the implementation of corporate social responsibility initiatives? And if there are differences in implementing corporate social responsibility between Polish and foreign port authorities, in which areas are they most pronounced?

The article aims to assess the implementation of the concept of social responsibility by the Polish seaport authorities in each of the CSR areas (based on a fixed set of criteria), compared to the ports that are considered exemplary. Through comparative analysis, the differences in CSR actions implemented by the Polish seaports' management authorities and the management of leading European seaports have been identified. Additionally, solutions that would contribute to an increase in the social responsibility of the management boards of the ports of Gdansk, Gdynia, Szczecin and Świnoujście have been determined. For the purposes of the study, the authors define CSR disclosure as the information that a seaport authority discloses about its environmental impact and its relationship with its stakeholders by various communication channels, i.e. reports, information brochures, official websites and interviews with port representatives (see also Gray et al., 2001; Gamerschlag et al., 2011).

The described research is comprehensive, as it concerns all seaports recognized by the Polish law as ports of fundamental importance to the national economy, meaning it covers almost the entire port sector in Poland. These types of studies have not been conducted before. It's possible that the method used in the study may be a useful example for seaport authorities of other countries whose economies are entering the free market system, just starting or planning to implement the concept of social responsibility and are looking for examples of best practices. Undoubtedly, the recommendations indicated in the article will find a practical application for the authorities of the studied (Polish) seaports, which, by following the example of foreign ports (in countries with an extended market economy tradition), can improve their strategies and methods of operation.

The structure of the article is as follows. In Section 2, we carried out a review of international and Polish literature in the area of social responsibility of seaports. Section 3 describes data sources used in the study and research methods. Section 4 contains the results of the comparison of actions taken in each area of CSR by the Polish and the chosen foreign seaport authorities. Section 5 provides an overview of the results of the study, and the final section of the article presents the main conclusions and references for the managing authorities of the Polish seaports.

2. Literature review

Corporate social responsibility and sustainable development are increasingly becoming the subject of research, which translates into a growing number of publications on the subject. In the years 2001–2003, an average of 14 articles were published on this topic annually. In 2016–2018, this number increased to 760 (Abad-Segura et al., 2019). One can often find interchangeable use of the concepts of corporate social responsibility and sustainable development by researchers and managers. These two concepts are differentiated by their respective origins – the starting point that shaped the concept of CSR had to do with social issues, especially philanthropic activities, while sustainable development was mainly related to environmental problems. The nature of corporate social responsibility is more operational - related to public relations - while sustainable development is related to strategic management. In recent years, the blurring of boundaries between the two ideas has been observed. Although they evolved for different reasons, both are focused on three areas: social, environmental and economic, with a common goal of harmonious development and dialogue with stakeholders (Montiel, 2008).

CSR is not a new concept in the port sector; ports, as complex economic objects, have a significant impact on both the social and natural environment. Seaports increasingly pay more attention to relations with their stakeholders, as is evidenced by, for example, the inclusion of information about CSR in their annual reports (Parola et al., 2013). The

first publications on the social responsibility of seaports, concerning ecological issues, appeared in the mid-1990s (Bateman, 1996; Giaoutzi and Nijkamp, 1993). Currently, the environmental aspect is still most often described in the context of social responsibility of seaports (Berechman and Tseng, 2012; Chen and Pak, 2017; Dinwoodie et al., 2012; ESPO, 2012; Lam and Notteboom, 2014; Liao et al., 2010; Sislian et al., 2016). Some researchers focus on eco-efficiency (Chen and Pak, 2017; Xiao and Lam, 2017), others on air (Peng et al., 2018; Wang et al., 2019) or water (Seguí et al., 2016) pollution management. Social responsibility is based on relationships with stakeholders, which is a factor in the growing number of publications on employment quality (Lu et al., 2016a, 2016b) and community impact (Schipper et al., 2017). Fewer publications are devoted to the economic responsibility of seaports (Acciaro, 2015; Denktas-Sakar and Karatas-Cetin, 2012; Yuen and Thai, 2017) and to the integration of all three CSR areas (Acciaro et al., 2014; Poulsen et al., 2016). Few publications describe the actual scope of implementation of CSR in seaports (Stein and Acciaro, 2020; Klimek and Dąbrowski, 2018; Klimek et al., 2019, 2020; López-Morales et al., 2020; Santos et al., 2016; Verhoeven, 2011).

In the relevant literature, individual areas of CSR are most often described; there is no comprehensive comparative analysis of all the major ports of a given country with model socially responsible ports. Some authors cite or use GRI standards as a method of reporting corporate social responsibility of seaports (Hossain et al., 2021; Klimek and Dąbrowski, 2018; Klimek et al., 2019), however, these indices have not yet been used by researchers as criteria for assessing the social responsibility of seaports. The situation is similar regarding the 2030 Agenda.

