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Difficulties and Threats Related to Vessel Traffic Planning on Świnoujście–Szczecin Fairway

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Abstract:

Purpose: *Commissioning of dredged Świnoujście–Szczecin fairway in Poland dealt with the changes in two-way vessel traffic regulations. Currently larger vessels then before can enter the fairway and may pass each other at the designated passing places. These changes caused challenges for Vessel Traffic Services operators (VTSOs) who make decisions on safe vessel traffic planning within the fairway. The aim of the presented study was to analyze the opinions of VTSOs on the difficulties and threats impacting decision-making process related to vessel traffic planning on the dredged Świnoujście–Szczecin fairway.*
Design/Methodology/Approach: *The research was carried out using marketing research method. Difficulties and threats related to vessel traffic planning within the fairway were identified. A questionnaire survey was carried out among VTSOs working in Vessel Traffic Services centers in Szczecin and Świnoujście. The achieved results were analyzed and compered to outcomes of survey carried out in 2022.*
Findings: *Research results analysis revealed that VTSOs consider the accuracy of weather forecasts, variability of input data for ship traffic planning, as well as variable weather conditions as the most significant difficulties during vessel traffic planning. According to practitioners, the major threats were related to failure of VHF communication and software, as well as delays in vessel maneuvers.*
Practical Implications: *The research results may be interesting to VTSOs, pilots, employee of seaports authorities and other participants of vessel traffic planning and organizing within the waterways.*
Originality/Value: *Difficulties and threats impacting decision-making process related to vessel traffic planning on dredged Świnoujście–Szczecin fairway were analysed. The research results fill in the gap on aspects impacting planning safe navigation of ships within considered fairway. Recommendations to reduce the impact of selected difficulties and threats on decision-making process related vessel traffic planning carried out by VTSOs were proposed.*

Keywords: *Decision-making, vessel traffic planning, vessel traffic services (VTS) operator, fairway, threat, maritime transport.*

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JEL codes: *C8, L9, R4.*

Paper type: *Research article.*

1. Introduction

Commissioning of dredged Świnoujście–Szczecin fairway located in Poland in July 2022 impacted the need to adjust vessel traffic regulations to service two-way traffic. The vessels with maximum parameters (length up to 260 m and a draft up to 11 m) can enter the waterway (Gucma *et al.*, 2021). The new rules impacted the changes in decision-making process carried out by Vessel Traffic Services operators (VTSOs) related to vessel traffic planning on the fairway. Despite the support provided by vessel traffic services systems (VTS) (Durczak and Filina-Dawidowicz, 2025), VTSOs make final decisions on admitting vessels to enter the fairway and often face difficulties during decision-making process.

Ensuring the high level of navigation safety is very important in marine traffic (Zhang *et al.,* 2023; Bąk *et al.,* 2024). Review of available literature revealed that problems related to safe navigation within the fairways and factors impacting it were widely analyzed. Different factors affecting safety of navigation in selected area (the Gulf of İzmit) were investigated by Dağkıran and Bolat (2025). Shin *et al.* (2025) evaluated the key factors that influence VTS center workload. In turn, Stach and Koch (2025) presented AI-based demonstrator that can be used as decision support tool for traffic monitoring. A method for identifying high risk ships to enhance the situational awareness of VTSOs in complex waters was elaborated by Zhang *et al.* (2025).

It should be noted that vessel traffic planning require cooperation between participants of decision-making process. Jurkovič and Satler (2025) explored internationally adopted rules, procedures, and standards that govern routine maritime communication in context of ensuring navigation safety. Nasution *et al.* (2025) highlighted that pilot professionalism, pilotage services, and shipping safety significantly impact the smooth flow of ship traffic in the port. Hsieh *et al.* (2024) investigated the stress and fatigue during VTSOs daily work.

Moreover, during decision-making process VTSOs analyze different information sets needed to make a decision. Information distortion may impact the decision-making process and quality of decisions made (Torok *et al.*, 2024), therefore, it is

important to analyze information used to reduce or eliminate these distortions (Semenov *et al.*, 2024).

Current literature also refers to vessel traffic on Świnoujście–Szczecin fairway. Statistical model of ship delays on the Świnoujście–Szczecin fairway in terms of restrictions resulting from port regulations was elaborated by Durlik *et al.* (2023). Errors committed by VTSOs, before implementing dredged Świnoujście–Szczecin fairway, have been examined (Kotkowska and Marcjan, 2021).

Factors affecting VTSOs' decision-making process were analyzed and recommendations were proposed by Filina-Dawidowicz and Durczak (2022). Furthermore, the survey study was conducted in 2022, when the opinions of VTSOs on the use of passing places planned on the fairway, one month after its commissioning, were examined (Filina-Dawidowicz and Durczak, 2023). However, the opinions of VTSOs on decision-making issues after introduction of new vessel traffic regulations on the mentioned fairway were not explored in detail.

