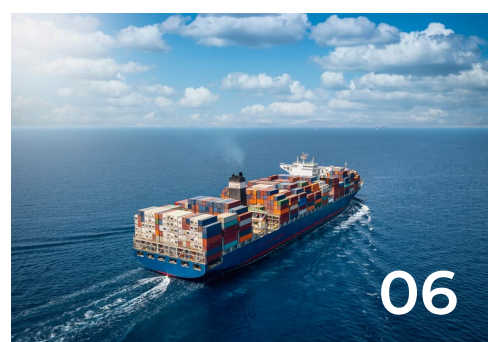VIKAND

SEAFARER WELFARE IN THE
REGULATORY SPOTLIGHT

CALL TO ACTION: ADAPTING TO EU SUPPLY CHAIN LAWS

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SUMMARY

This white paper is an call to action for maritime companies and all entities involved in global trade, including large commodity traders, forwarders, and supply chain partners. The newly enacted EU Corporate Sustainability Reporting Directive ("CSRD") and the upcoming Corporate Sustainability Due Diligence Directive, also known as the EU Supply Chain Act, ("CSDDD") are set to significantly change corporate responsibility worldwide.

With the EU Supply Chain Act taking effect in 2025 and the CSRD already in place, immediate action is necessary to avoid consequences that could disrupt operations.

Therefore this white paper:

➕ Explains which companies are subject to the EU Supply Chain Act and the CSRD

➕ Details the requirements they must meet, including thorough due diligence processes across their operations and supply chains.

➕ Provides checklists for maritime companies to ensure all critical steps are addressed to navigate these regulations.

➕ Emphasizes the importance of social sustainability, particularly the well-being of seafarers—a crucial issue in this context with significant implications for global trade.

Attention is also given to the CSRD, which imposes strict timelines on thousands of companies. The requirement for a Double

Materiality Assessment mandates businesses to evaluate and report on both the social and environmental impacts of their operations **and their broader value chains** which represents a fundamental change in how companies approach sustainability.

Both CSDDD and the CSRD could potentially impose material consequences, with fines reaching up to 5% of annual net worldwide revenue. Whereby noncompliance could result in:

➕ substantial financial penalties,

➕ loss of market access,

➕ disruptions to supply chains,

➕ reputational damage,

➕ exclusion from key markets or public contracts

➕ negative media attention,

This reflects a global shift towards holding companies not only accountable for their own operations but also for actions of their subsidiaries and entire value chains.

Strict enforcement, - like for example in France that has just set a precedent with its implementation of the CSRD, effective December 6, 2023 and that has introduced financial penalties, including the possibility of up to five years in prison - highlights the seriousness of non-compliance and underscores the need to understand and follow these regulations.

INTRODUCTION

This white paper explores the EU Corporate Sustainability Reporting Directive (CSRD) of 2023 and the upcoming Corporate Sustainability Due Diligence Directive (CSDDD), commonly known as the EU Supply Chain Act, effective in 2025. It discusses the impact of these regulations on maritime companies and their compliance strategies. The paper emphasizes the importance of social sustainability, especially the well-being of seafarers, and offers practical guidance on how companies can meet these regulatory requirements.

Seafarers play a pivotal role in global trade, with over 80 percent of international trade transported by sea. Their expertise is essential for the efficient and safe operation of ships. However, despite their vital contributions, the challenges faced by seafarers have often been underappreciated. Seafaring is among the most hazardous professions, involving significant health and safety risks. Between 2014 and 2022, the European Maritime Safety Agency recorded 23,814 marine incidents, including 6,784 serious casualties and 604 fatalities.[1]

In addition to the high-risk nature of the job, the social effects on seafarers cannot be understated. They spend long periods away from home, missing out on family life and important events. Although modern communication tools have alleviated some isolation, the emotional toll remains substantial.

Recent years have seen increased public attention to the difficult conditions faced by seafarers. New regulations have been introduced to address seafarer well-being, including the 2022 Maritime Labour Convention (MLC) Amendments, effective December 2024, the recent STCW Amendments tackling bullying, sexual assault, and harassment onboard, the CSRD, the EU Supply Chain Act and the recent recognition of

seafarers as essential workers in the EU. [2] Mental health challenges are prominent in the maritime industry. The Covid-19 pandemic highlighted these issues, leading to increased company actions. The International Seafarer's Welfare and Assistance Network (ISWAN) reported that nearly 20 percent of helpline calls in Q3 2023 related to family issues, homesickness, isolation, and rising instances of harassment and violence. Additionally, around ten thousand seafarers leave the industry annually due to preventable health issues, highlighting the need for a proactive healthcare approach.