Another gap in the literature lies between the theoretical and practical aspects of CSR in seaports. Since CSR in the maritime industry remains an ongoing discussion in the academic context, the need for contributions that close the gap between theory and practice is of benefit for future environmental awareness within the maritime transport sector (Stein and Acciaro, 2020, p. 14).

At the turn of the years 2015 and 2016, ESPO surveyed 86 seaport management authorities functioning in 19 countries from the EU, Norway and Iceland. The results showed that more than half of the port authorities surveyed (54% of respondents) have a formalized CSR policy (ESPO, 2016). Its assumptions and information regarding the results of these societally beneficial activities are (usually annually) published in the form of CSR reports and made available online. The primary beneficiaries of CSR programs are employees and the local community (ESPO, 2016).

The ESPO Environmental Report 2020 demonstrated several positive changes in the European port sector (ESPO, 2020). What is most significant, 96% of port management boards (out of 97 surveyed) have a developed environmental policy, while 92% of respondents create a summary of the most critical challenges in the field of environmental protection. A growing number of seaport management authorities (69% as of 2020) make their environmental reports publicly available, while 81% of port authorities have implemented an environmental monitoring program. There is a visible tendency to increase the scope of communication with stakeholders, as is evidenced by the fact that 91% of ports inform their stakeholders about their environmental policy, and 86% of ports make this information publicly available on their websites. The data used for the study comes from 97 EU / EEA ports which belong to ESPO, and use the EcoPorts Self-Diagnosis Method (SDM) (ESPO, 2020).

The World Ports Sustainability Program helps seaports to fulfil their duties for the benefit of society and the environment. The 2020 World Ports Sustainability Report shows that in the years 2018–2019, 38 projects for resilient infrastructure were initiated, 43 in the area of Climate and Energy, 68 within the framework of Community Outreach and Port City Dialogue, 11 regarding Safety and Security and 19 in the area of Governance and Ethics (WPSP, 2020).

Few publications address the social responsibility of Polish seaports. Previous publications on the CSR of Polish seaports mostly regarded individual ports: Gdynia (Klimek and Dąbrowski, 2018; Żukowska, 2020), Gdańsk (Klimek et al., 2019) as well as Szczecin and Świnoujście (Klimek et al., 2020). This study covers the entire port sector of Poland. Contrary to the first publications focusing mainly on ecological aspects, this article is characterized by a holistic approach to CSR areas. So far, the methods used to research the social responsibility of Polish seaports were most often case studies (Klimek and Dąbrowski, 2018; Wagner, 2017; Klimek et al., 2019, 2020; Żukowska, 2020; Mańkowska et al., 2020) and the benchmarking method was not used to analyse or evaluate the CSR of Polish seaports. The same applies to the GRI index and the 2030 Agenda, which were also not previously used as criteria for assessing the social responsibility of Polish seaports. This article aims to fill this literature gap.

3. Data collection and methods applied

Both secondary and primary data sources were used in this research. The data collection process took place in two stages – first, data from the websites of the surveyed seaport managements were analysed. This included published CSR/sustainable development reports, CSR policies, as well as other available publications on charity (sponsorship) and pro-environmental practices of port authorities. After having prepared a list of criteria for assessing the social responsibility of seaports (the way of selecting criteria is explained at the end of this chapter), the generally available materials of Polish seaport authorities were analysed in order to determine the actions taken by them under each criterion. Based on the results of the analysis of the available materials, a list of indicators that were not reported in official sources was prepared. Therefore, in the second stage, additional standardised interviews were conducted with representatives of the management boards of Polish seaports who are responsible for CSR. Based on this list, questions were formulated for representatives of the port authorities (tab. 1), and their answers made it possible to complete the collected data. Standardized interviews were conducted with representatives of port authorities over the period 20/10/2020–10/11/2020, via e-mail. Table 1 contains a list of questions included in the interview with the indication of which port received a given question (i.e. which port did not publish information on a given issue in publicly available sources).

Information obtained from the interviews with port representatives has been indicated in the tables presenting the research results (section 4). The study concerned the years 2015–2020 since its purpose was to present the current form of CSR policies presently being implemented in the surveyed port hubs.

A significant problem is posed by the measurability of corporate social responsibility. As part of CSR research, mainly qualitative data is analysed. As such, a dilemma arises: “how to measure the unmeasurable”. In qualitative research, as opposed to quantitative research, the criteria are not homogeneous (Langley and Abdallah, 2011) and thus allow for in-depth analysis and understanding of the studied occurrence. This article uses a comparative analysis method that can be used to analyse a small number of empirical cases in a holistic manner in order to capture the causal processes leading to the observed similarities and differences (Pickvance, 2001). The number of compared seaports was of great importance for the selection of the research method. Thanks to comparative analysis, it is possible to place several comparable examples next to each other and to determine the differences and similarities between them. When choosing the method, the authors were also guided by the transparency of the study - thanks to a comparative analysis, the article may be more useful for port authorities, which corresponds to the aim of the study. A comparative analysis is a method that is often used to illustrate corporate social responsibility and sustainable development (Aguilera et al., 2006; Sadeka et al., 2018; Hąbek et al., 2018), also in the port sector (Feng et al., 2012). The main problem in comparative research, though it may seem ironic, is comparability. This applies to both the tested objects as well as the concept of the analysis itself. Only entities that fulfil the same function (or role) can be meaningfully

Table 1
Structured interview questions with port representatives.