Therefore, the article aims to analyze opinions of VTSOs on difficulties and threats impacting decision-making process related to vessel traffic planning on dredged Świnoujście–Szczecin fairway. The questionnaire survey was used to conduct the research. The opinions of VTSOs were examined. Conclusions were drawn and recommendations were proposed to improve decision-making process conducted by VTSOs.

2. Characteristics of Decision-Making Process Related to Vessel Traffic Planning

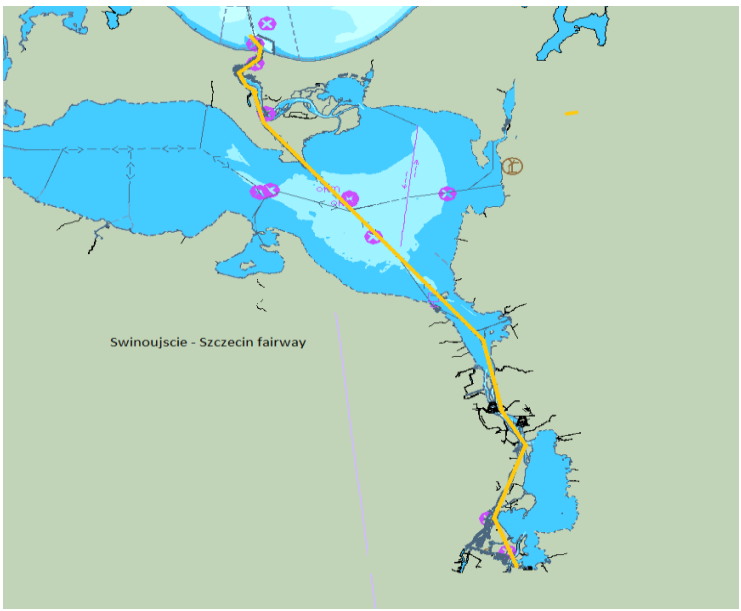
Modernization of Świnoujście–Szczecin fairway (Figure 1) was carried out according to project guidelines (Project, 2017). The fairway was dredged to 12.5 m. Within the fairway two passing places were located ("Mijanka Zalew" and "Mijanka Police") (Project, 2017; Filina-Dawidowicz and Durczak, 2023). Commissioning of the dredged fairway dealt with implementation of new traffic rules introduced in Port Regulations adopted on 06 April 2023 (Order, 2023). According to Port Regulations ships that enter Świnoujście–Szczecin fairway were divided into compliance groups depending on their length, width and draught (Table 1). Introduction of new vessel traffic regulations caused challenges for VTSOs who make everyday decisions on safe vessel traffic planning within the fairway.

Planning and organising of vessel traffic on the Świnoujście–Szczecin fairway is a multi-step process involving several participants, including among others:

- VTSOs employed in VTS Center Świnoujście and VTS Center Szczecin who are the primary actors responsible for vessel traffic planning and organization, as well as monitoring of traffic safety assurance,

- Szczecin and Świnoujście Seaports Authority - further in text Seaports Authority (dispatchers), Szczecin Harbour Master Office (duty officers) and pilots with whom selected decisions are consulted or who are informed while particular steps are implemented,
- Agents who provide initial input data, e.g., information on vessel documentation, into information system (Decision Management Information System - DMIS),
- Tug and mooring services providers who are involved in vessel traffic performance and ship berthing operations.

Figure 1. *Dredged Świnoujście – Szczecin fairway.*



Source: *Own elaboration based on VTS application (Maritime, 2024).*

Table 1*. Particular compliance groups of vessels dimensions that may enter Świnoujście–Szczecin fairway introduced in Port Regulations (as of 06 April 2023).*

Group	**LOA* [m] ≤**	**B* [m] ≤**	**T* [m] ≤**
0	Auxiliary port vessels, bunker vessels supplying ships with fuel, inland navigation passenger vessels, barges and push boats with single-section barges.		
1	100	15	4
2	120	20	6
3	160	25	8
4	200	30	11
5	240	32.3	11

Note: **LOA - length overall, B - width, T – draught.*
Source: *Order, 2023.*

Basic stages of decision-making process carried out by VTSOs while vessel traffic planning are presented in Table 2. The general framework of this process encompasses formal approvals (e.g. acceptance of vessel's documentation), operational planning, and real-time vessel traffic monitoring (Filina-Dawidowicz and Durczak, 2023).

The decision-making process begins with the submission of ship's pre-arrival documents, e.g., FAL (Facilitation of International Maritime Traffic) forms, by the agent. These forms include critical information, such as the vessel's dimensions, draught, and estimated time of arrival, which are entered by agents into the DMIS. Based on this data, formal approval for vessel entry to the Świnoujście, Szczecin or Police seaports is issued by duty officers.