Further, a report by Norwegian maritime insurer Gard highlights a worrying trend: 11% of crew fatalities from 2019 to 2023 were due to suicide, a number which Gard has indicated could actually be much higher due to underreporting. This stark statistic highlights the urgent need for a comprehensive approach to seafarer mental health and well-being. [3]

These challenges reveal significant disparities between seafaring and shoreside jobs. As sustainability and corporate responsibility gain importance, it is crucial to evaluate how global entities address the well-being of seafarers.

The MLC 2006, ratified by 108 countries[4], establishes foundational guidelines for seafarer welfare. The MLC has been further strengthened with amendments effective December 2024. However, the recent enactment of the CSRD in 2023 and the upcoming EU Supply Chain Act (CSDDD) set to take effect in 2025, build upon these guidelines by imposing more stringent obligations.

Unlike the MLC, which primarily focuses on maritime companies, the CSRD and CSDDD extend their reach to encompass all companies involved in global trade. The CSRD applies to approximately 50,000 companies, while the EU Supply Chain Act (CSDDD) is expected to affect around 5,500 companies.

These directives require organizations to evaluate and manage seafarer well-being and their entire supply chains.

This broad scope highlights the "Brussels Effect," where EU regulations influence global practices, setting a new standard for social and environmental responsibility that impacts companies worldwide, not just those within the EU. [5]

Despite being integral to almost every supply chain, maritime transportation is frequently neglected in risk assessments. The CSRD and EU Supply Chain Act (CSDDD) do not specifically address the challenging working conditions in shipping. However, this white paper will highlight the necessity of evaluating seafarers' well-being to achieve regulatory compliance and examines the effects of these laws on global entities and their compliance strategies.

These challenges reveal significant disparities between seafaring and shoreside jobs.

EU SUPPLY CHAIN ACT

The CSDDD, also known as the EU Supply Chain Act, was adopted on 24 May 2024. This directive sets out new obligations for large companies, focusing on how their activities impact human rights and environmental protection. It requires companies to manage the social and environmental effects of their entire value chain, including direct and indirect suppliers, as well as their own operations. The law also outlines the liabilities associated with these responsibilities.

A. What Companies are in Scope?

The EU Supply Chain Act (CSDDD) imposes due diligence obligations on every segment of the supply chain, affecting a range of stakeholders in the maritime industry. This includes shipping companies, freight forwarders, port operators, logistics firms, and suppliers. Each must align with high standards for environmental and social responsibility.

Shipping companies need to assess the ESG practices of the maritime operators they partner with. Freight forwarders, who oversee the movement of goods, must ensure their operations uphold sustainability and ethical standards throughout the shipping process. Port operators and logistics firms, involved in handling goods at various stages, are also required to meet these standards. Suppliers must maintain practices that respect labor rights and environmental protections.

For seafarers, these regulations are directly relevant. Ensuring fair labor practices and safe working conditions on ships is essential to meeting the social criteria of the CSDDD. This responsibility extends to freight forwarders and port operators, whose operations can affect seafarers' conditions. For instance, if port operators do not comply with environmental regulations, it might lead to poorer conditions onboard for crew members. Similarly, freight forwarders need to ensure their logistics practices uphold ethical standards that safeguard seafarers' rights.

By meeting the CSDDD requirements, everyone in the supply chain contributes to improved conditions for seafarers and supports ethical and sustainable practices. Adherence to these regulations helps achieve better outcomes for all involved and promotes a more responsible and transparent maritime industry.

The EU Supply Chain Act (CSDDD) applies to:

➕ European companies with limited liability, more than 1,000 employees, and over €450 million in global turnover

➕ While small and medium-sized enterprises (SMEs) are not directly affected, they may be impacted indirectly as suppliers to larger companies subject to the directive.

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The implementation timeline for the directive is as follows:

3 yrs
from the directive's entry into force for companies with more than **5,000 employees** and **€1.5 billion in turnover.**

4 yrs
from the directive's entry into force for companies with more than **3,000 employees** and **€900 million in turnover.**

5 yrs
from the directive's entry into force for companies with more than **1,000 employees** and **€450 million in turnover.**

These regulations highlight the importance of due diligence across the entire supply chain. Compliance helps guarantee that all parties, including those impacting seafarers, contribute to more ethical, safe, and sustainable maritime practices.

B. What are Companies Required to Do?

Affected companies must fulfil their corporate due diligence obligations along the supply chain with regard to human rights and the environment. In order to do so, Companies are required to follow five specific steps: [6]

1   **Policies and Management System:** Integrating risk-based due diligence into corporate policies that outline an approach to due diligence and a code of conduct. Update these annually.