Question	Port of Gdańsk	Port of Gdynia	Ports of Szczecin-Świnoujście
How frequently do you plan to issue subsequent CSR reports?	X	X	
Does the seaport authority plan to prepare and publish a CSR report on the seaport			X
Does the seaport authority commission an external audit to verify the implementation of CSR activities?			X
Does the seaport authority publish or make available to stakeholders data on the number of employees (broken down by type of contract, gender and age), as well as on newly hired employees and employment rotation?			X
Does the seaport authority provide benefits dedicated only to full-time employees (not intended for part-time employees or other contracts than an employment contract)?	X	X	X
Does the seaport authority implement a procedure for reporting employee complaints (regarding e.g. mobbing)?	X		X
Does the seaport authority develop and familiarize employees with unethical behaviour reporting procedures?			X
Does the seaport authority have a document covering values, principles, standards, and norms of behaviour?			X
Does the seaport authority identify its own and the seaport's stakeholders?			X
Does the seaport authority create a list of the stakeholder groups?			X
What is the average number of training hours per seaport employee per year?			X
Does the seaport authority prepare a list of IUCN Red List species and national conservation species with habitats in areas affected by the seaport's operations?		X	
Does the seaport authority provide detailed information on energy intensity?			X
Does the seaport authority provide information on water consumption by source?	X	X	X
Does the seaport authority provide information on water recycling and reuse?	X	X	X
Does the seaport authority provide information on the intensity of GHG emissions?	X	X	X
Does the seaport authority provide information on nitrogen oxides (NOx), sulfur oxides (SOx), and other significant emissions?	X	X	X
Does the seaport authority provide information on water discharge by quality and destination?	X	X	X
Does the seaport authority provide information on waste by type and disposal method?	X	X	X
Does the seaport authority provide information on significant spills?	X	X	X
Does the seaport authority provide information on bodies of water affected by water discharges and /or runoff?	X	X	X
Does the seaport authority provide information on types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities?	X	X	X
Does seaport authority take action to protect human rights?	X	X	X

compared to each other (Esser and Vliegenthart, 2017).

Six seaports operating in European Union countries, located in large urban centres (four Polish, one German and one Belgian), were subjects of this study. The Polish seaports in Gdańsk, Gdynia, Szczecin and Świnoujście are universal ports, considered to be among the ports of fundamental importance for the national economy and the largest ports in the Baltic region. All of them are part of the Trans European Baltic-Adriatic corridor. The authorities of these ports (Port of Gdańsk Authority, Port of Gdynia Authority, Szczecin and Świnoujście Seaports Authority) mainly take care of real estate and port infrastructure management (in accordance with the applicable Polish law) effectively fulfilling the role of landlords. They are public utility enterprises (joint stock companies in which the majority of shares belong to the State Treasury). Port authorities, together with port operators, form port service centres (operating under the brand names of Port of Gdańsk, Port of Gdynia, Ports of Szczecin and Świnoujście).

The seaports in Hamburg and Antwerp were selected as model ports in the implementation of the CSR concept. Both are universal ports, counted among the largest seaports in Europe and even in the world. The managing body of the port of Antwerp is the Antwerp Port Authority, which has the status of an autonomous municipal company. The governing body of the Port of Hamburg is the Hamburg Port Authority, which is a public law partnership. Both ports are considered smart ports, which means that they both use digital technologies to increase safety, efficiency and effectiveness of operations and also to minimize their negative impact on the environment (Chen et al., 2019). These ports cooperate with the cities in which they are located under the smart port-city banner. Both ports in Hamburg and Antwerp report their socially responsible practices. Their reports on responsible development are based on the postulates of the 2030 Agenda and the Global Reporting Initiative (GRI) guidelines. Since 2012, the Antwerp Port Authority has been publishing a sustainability report. The port also participates in international projects, such as ESI (Environmental Ship Index), CLINSH Project, Port Information Network (PIN) (Port of Antwerp, 2017). The seaport in Hamburg has been reporting on activities undertaken in the field of corporate social responsibility since 2011. The reports are posted on the official GRI website (Global Reporting Initiative, 2020). The port participates in international projects supporting the sustainable development of seaports (ESI Green Award) and undertakes independent initiatives in the field of social and environmental responsibility, for example, Hamburg Sustainable Fleet; Secure Truck Parking; 5G Mobile Network Architecture (5G-MoNArch) (Hamburg Port Authority, 2019).