While planning and organizing vessel traffic within the fairway different factors should be taken into account. Possibility to organize two-way traffic considering navigational aspects, overtaking or crossing situations, must be carefully analysed in regard to fairway's width and depth, as well as actual hydrometeorological conditions. Vessel manoeuvres safety is strongly dependent on current, wind speed, and visibility, which may significantly limit the vessels masters' ability to maintain safe passing distances between ships.

Moreover, vessel's speed should be adjusted to ensure safe traffic on the waterway (Paulauskas *et al.,* 2020). Therefore, restrictions related to the vessel's size (length overall and tonnage), time of planned traffic (day or night), and pilot availability are crucial, as well as should be considered while planning uninterrupted and safe vessel traffic. Additionally, it is important to manage vessel traffic with ferry schedules (in Świnoujście seaport) and prioritize vessels according to the Ports Authority's requirements.

Table 2. *Basic stages of decision-making process carried out by VTSOs*

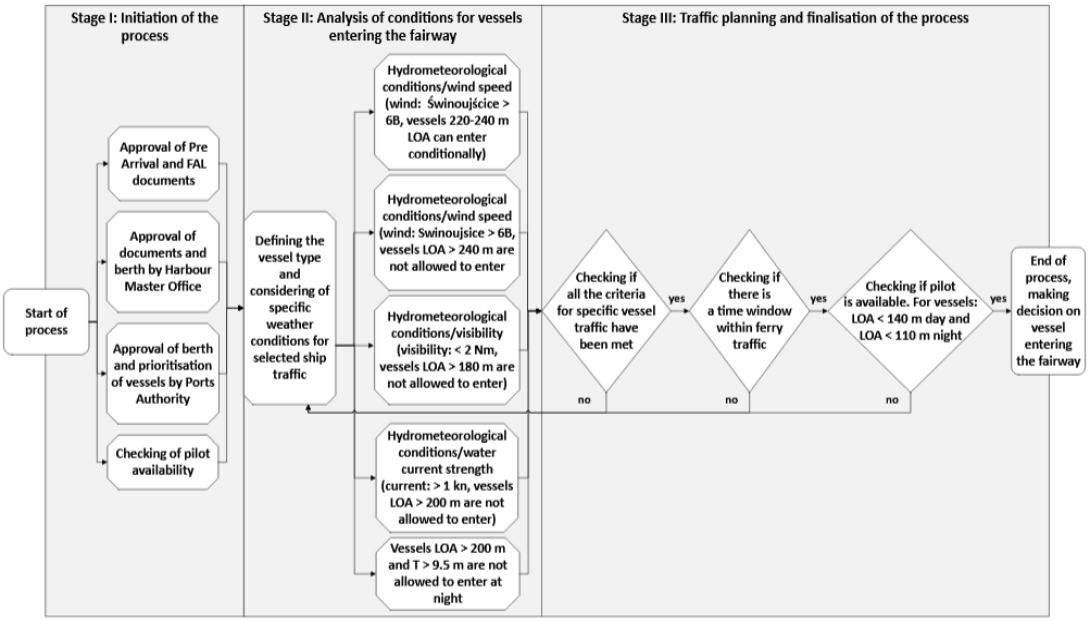
Stage	**Description**
I: Initiation of the process	This stage includes activities related to the acceptance of the ship's pre-arrival documents, verification of pilot availability, etc.
II: Analysis of conditions for vessels entering the fairway	This stage covers activities related to verification of relevant conditions (hydrometeorological, including wind speed, visibility, water current strength; time of a day, etc.) referring to the specific vessel type required for the safe entry of the vessel into the fairway.
III: Traffic planning and finalisation of the process	This stage involves activities related to additional verification of actual vessel traffic and making final decision on whether to allow a vessel to enter the fairway.

Source: *Own elaboration.*

Simplified process related to vessel traffic planning on the dredged Świnoujście–Szczecin fairway by VTSOs is presented in Figure 2, where the subsequent decision-

making stages are performed. It includes getting approval of needed documents and berth, verification of pilot availability, as well as checking of hydro-meteorological conditions. Depending on the vessel's length overall (LOA), draught (T) and time of day, as well as considering specific restrictions (Order, 2023) the decision on approval, non-approval or conditional approval for vessel to enter the fairway is taken. In the event of non-approval, the vessel waits for permission while remaining at anchor in the roadstead.