2   **Risk Assessment:** Identify actual and potential adverse human rights and environmental impacts arising from your operations, subsidiaries, and direct and indirect business relationships within your value chain.

3   **Measures to Cease, Prevent, or Mitigate:** Prevent or mitigate potential adverse impacts, and end or minimize real adverse impacts. Develop and implement a prevention action plan, seek contractual assurances from business partners, make necessary investments and, if required, terminate business relationships.

4   **Complaints Procedure:** Establish a complaint procedure to enable affected persons and organizations to submit complaints relating to real or potential adverse impacts.

5   **Monitoring:** Conduct regular assessments of the implementation and effectiveness of the due diligence measures, at least annually or after significant change.

EU SUPPLY CHAIN ACT
CHECK LIST

C. CSDDD Compliance Checklist for Maritime Companies

Immediate Actions:

1. Review Due Diligence Practices:

Examine existing ESG policies and procedures.

Identify any current due diligence related to environmental and human rights impacts.

2. Map the Maritime Value Chain:

Document all stages of shipping operations, from vessel procurement to goods delivery.

Include all subcontractors, agents, and third-party service providers.

3. Identify Business Collaborators:

List direct partners, such as freight forwarders, port operators, and logistics providers.

Identify indirect partners, including suppliers of goods transported and their sub-suppliers.

4. Assess Environmental and Human Rights Risks:

Conduct risk assessments for environmental and human rights impacts within operations and the value chain.

Evaluate risks associated with different routes, ports, and regions.

Data Collection and Analysis:

5. Perform a Gap Analysis:

Compare current practices against CSDDD requirements.

Identify gaps in areas such as emissions, labor conditions, and waste management.

Assess onboard healthcare facilities, access to medical care, nutrition quality, exercise opportunities, and general living conditions (e.g., cabin space, hygiene standards).

Evaluate mental health support systems, availability of counseling, onboard recreational activities, internet connectivity for communication with families, and measures to prevent isolation and burnout.

Examine the safety protocols, working hours, rest periods, protection against fatigue, and the adequacy of training in safety and emergency procedures.

6. Evaluate Regulatory Readiness:

Assess readiness to meet CSDDD requirements.

Determine if additional resources or expertise are needed.

7. Identify Areas for Improvement:

Highlight areas needing improvement.

Develop action plans with clear timelines and responsibilities.

8. Assess Necessary Changes:

Consider required policy, procedural, and training updates.

Engage with stakeholders, including crew members and business partners, to ensure alignment.

EU SUPPLY CHAIN ACT
CHECK LIST

Proactive Steps:

9. Implement Training Programs:

Educate staff and crew on CSDDD requirements and ESG compliance.

Provide ongoing training on new regulations and best practices.

10. Develop Monitoring Systems:

Establish robust systems to monitor ESG compliance across operations.

Implement regular reporting mechanisms to track progress.

11. Enhance Proactive Healthcare and Telehealth:

Implement proactive healthcare measures to address seafarers' health and well-being.

Utilize telehealth solutions to offer timely medical support and consultations.

Ensure that these measures integrate with compliance efforts to improve health outcomes and meet regulatory standards.

12. Engage with Stakeholders:

Maintain open communication with business partners, customers, and regulators about due diligence efforts.

Collaborate with industry associations and peers to share best practices.

13. Utilize Digital Solutions:

Employ advanced data tools for monitoring onboard conditions and seafarer health.

Deploy technologies for real-time compliance tracking and management with a potential to be integrated into other financial or corporate systems.

Continuous Improvement:

14. Review and Update Regularly:

Periodically review and update due diligence policies and practices.