The ports selected for this study meet the criterion of comparative analysis, because they are all universal ports, they operate in market economy countries belonging to the European Union (though the history of their membership in the EU is different), they perform the same functions as each other, and they are considered to be the largest ports in their respective countries and regions. The main differences between the Polish ports and the ports selected for comparison - ports of Antwerp and Hamburg - concern the extent of their service activities (throughput volume) and the tradition of implementing CSR. However, it is necessary

to emphasize the efforts of the Polish seaports authorities aimed at emulating their foreign competitors in the field of socially responsible activities, a fact which they hope will lead to the elimination of shortcomings and differences in the field of CSR.

In order to select criteria for assessing the social responsibility of Polish seaport managing authorities, an analysis of trends in reporting the social responsibility of seaports in the world was carried out. The first step in preparing for the study was to review the literature and reports being published by socially outstanding and environmentally responsible seaports in Europe. Subsequently, the sustainable development reports (including the GRI tables), which are published by the ports of Antwerp and Hamburg, were analysed in detail. On this basis, the GRI guidelines and sustainable development goals (2030 Agenda) - which are used by both reference ports to report on their CSR activities - were selected. The lists of evaluation criteria developed for the purpose of the study (see Tables 2–5 are grouped in the same manner as the GRI reports (according to individual indicators). The criteria to be compared are taken from the sustainability reports of the reference ports. The appropriate combination of the 2030 Agenda and the GRI guidelines (i.e. the most commonly used tools for reporting sustainable development and social responsibility in the world) allows for a more complete picture of all analysed areas of social responsibility of seaports. The goals presented by the United Nations have set the direction for sustainable development and are more up-to-date, communicative and thus more understandable for practitioners. The analysis of corporate social responsibility reports has shown that seaports using the 2030 Agenda fit well into the global trends in implementing and reporting corporate social responsibility. Since the aim of the article was to present a holistic approach to CSR of seaports, it was decided to combine the goals of the UN with the GRI guidelines.

4. Results

The results of the study of activities undertaken in the field of social responsibility by the managing authorities of the largest Polish seaports and seaports recognized as exemplary have been included in tables with individual CSR areas, i.e. organization profile (Table 2), economic impacts (Table 3), environmental performance (Table 4) and social performance (Table 5).

The management boards of the seaports in Gdynia, Gdańsk, Szczecin and Świnoujście each provide their stakeholders with information regarding organizational profile (Table 2). The only areas in which the ports of Gdańsk and Gdynia differ from the exemplary ports are the lack of GRI tables in their CSR reports and the absence of external auditing verifying the compliance of specific objectives of social responsibility with the GRI standard. This notwithstanding, both port authorities prepare their reports based on GRI guidelines (Port of Gdańsk Authority SA, 2017; Port of Gdynia Authority SA, 2019). Szczecin and Świnoujście Seaports Authority does not report employee data to stakeholders and does not publish CSR reports and does not plan to change that fact in the near future. Still, Szczecin and Świnoujście Seaports Authority has certificates of compliance of its quality management system with the ISO 9001:2015 standard and environmental management with the ISO 14001:2015 standard, meaning that the port has to take care of both its relationship with stakeholders and the environment (Szczecin and Świnoujście Seaports Authority SA, 2017, 2018).

A good practice to emulate in the field of business ethics is the corruption prevention program implemented by the Hamburg Port Authority, under which employee training courses are organised. Moreover, the sustainability reports published by Hamburg Port Authority include information on confirmed cases of corruption in a given period. Polish seaports also declare ethical activities without signs of corruption, but no examples of specific actions and data on confirmed cases of corruption are available.

CSR activities reported by Polish seaports relate to activities undertaken by the port authorities, whereas in the cases of the ports in Hamburg and Antwerp, the reports cover the activities of all entities, including operators, which form the port service supply centre. A 2015 decision by the Hamburg Senate made it obligatory for the Hamburg Port Authority to broaden its sustainability reports to the entire port of Hamburg. In 2017, Hamburg City Parliament subsequently asked the Ministry of Economy, Transport and Innovation to produce a corresponding sustainability report in conjunction with associations and institutions operating at the port. In 2018, a project group for sustainable port development was created, which deals with reporting of the effects of and creation of policies for sustainable development of the whole seaport centre. The group consists of: Ministry for the Environment and

Table 2
Identification of CSR actions of the studied seaport authorities in the area of organization profiles.

Description	Port of Gdańsk	Port of Gdynia	Ports of Szczecin-Świnoujście	Port of Hamburg	Port of Antwerp
Provides information on the number of employees and other workers	YES	YES	NO*	YES	YES
Provides information on significant changes to the organization and its supply chain	YES	YES	YES	YES	YES
Identification of key impacts, risks, and opportunities	YES	YES	YES	YES	YES
Identification of values, principles, standards, and norms of behaviour	YES	YES	YES*	YES	YES
Creation of mechanisms for advice and concerns about ethics	YES	YES	YES*	YES	YES
Creation of the list of stakeholder groups	YES	YES	YES*	YES	YES
Engagement with stakeholders	YES	YES	YES	YES	YES
Provides information on entities included in the consolidated financial statements	YES	YES	YES	YES	YES
Provides information on reporting period & cycle	YES*	YES*	NO*	YES	YES
Preparation of CSR reports, based on GRI	YES	YES	NO	YES	YES
Inclusion of a GRI content index in the report	NO	NO	NO	YES	YES
Verification of reports by external audit	NO	NO	NO*	YES	YES

YES – activities are running.
NO – actions are not implemented.
* data from interviews.