Figure 2. *Simplified process of vessel traffic planning by VTSOs (case of vessel entering Świnoujście port)*



Source: *Own elaboration.*

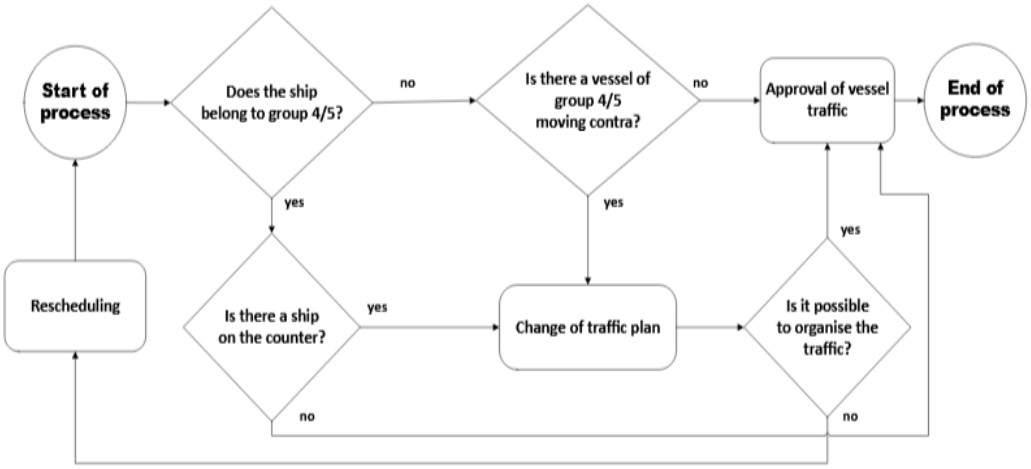
While planning vessel traffic, VTSOs also consider the possibility to ensure two-way vessel traffic within the fairway. Diagram related to planning vessel passing in "Mijanka Zalew" passing area is shown in Figure 3.

The procedure begins by determining whether the vessel belongs to compliance group 4 or 5. It is important to check that no ships are sailing in the opposite direction. In cases other ship is on the counter, a change of vessel traffic plan is required to ensure navigation safety.

This process also covers verification whether vessel traffic can be effectively planned within specific limitations. If it is not possible to plan the traffic, the vessel traffic schedule is changed until safe vessel passage can be guaranteed. This scheme emphasises the importance of systematic planning, operations' coordination and

rescheduling to minimise navigational risks and ensure smooth traffic flow at the "Mijanka Zalew" passing place.

Figure 3. *Simplified process of vessel passing planning at "Mijanka Zalew" passing place*



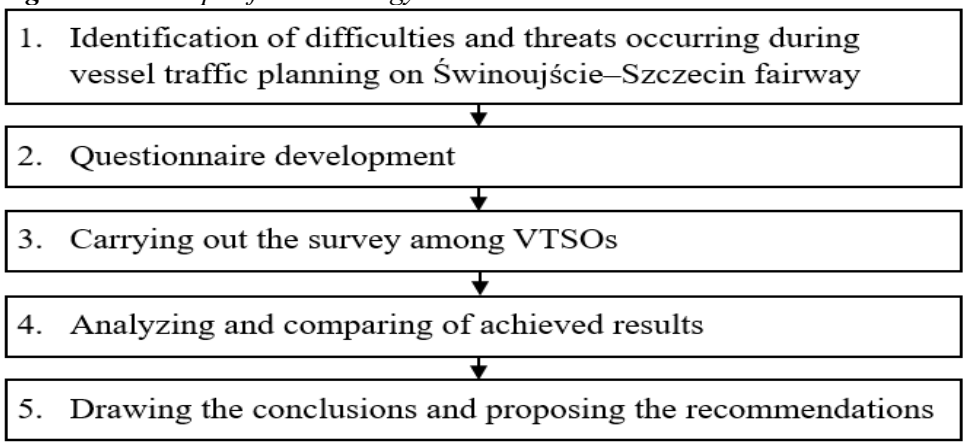
Source: *Own elaboration.*

After issuing the decision on admission of vessel to enter the fairway, real-time monitoring and vessel traffic coordination, as well as berthing assistance (including pilot, towing, and mooring services) take place.

3. Research Methodology

The research was conducted according to steps presented in Figure 4.

Figure 4. *The steps of methodology chosen to conduct the research*.



Source: *Own elaboration.*

In the presented study the following three research questions were addressed:

1. What difficulties face VTSOs while planning the vessel traffic on Świnoujście–Szczecin fairway?
2. What threats impact the decisions of VTSOs related to planning of vessel traffic on Świnoujście–Szczecin fairway?
3. What sections within an analysed fairway are associated with high risk level in opinion of VTSOs (two years after commissioning the fairway)?

Based on discussions carried out with VTSOs and available literature analysis, the questionnaire addressing the established research questions was developed. The main purpose of conducting the survey was learning VTSOs opinions on key aspects influencing their decisions related to planning the safe entry of ships into the Świnoujście–Szczecin fairway.

A survey among VTSOs was conducted in July-September 2024. Nineteen out of 19 VTSOs employed in VTS Centers in Świnoujście and Szczecin participated in the survey, evaluating the importance of selected aspects related to vessel traffic planning on the fairway. While completing the survey, operators rated difficulties and threats hindering decision-making processes, and assessed specific sections of analysed fairway in regard to risk level of vessel traffic.