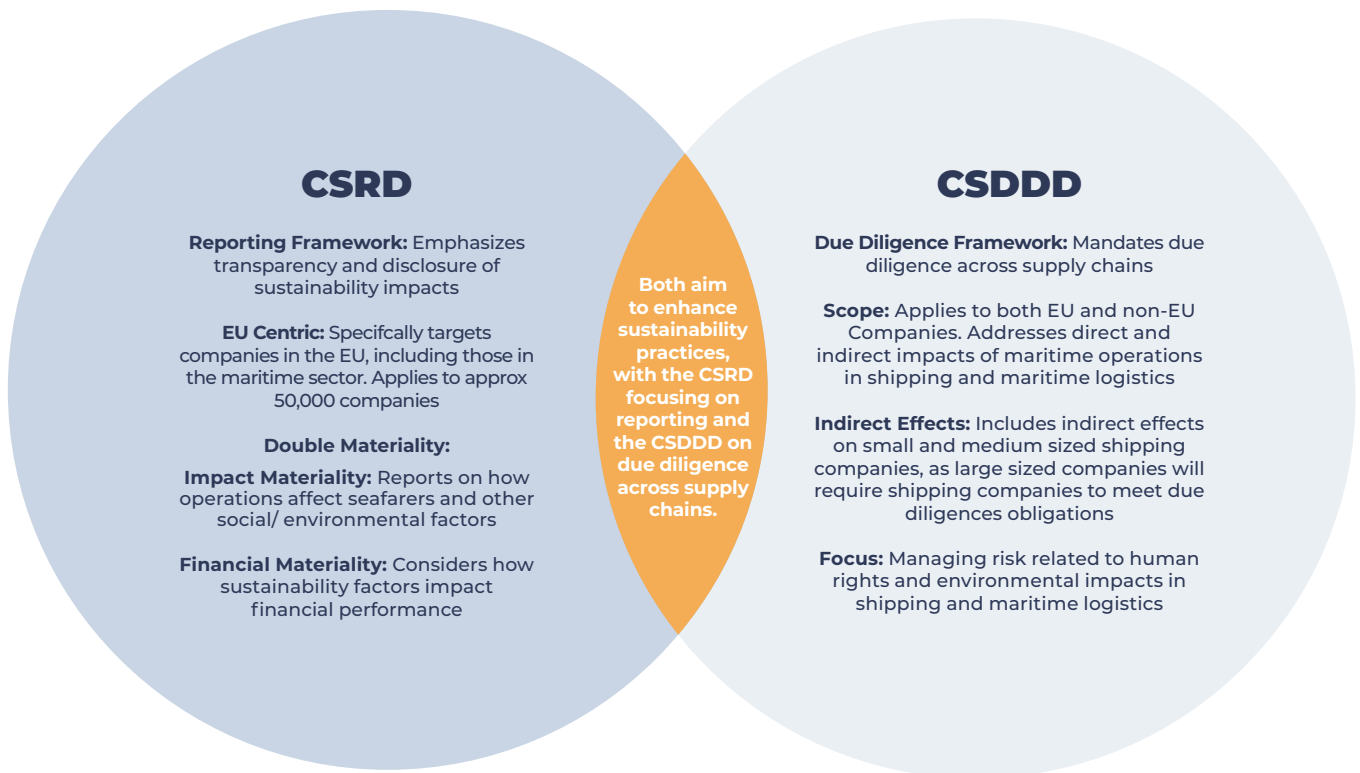Continuously improve ESG performance through audits, assessments, and stakeholder feedback.

Following this checklist will help maritime companies align with the EU Supply Chain Act (CSDDD). Focusing on detailed assessments, integrating proactive healthcare and telehealth, and updating practices regularly will strengthen compliance. Ensuring seafarers receive necessary health support and maintaining clear communication with all partners will enhance overall effectiveness and regulatory adherence.

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CORPORATE SUSTAINABILITY REPORTING DIRECTIVE

The CSRD and the CSDDD are complementary regulations that work in tandem to enhance sustainability and accountability across different levels of business operations. While the CSRD has a broader scope, impacting approximately 50,000 EU companies, and focuses specifically on companies within the EU, the CSDDD addresses due diligence across supply chains. Together, these regulations create a comprehensive framework for improving sustainability practices.

In short, the CSDDD requires companies to take environmental and social **responsibility,** while the CSRD ensures European companies are **transparent** about it. The intention is for companies to apply them together (if they fall under both directives).

CSRD

Reporting Framework: Emphasizes transparency and disclosure of sustainability impacts

EU Centric: Specifcally targets companies in the EU, including those in the maritime sector. Applies to approx 50,000 companies

Double Materiality:

Impact Materiality: Reports on how operations affect seafarers and other social/ environmental factors

Financial Materiality: Considers how sustainability factors impact financial performance

Both aim to enhance sustainability practices, with the CSRD focusing on reporting and the CSDDD on due diligence across supply chains.

CSDDD

Due Diligence Framework: Mandates due diligence across supply chains

Scope: Applies to both EU and non-EU Companies. Addresses direct and indirect impacts of maritime operations in shipping and maritime logistics

Indirect Effects: Includes indirect effects on small and medium sized shipping companies, as large sized companies will require shipping companies to meet due diligences obligations

Focus: Managing risk related to human rights and environmental impacts in shipping and maritime logistics

The CSRD represents a significant update to the previous Non-Financial Reporting Directive (NFRD), came into effect on 5 January 2023. This new EU regulation is designed to enhance the transparency and quality of corporate sustainability disclosures, offering stakeholders more comparable, relevant, and reliable information.