Table 3
Identification of CSR actions of the studied seaport authorities in the area of economic impacts.

Description	Port of Gdańsk	Port of Gdynia	Ports of Szczecin-Świnoujście	Port of Hamburg	Port of Antwerp
Provides information on direct economic value generated and distributed	YES	YES	YES	YES	YES
Provides information on infrastructure investments and services supported	YES	YES	YES	YES	YES
Provides information on significant economic impacts	YES	YES	NO	YES	YES
Provides information on investments in the Port	YES	YES	YES	YES	YES
Provides information on investments in research & development	YES	YES	YES	YES	YES

YES – activities are running.
NO – actions are not implemented.

Energy, Ministry of Economy, Transport and Innovation, Hamburg Federation of Trade Unions, Hafen Hamburg Marketing, Hamburg Port Authority, Hamburg Chamber of Commerce, Industry Association of Hamburg, Logistik-Initiative Hamburg, Association of Hamburg Port Operators, Verein Hamburger Spediteure and Zentralverband Deutscher Schiffsmakler.

In turn, in the port of Antwerp in 2010, a Sustainability Steering Group was established with the aim of developing a sustainable development plan for the entire port community. The first report was published in 2012. The same year, it was awarded the Best Belgian Sustainability Report 2012 in the category "other organizations". In order to improve sustainability reporting, more project groups have gradually joined the Sustainability Steering Group. After the publication of the second report of sustainable development, the following working groups have become part of the Group: Mobility, Travel between Home & Work, Road Transportation, Rail Transportation, Barge Transport, Pipelines, Energy & Climate, Safety & Security, Social Experience and Research & Innovation. Then, between the publication of the third and fourth report, at the instigation of stakeholders, two additional groups were set up, dealing with the Circular Economy and Sea Shipping. The sustainable development working group and area-specific groups are made up of representatives from Alfaport Antwerpen, the Antwerp Port Authority and Left Bank Development Corporation as well as Catalisti and other stakeholders. Coordination between the steering group and working groups takes place through consultation between the coordinators of the working groups and a representative of the steering group (Port of Antwerp, 2017).

The examined authorities of the largest Polish seaports, like the exemplary port authorities, implement activities in the area of economic impacts (Table 3) and inform their stakeholders about them. The only discrepancy here is between Szczecin and Świnoujście Seaports Authority and other ports in the significant economic impacts area. All described seaports provide information on financial results and investments. Due to the scale of their operations, seaports generate significant added value, expressed, for example, in the number of people

Table 4
Identification of CSR actions of the studied seaport authorities in the area of environmental performance.

Description	Port of Gdańsk	Port of Gdynia	Ports of Szczecin-Świnoujście	Port of Hamburg	Port of Antwerp
Provides information on energy consumption within the organization	NO	YES	NO*	YES	YES
Provides information on energy intensity	NO	NO	NO	YES	YES
Taking action to reduce energy consumption	YES	YES	YES	YES	YES
Provides information on water consumption by source	NO*	YES*	NO*	YES	YES
Provides information on water recycled and reused	NO*	NO*	NO*	YES	YES
Provides information on operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	YES	YES	YES	YES	YES
Provides information on protected or restored habitats	YES	YES	YES	YES	YES
Preparation of a list of IUCN Red List species and national conservation species with habitats in areas affected by operations	YES	NO*	YES	YES	YES
Provides information on GHG emissions intensity	NO*	NO*	NO*	YES	YES
Taking action to reduce GHG emissions	YES	NO	YES	YES	YES
Provides information on nitrogen oxides (NOx), sulfur oxides (SOx), and other significant emissions	NO*	YES*	NO*	YES	YES
Taking action to reduce nitrogen oxides (NOx), sulfur oxides (SOx), and other significant emissions	YES	YES	YES	YES	YES
	NO*	YES*	NO*	YES	YES

(continued on next page)

Table 4 (*continued*)

Description	Port of Gdańsk	Port of Gdynia	Ports of Szczecin-Świnoujście	Port of Hamburg	Port of Antwerp
Provides information on water discharge by quality and destination	NO*	YES*	NO*	YES	YES
Provides information on waste by type and disposal methodology	NO*	NO*	NO*	NO	YES
Provides information on significant spills	NO*	NO*	NO*	YES	YES
Provides information on bodies of water affected by water discharges and /or runoff	YES	YES	YES	YES	YES
Provides information on negative environmental impacts in the supply chain and actions taken					

YES – activities are running.
NO – actions are not implemented.
* data from interviews.

employed or as a percentage of the country's / region's GDP. The ports of Antwerp and Hamburg devote more attention than Polish seaports to added value, e.g. by publishing lists of investments by the different sectors active in the port or specific assumptions aimed at increasing the added value of the wider region in which they operate.