The achieved research results were analyzed. Some of the results were compared to the outcomes of survey carried out among VTSOs in July and August 2022, about one month after the day when modernized fairway was commissioned (Filina-Dawidowicz and Durczak, 2023).

Based on achieved results, the conclusions were drawn and recommendations to reduce the impact of selected difficulties and threats on the decision-making process were formulated.

4. Results

As a part of the conducted research the difficulties and threats occurring during vessel traffic planning on Świnoujście–Szczecin fairway were identified (Tables 1 and 2). It should be noted that recognized issues are mainly related to human factor impact on vessel traffic planning. These difficulties and threats were assessed by respondents in questionnaire survey.

Table 1. *Identified selected difficulties that may impact decision-making process while vessel traffic planning*

Source of difficulty	**Examples of difficulties**
Human factor	• Punctuality of information provided by agents • Punctuality of information provided by pilots • Punctuality of information provided by Seaports Authority • Precision of information provided by agents • Precision of information provided by pilots • Precision of information provided by Seaports Authority • Quality of communication with agents • Quality of communication with pilots • Quality of communication with Seaports Authority • Failure to provide information on time, e.g. on towing services, vessels draughts, etc. • Variability of input data for vessel traffic planning • Changes to ship traffic plans and schedules • Difficulty in considering ferry traffic in Świnoujście when planning maneuvers • Problems related to the coordination of ship passage times • Awareness of the risk of undesirable situations occurring during ship passing • Stress related to lack of time to properly plan maneuvers
Organizational factors	• Unclear, complicated regulations
Technical and technological factors	• Lack (unavailability) of decision-making support tools (e.g. for conducting calculations/simulations) • Accuracy of weather forecasts
Environmental factors	• Variable weather conditions

Source: *Own elaboration.*

Table 2. *Identified selected threats that may impact decision-making process while vessel traffic planning*

Source of threat	**Examples of threats**
Human factor	• Human error (VTSO) • Lack (unavailability) of linesman • Lack (unavailability) of pilot • Lack (unavailability) of tugs • Disruption of the flow and quality of information between decision-makers • Delays in vessel maneuvers
Organizational factors	• Unforeseen changes in the movement of other vessels on the fairway • Blockage of the fairway

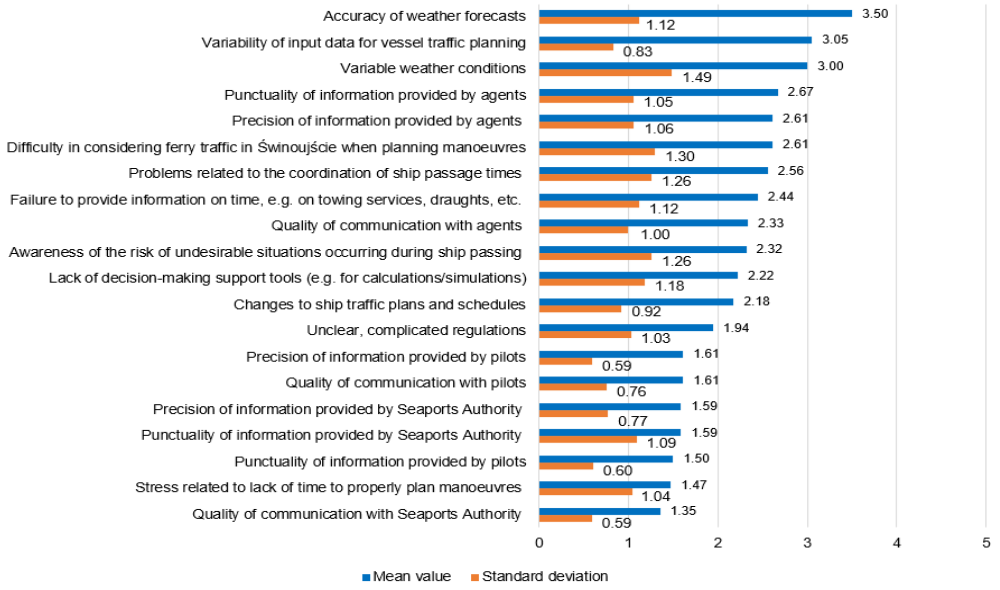
Technical and technological factors	• Software failure (VTS application) • VHF (Very High Frequency) communication failure

Source: *Own elaboration.*

The questionnaire was filled in by VTSOs employed in VTS Centre Szczecin (12 respondents) and VTS Centre Świnoujście (7 respondents).

VTSOs were asked to rate difficulties in vessel traffic planning using a scale from 1 to 5, where 1 – the slightest difficulty, and 5 – the greatest difficulty. The mean values of the received ranks are shown in Figure 5.