The environmental factor is, next to the social one, the most thoroughly described aspect of social responsibility of seaports. This is due to the fact that the ports generate considerable external costs which affect the pollution of land, water and air. The type of communication used to inform about activities undertaken by a port in this area can vary from general information about measures being taken in order to, for example, reduce greenhouse gas emissions, to more detailed statistics showing year after year emissions.

Not one of the management authorities of the most important Polish seaports informs about the port's energy consumption, recycled water resources, greenhouse gas emissions (port authorities in Gdańsk, Szczecin and Świnoujście do declare their implementation of tasks aimed at reducing GHG emissions), significant spills and water reservoirs at risk of water discharges (Table 4). The Port of Gdynia Authority - alone among the management boards of Polish ports - provides, at the request of stakeholders, data on the organization's electricity consumption, water consumption by source, the state of NOx and SOx emissions, water discharges and types of waste. The authorities of all surveyed ports strive to reduce their energy consumption. For this purpose, the Port of Gdańsk Authority uses, inter alia, heat recovery technology during reloading (Port of Gdańsk Authority SA, 2016), the Port of Gdynia Authority conducts thermo-modernization works (Port of Gdynia Authority SA, 2019), while Szczecin and Świnoujście Seaports Authority monitors current energy consumption. The management of each Polish seaport informs about protected areas and habitats, as well as species from the IUCN Red List and the national list of protected species. The latter, however, are prepared by the Port of Gdynia Authority only for specific investments. In all ports, measures are taken to compensate for the external costs generated.

Table 5
Identification of CSR actions of the studied seaport authorities in the area of Social Performance.

Description	Port of Gdańsk	Port of Gdynia	Ports of Szczecin-Świnoujście	Port of Hamburg	Port of Antwerp
Provides information on new hires and employee turnover	YES	YES	NO*	YES	YES
Provision of benefits to full-time employees that are not provided to temporary or part-time employees	NO*	NO*	YES*	YES	YES
Provides information on types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	NO*	YES*	NO*	YES	YES
Provides information on number of trainings for employees per year	YES	YES	YES*	YES	YES
Taking action to protect human rights	NO*	NO*	NO*	YES	YES
Organizing operations with local community engagement, impact assessments, and development program	YES	YES	YES	YES	YES

YES – activities are running.
NO – actions are not implemented.
* data from interviews.

All areas included in Table 4 relate to actions undertaken and described by ports in Hamburg and Antwerp. Notably, both ports provide accurate data about their environmental impact, in particular, data on water consumption by source, the consumption of water, consumption of electricity, the management of waste and emissions of greenhouse gases and other substances into the atmosphere. The reports also provide examples of specific investments aiming to reduce emissions. Both ports participate in the Environmental Ship Index program, according to which port fees are discounted for ships with a greater reduction in emissions than is legally mandatory; the greater the reduction, the greater the discount offered to the ship in question.

It is worth noting that the ports of Hamburg and Antwerp approach the issue of environmental protection and climate change comprehensively and the actions taken are implemented in cooperation with stakeholders (the aforementioned project groups). The PortKLIMA project (in which the port in Hamburg participates), for example, established research and development cooperation on the impact of ports on climate change with the Institute for Hydraulic and Coastal

Engineering at the Bremen City University of Applied Sciences. The aim of the PortKLIMA project is the development and pilot implementation of didactic modules in the field of training and professional development of engineers, logisticians, economists and technicians in the field of port engineering and management, as well as additional training for students (thematic majors) aimed at adapting to climate change in planning, construction and exploitation of seaports in Germany. The design works are based on expert analysis of climate change and the vulnerability of individual systems and port facilities to localized climate change scenarios, as well as the examination of their adaptability, taking into account economic factors Hamburg Port Authority, 2019).

Another example of pro-environmental action worth imitating is the replacement of the fleet of vehicles serving seaports with low-emission trucks (in 2018, they accounted for over 33% of the fleet). To promote electromobility, the Hamburg Port Authority continues to expand the energy supply infrastructure for vehicles, which in 2018 consisted of 33 charging points. In Poland, it has not been decided so far to replace vehicles servicing ports with environmentally friendly models, but a good step towards electromobility is the provision of charging points for electric vehicles by the ports in Gdańsk and Gdynia.

The ports of Hamburg and Antwerp (similarly to the port of Szczecin) are not located directly by the sea, so their accessibility depends on the condition of the rivers on which they are located. In both Germany and Belgium, inland water transit is of great importance in the transport of cargo between ports and hinterland. This is also visible in the activities of ports, which care not only about navigability but also the environmental condition of the Scheldt (Port of Antwerp) and Elbe (Port of Hamburg) rivers. Both ports undertake actions to reduce the proportion of road transport in their delivery and pick-up operations. In 2018, in the port of Antwerp, more than half of the containers going to and from the port (56.2%) were transported by truck, 36% of containers were transported by ships, and 7.8% by rail. By 2030, the percentage of road transport usage should drop to 43% in favour of inland navigation and rail (Port of Antwerp, 2019).

It is also significant that the ports of Antwerp and Hamburg provide not only positive information but also negative impacts of their activities in their sustainability reports. Examples include the detailed statistics published by the Port of Antwerp on significant spills (Port of Antwerp, 2019) and the information contained in the Hamburg Port Authority report on the port-city conflict concerning urban development (Hamburg Port Authority, 2019).

The reports of the surveyed Polish ports mention only positive actions and their effects, but there is no information on negative events such as leaks or the amount of harmful substances released into the atmosphere.

Social matters are another widely described area of the social responsibility of seaports. Seaports have an extensive group of stakeholders, both internal and external. These include port workers as well as competitors, suppliers, customers, the local community, universities, national and international organizations and other entities that have an impact on the port's operations. For port authorities, it should be important not only to carry out activities in the social area of CSR but also to inform stakeholders about the actions taken. It seems to be a good practice to invite terminal operators and other port companies to develop a joint sustainable development plan, as do the port authorities in Antwerp and Hamburg.

All seaports provide stakeholders with information on employee training and projects aimed at the local community (Table 5). Regarding the second point mentioned above, the list of pro-social activities is very long. The management boards of all surveyed ports actively cooperate with universities, schools, and sports clubs and engage in charitable practices. Szczecin and Świnoujście Seaports Authority does not provide information about staff turnover, but it includes information about actions aimed at improving the quality of employment, a measure which is also undertaken in ports of Gdynia and Gdańsk.

The need to protect workers' rights is emphasized by all surveyed port authorities, while the greatest attention is paid to issues of equality and the problem of mobbing. Management boards of ports in Gdynia and Gdansk provide information about the structure of employment broken down by gender, age and education of workers, which is vital from the perspective of equal opportunities improvement. All surveyed management boards of Polish seaports implement activities aimed at counteracting mobbing and discrimination in the workplace.

In this regard, the port of Hamburg has gone a step further and data on issues such as injuries, occupational illnesses, working days lost, absence, and number of fatal work accidents are also reported, broken down by gender. Since 2015, the Hamburg Port Authority employs an Equal Opportunities Officer, who fulfils his/ her responsibilities in line with the Hamburg Act on Gender Equality in the Public Sector (Hamburg Port Authority, 2019). Consistent with legal requirements, the Hamburg Port Authority has also developed an equal opportunity plan, the main aim of which is to improve work-life balance and increase the percentage of women among port employees. For this purpose, various programs have been implemented (e.g., help in organizing childcare during school holidays).

When analysing the undertaken pro-social activities, it is worth mentioning that the Antwerp Port Authority takes its practices beyond the borders of its country. A good example is the 2018 project where 25 high school students worked for one day at the Antwerp Port Authority. Their earnings, 50 euros a day, were donated to the Plan International project to help young girls in Ecuador.

Port of Antwerp International, a consulting and investment company owned by The Antwerp Port Authority, provides training for ports in Africa, India, Brazil, the Middle East and Southeast Asia in the implementation of sustainable development. Moreover, The Antwerp Port Authority, Alfaport Voka and CEPA (the employers' organization for port labourers) have also had a structural partnership with Mercy Ships. This international organization carries out free surgical procedures for the most in-need groups in society. This is done on the ship Africa Mercy, off the coast of Africa.

5. Discussion

The social responsibility activities of the major Polish seaport authorities differ, however, from the CSR implemented by the ports of Antwerp and Hamburg. In the ports in Poland, the concepts of corporate social responsibility and sustainable development, compared to those in Belgium and Germany, have been implemented recently. Moreover, there are differences in the society's attitude to the importance of taking into account the impact of the company's environment on its functioning, which results from the previously described historical events and the relatively late introduction to democracy.

The greatest discrepancies are visible in the pro-environmental and pro-social areas. The ports of Antwerp and Hamburg provide stakeholders with detailed data on emissions, water consumption, energy and waste generated. None of the Polish ports presents complete, detailed statistics on all of these issues. Different is also the approach to the choice of transport mode performing delivery and pick-up operations in ports. In Germany and Belgium, great importance is attached to the development of environmentally friendly means of transport, and inland water transport is widely used there. In Poland, this branch of transport makes up a small proportion of general cargo transport and transit to/ from ports. This is influenced by state politics, insufficient navigability of rivers, lack of funding for environmentally friendly means of transport and the approach of cargo operators to the issue of environmental protection (the cheapest solutions are most often chosen; environmental harm is less important when choosing the means of transport).