Figure 5. *Difficulties while planning vessel traffic on the fairway, mean values*



Source: *Own elaboration.*

Based on the results presented in Figure 5, it can be concluded that VTSOs identified external factors as the most significant difficulties affecting the quality of decisions made during vessel traffic planning. The highest mean values were assigned to the following difficulties:

- accuracy of weather forecasts (mean value 3.50) – the result shows that VTSOs consider this difficulty as the most critical issue, indicating a strong dependency of navigation safety on the quality of provided meteorological data,
- variability of input data for traffic planning (mean value 3.05) – the result demonstrates that inconsistent or uncertain data significantly impedes effective vessel traffic planning,

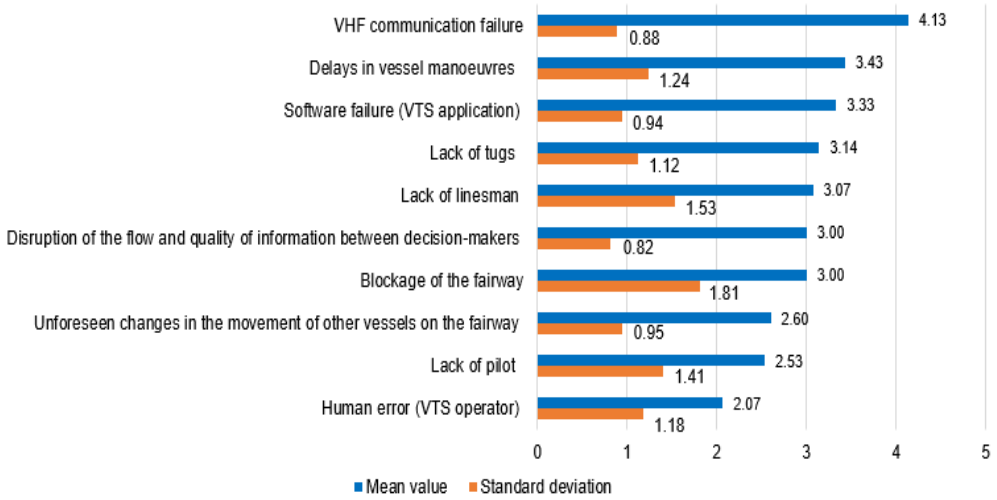
- variable weather conditions (mean value 3.00) – the result confirms that dynamic changes in weather conditions constitute a major source of decision-making uncertainty.

Other prominent difficulties included the punctuality and precision of information provided by agents, as well as challenges in considering ferry traffic in Świnoujście when planning ships manoeuvres. On the other hand, according to respondents opinions, the lowest-rated difficulties are dealing with communication quality with Ports Authority and stress related to the lack of time to plan manoeuvres (mean values 1.35 and 1.47).

High values of standard deviations (e.g., 1.49 for variable weather conditions) may indicate differences in operators' opinions, possibly due to varying levels of experience, workplace, or exposure to complex traffic situations.

Operators were also asked to assess threats when planning vessel traffic on the fairway using a scale from 1 to 5, where 1 – insignificant threat, and 5 – a very significant threat. The mean values of ranks given by respondents are presented in Figure 6.

Figure 6. *Threats while planning vessel traffic on the fairway, mean values*



Source: *Own elaboration.*

Based on the results presented in Figure 6 it can be stated that in VTSOs opinion the highest-rated threats are:

- VHF communication failure (mean value 4.13) – the result indicates that reliable radio communication is considered by VTSOs as very essential for both safe and efficient planning and organization of vessel traffic; failures in

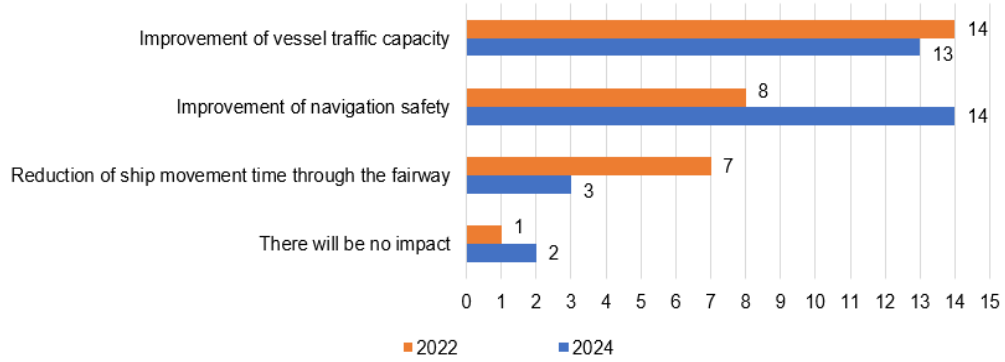
this system pose a direct risk to situational awareness and the timely exchange of information between VTSOs and vessels' masters,
- delays in vessel manoeuvres (mean value 3.43) – the result highlights the operational impact of navigational disruptions or inefficiencies on vessel traffic planning,
- software failure (mean value 3.33) – the result emphasizes the importance of IT system stability in managing vessel traffic.