In Poland, sustainable development plans and CSR strategies or policies are established independently by port management and companies in the port service sector. It seems to be a good solution to create project groups, as is the case in the ports of Hamburg and Antwerp, to develop a joint (with stakeholder participation), comprehensive policy

of sustainable development or CSR for the entire port complex. This way, socially responsible activities would show greater development.

In order to increase the corporate social responsibility of Polish seaports, it is necessary to take a holistic approach to all three areas of CSR and the port complex as a whole. Because CSR reports are a tool for communication between ports and their stakeholders, a change in the form of reporting seems to be warranted. It is a good idea to include GRI tables in CSR reports - a common practice among companies reporting CSR and sustainable development. Moreover, following the examples of the ports of Antwerp and Hamburg, Polish seaports could benefit from an external audit, which would increase the credibility of the reported data. Szczecin and Świnoujście Seaports Authority, though it does not publish reports on CSR, implements socially and environmentally responsible activities. Therefore, considering the quality of communication with stakeholders, it seems reasonable to publish a CSR report. It is worth noting that the quality of business relationship may decide about the success or failure of a company, including a seaport (Caliskan and Esmer, 2019).

It would be worthwhile to complete the socially responsible actions of Polish seaports with additional concepts related to human rights. Managing authorities of Polish seaports have internal procedures for reporting employee complaints about, for example, mobbing. It appears to be a good idea to include in reports information about specific activities aimed at eliminating discrimination (e.g., on the grounds of gender or ethnic/national origin). Polish seaports cooperate with stakeholders from various countries. Therefore, it is essential that not only issues important from the Polish perspective but also from the global one (such as combating racism) are taken into account when creating CSR policies and reports.

The concept of sustainable development requires an inextricable link between the company's operations and environmental protection. Since sustainable development is a long-term process, it is worthwhile for people entering the labour market to already have knowledge in this field and approach business and environmental protection comprehensively. A good example is the PortKLIMA project described earlier, in which the port of Hamburg participates. Increasing the scope of cooperation between Polish ports and schools and universities would contribute both to improving the image of the port, ensuring future adequately qualified staff, and increasing the quality of educational services provided.

6. Conclusions

In response to the posed research questions, it appears that the key issue is to determine when a specific port can reasonably be called socially responsible. There isn't any widely adopted model according to which an organisation can be unambiguously classified in terms of CSR. What combines different definitions of corporate social responsibility is a voluntary policy implementation in three areas: social, environmental and economic; that is, committing to these policies voluntarily. It can be considered that a seaport or seaport managing authority is socially responsible if it willingly carries out activities in all three areas of CSR. Based on the results presented in the article study, it can be assumed that the managing authorities of the largest Polish seaports are socially responsible.

The authorities of Polish seaports implement activities in all three areas of social responsibility. However, the scope and scale of these operations are much smaller compared to the ports of Antwerp and Hamburg. For example, the information about the entire port centres is not included in the reports; only the activities carried out by port authorities are presented, demonstrating that Polish ports are behind the ports considered here as exemplary.

The research has shown that there are also differences between Polish and foreign (i.e., those considered exemplary) port authorities in implementing the concept of corporate social responsibility. The most significant differences between the social responsibility of the studied seaport authorities have been observed in the social and environmental areas. The differences are visible primarily in the number and scale of actions undertaken, as well as in the method of CSR reporting itself.

The conducted qualitative research resulted in specific conclusions and recommendations for the surveyed management boards of Polish seaports. In order to improve the quality of relations with stakeholders, Szczecin and Świnoujście Seaports Authority should formalise its CSR policies through regular development, open communication regarding these policies, and publishing social responsibility reports. The quality of the published data and the transparency of the reports that examine authorities of Polish seaports would be positively impacted by including GRI tables in CSR reports – already a common solution across the world. Advantageous from this perspective would also be to allow for professional external audits of social responsibility activities. The CSR reports developed by the managing boards of the seaports should cover the entire port area, i.e. actions taken by the port authorities and all other entities operating within the port. It also seems to be a good solution to publish information about generated externalities, such as emissions of greenhouse gases and other harmful substances, water and energy consumption, waste management as well as information about specific actions undertaken to combat inequality (racial, religious, etc.). The reports of the ports in Antwerp and Hamburg contain many examples of good practices that should be used by the authorities of Polish ports.

The multidimensional and difficult to measure nature of corporate social responsibility actions hamper their assessment. The methods used herein - benchmarking and case study - allow for in-depth analysis of corporate social responsibility implemented by the various economic actors, but its overall assessment remains subjective in nature. Therefore, it seems that the goal of further research on social responsibility should be to develop quantitative methods allowing for the objective assessment of CSR of economic entities, including seaports.

CRediT authorship contribution statement

Anna Michalska-Szajer: Conceptualization, Investigation, Resources, Writing - original draft. **Hanna Klimek:** Conceptualization, Writing - original draft, Writing - review & editing, Supervision, Project administration. **Janusz Dąbrowski:** Conceptualization, Methodology, Writing - original draft, Writing - review & editing, Supervision, Project administration.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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