Other highly-ranked by respondents threats included lack (unavailability) of tugs and linesmen, disruption of the flow and quality of information between decision-makers that suggests that poor cooperation between participants of decision-making process can lead to misunderstandings or faulty decisions occurrence.

Meanwhile, human errors committed by VTSOs (mean value 2.07) achieved the lowest mean values compared to other options assessed. However, relatively high values of standard deviation (1.18–1.81) in case of selected responses suggest varied VTSOs perception of the issues analysed, possibly due to differences in work experience or infrastructure serviced.

Answering the question related to the impact of new passing places on vessel traffic planning, VTSOs mainly marked improvement of navigation safety and vessel traffic capacity (Figure 7). Comparing this result to VTSOs opinions achieved in 2022 (Filina-Dawidowicz and Durczak, 2023), it should be mentioned that operators perceive the higher impact of passing areas on navigation safety improvement. In turn, the reduction of ships movement time was chosen by less number of respondents, only 3 operators expressed such opinion.

Figure 7. *Impact of new passing places on vessel traffic organization, number of responses*



Source: *Own elaboration.*

VTSOs were also asked about vessels passing planning at new passing places on Świnoujście–Szczecin fairway. It should be stated that 18 out of 19 VTOs have planned the vessel passing at passing place "Mijanka Zalew" in 2024.

Respondents indicated that 84% out of initially planned maneuvers were completed. Comparing this viewpoint to opinion acquired in 2022, it should be noticed that in 2022 only 5 out of 17 VTSOs considered to plan it (8 operators expressed opinion on possibility to plan it conditionally).

In regard to passing place "Mijanka Police", in 2024 only 1 operator reported its usage for vessels passings. In turn, in 2022, 4 out of 17 VTSOs answered affirmatively that would consider to plan the passing of vessels which parameters would exceed those previously used (6 operators considered to do it conditionally). That result confirms that VTSOs consider "Mijanka Police" as a quite risky for ships passing.

VTSOs were also asked to assess the specific sections of the fairway on a scale from 1 to 10, where 1 – vessel traffic is not risky, and 10 – vessel traffic is very risky (Figure 8). The achieved mean values were compared to VTSOs opinions on vessel traffic safety level expressed in 2022 (Filina-Dawidowicz and Durczak, 2023).

In VTSOs' opinion, the "Mijanka Police" passing place (used by maximum-sized vessels) achieved the highest mean values in both 2022 (8.00) and 2024 (7.46), confirming earlier expressed viewpoint that VTSOs identify this section as one of the most critical in terms of navigational safety.

Similarly, fairway section "Dock 5 - Szczecin port area" was also highly ranked by VTSOs (mean values 7.54 in 2022 and 7.15 in 2024), pointing out that cautious vessel traffic planning and monitoring within this fairway section is required.

However, it should be highlighted that a significant decrease in the VTSOs' risk level perception related to "Mijanka Zalew" passing place was observed (mean value dropped from 7.09 in 2022 to 5.20 in 2024).

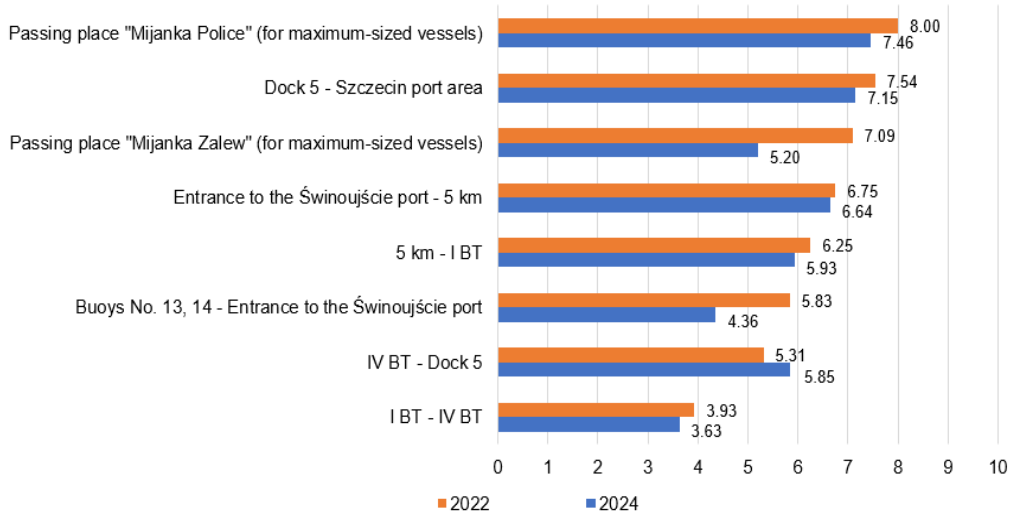
This result suggests that training sessions and updated navigational practices introduced for VTSOs have positively impacted their confidence and ability to manage vessel traffic passing in this area.

Interestingly, the fairway section "Buoys No. 13, 14 – entrance to the Świnoujście port", which achieved VTSOs' lower rates in 2022 (mean value 4.36), received a noticeably higher score in 2024 (mean value 5.83).

This may indicate VTSOs' growing awareness of new navigational challenges at this section of Świnoujście–Szczecin fairway, possibly due to changes in dimensions of vessels entering the fairway, traffic density, or regulations amendments.

In VTSOs opinion, in both years analysed the least risky was "I BT – IV BT" section with mean values of 3.93 (in 2022) and 3.63 (in 2024). That result may lead to a conclusion that this parts of the waterway is relatively safe and well-managed.

Figure 8. *Level of risk associated with vessel traffic in specific sections of the Świnoujście–Szczecin fairway, mean values*



Source: *Own elaboration.*

5. Conclusions

In presented study difficulties and threats that have the greatest impact on vessel traffic planning on the Świnoujście–Szczecin fairway were determined and assessed. The research results allowed to better understand the aspects influencing VTSOs decisions related to planning of vessels' entry into the fairway.

It was revealed that difficulties faced by VTSOs while planning the vessel traffic on the fairway are dealing, i.e., with insufficient and erroneous information (e.g. inaccurate weather forecasts, incorrect input data for ships planning). In addition, weather conditions (e.g. wind speed, water currents, etc.) impact VTSOs decisions that are often done based on the weather forecasts. Therefore, the actions should be taken to improve the accuracy of information provided to VTSOs.

In opinion of VTSOs, the most significant threats impacting their decisions related to planning of vessel traffic on the fairway are related to technical equipment operation. VHF communication and software precise operating constitute the basis for safe and efficient vessel traffic planning. Daleys in vessels manoeuvres impact other vessel traffic within the fairway and decisions related to time when the ship can enter the fairway.

Two years after modernised fairway was commissioned, VTSOs are more experienced in implementing new vessel traffic regulations. It should be noted that passing place "Mijanka Zalew" is commonly used by VTSOs during vessel traffic planning. However, it was revealed that passing place "Mijanka Police" is not used

by VTSOs, most probably, due to safety reasons and short time window for ships to pass each other.

Despite having more experience in implementing new vessel traffic regulations, VTSOs face difficulties and threats, therefore, the reduction of their impact on decision-making process should be considered. Recommendations to reduce the most significant difficulties' and threats' impact on the decision-making process carried out by VTSOs while planning vessel traffic on Świnoujscie–Szczecin fairway are proposed in Table 2.

The implementation of these recommendations may contribute to improve vessel traffic planning on fairway, increase the operational efficiency of the ports of Świnoujście, Szczecin and Police and enhance the safety of vessels navigating this waterway.

Table 2. *Recommendations to reduce selected difficulties' and threats' impact on the decision-making process performed by VTSOs*

Selected difficulties and threats identified	**Recommendations**
Accuracy of weather forecasts	• Acquire and integrate forecasting tools based on high-resolution weather models, tailored to the specific hydrometeorological conditions of the Odra River mouth and Szczecin Lagoon. • Create a point-specific forecasting system for strategic sections of the fairway. • Regularly update forecasting models in collaboration with national meteorological services.
Variability of input data for ship traffic planning due to imprecise determination of speed, etc.	• Introduce procedures and conduct interdisciplinary training sessions with pilots, agents, and VTS centers' staff to raise their awareness on inaccurate input data impact on vessel traffic flow and risks. • Introduce penalties or follow-up measures in the event of repeated inconsistencies in data provided by the same agents/operators.
Variable weather conditions	• Incorporate real-time weather maps and alerts in VTS planning tools, providing short-term weather forecasts. • Use high-resolution nowcasting models (0–2 hours forecast) integrated into planning tools.
VHF communication failure	• Periodically conduct VHF signal coverage audits and generate risk-based coverage maps to identify blind spots and infrastructure gaps. • Implement the VHF system backup.
Delays in vessel manoeuvres	• Synchronize better activities related to vessel traffic planning and data used by VTSOs on availability of pilots, tugs, and berths through integration of real-time data in the VTS system.

Software failure (VTS application)	• Regular test and update the software to eliminate technical errors and improve system stability.

Source: *Own elaboration.*

It would be reasonable to repeat the survey and investigate the VTSOs opinion on threats and difficulties after implementation of improvements, including introduction of procedures on vessel traffic planning within the fairway.

The directions of authors future research will be focused on detailed analysis of information uncertainty faced by VTSOs and modelling of specific decision-making scenarios related to vessel traffic on the Świnoujście–Szczecin fairway.

The research results may be of interest to VTSOs, as well as employee of port authorities, pilot stations, and maritime offices involved in decision-making process related to planning vessel traffic on the Świnoujście–Szczecin fairway and other navigation areas.

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