The CSRD's main aim is to provide clarity for investors, analysts, consumers, and other stakeholders, enabling them to better assess the sustainability performance of EU companies and understand the associated business impacts and risks. The CSRD expands the scope of sustainability reporting beyond the NFRD, addressing gaps identified by the European Parliamentary Research Service, such as inconsistent and non-comparable data that could impede sustainability investments and raise data-related costs.

For maritime companies, the CSRD mandates detailed reporting on the impact of their operations on sustainability, including the conditions faced by seafarers. This regulation emphasizes the need to address social impacts, which is important given the tough working conditions seafarers endure. Improved transparency under the CSRD allows stakeholders to make well-informed decisions and supports EU objectives of reducing climate risk and promoting sustainability.

By focusing on clear and comparable data, the CSRD will influence how maritime companies report on seafarers' working conditions. This regulation, alongside the CSDDD, will push maritime companies to strengthen their sustainability practices and enhance their overall ESG performance.

A. Who Needs to Comply?

The CSRD broadens the scope of sustainability reporting to include a wider range of companies compared to the previous Non-Financial Reporting Directive (NFRD). While the NFRD applied only to companies with over 500 employees, the CSRD extends this requirement to large companies defined as those with over 250 employees, a turnover of more than €50 million, and total assets exceeding €25 million.

Below is a breakdown of which companies must comply with the CSRD:

LARGE ENTERPRISES	MEDIUM ENTERPRISES
Balance sheet: More than €25M	Balance sheet: €5M – €25M
Net turnover: More than €50M	Net turnover: €10M – €50M
Employees: More than 250	Employees: Up to 250
SMALL ENTERPRISES	**MICRO ENTERPRISES**
Balance sheet: €450,000 – €5M	Balance sheet: Up to €450,000
Net turnover: €900,000 – €10M	Net turnover: Up to €900,000
Employees: Up to 50	Employees: Up to 10

Companies, even those outside the EU, should recognize the importance of being prepared to report under the CSRD. As EU companies start demanding transparency on social and environmental practices, being ready to provide this information will be important for maintaining strong business relationships and gaining potential economic benefits.

B. Timelines for Compliance

The implementation of the CSRD will be phased in from 2024 to 2029, with deadlines varying based on company size and listing status. Approximately 50,000 companies across the EU are expected to be impacted. EU Member States were already required to adopt the CSRD provisions into national law by 6 July 2024.

The practical application will be staggered from 2024 to 2028, with the first reporting cycle starting in 2025, based on data from financial years beginning on or after 1 January 2024. EU companies currently subject to the NFRD will be the first to report under the CSRD.

Following this, other large companies, including non-EU companies with securities listed on an EU regulated market and parents of large EU groups, will report in 2026 for financial years starting on or after 1 January 2025. Small and medium enterprises (SMEs) listed on an EU regulated market, excluding micro-enterprises, will start reporting for financial years beginning on or after 1 January 2026, with reports due in 2027. Finally, non-EU groups with significant activities in the EU will be required to report in 2029 for financial years starting on or after 1 January 2028.

For the initial three years, companies will follow a "comply or explain" approach. This means they need to either fully meet reporting standards or, if they can't, explain why. If a company lacks access to all the necessary information about its value chain, it must detail its efforts to gather this information, reasons for any gaps, and plans to address them in the future. This method promotes transparency and ongoing improvement in supply chain reporting, helping stakeholders see the challenges and the company's efforts to overcome them.

This approach naturally leads to the double materiality assessment, a key requirement under the CSRD. Companies must now evaluate and report on how their operations affect people and the environment and assess the financial impact of sustainability-related risks and opportunities.

C. Double Materiality Assessment

The CSRD requires large companies and listed companies to publish regular reports on the social and environmental risks they face and on how their activities impact people and the environment. As part of the CSRD, companies are required to conduct a 'double materiality assessment'. As discussed, large companies will have to apply these new rules starting this year (2024) for reports to be published in 2025.

Carrying out a double materiality assessment is the essential first step towards achieving CSRD compliance, as it enables in-scope companies to identify which disclosure requirements listed in the European Sustainability Reporting Standards (ESRS) are relevant to them. This assessment is mandatory for companies affected by the CSRD.

The objective of European Sustainability Reporting Standards (ESRS) is to specify the sustainability information that an undertaking shall disclose in accordance with Directive 2013/34/EU of the European Parliament and of the Council, as amended by Directive (EU) 2022/2464 of the European Parliament and of the Council.

The CSRD explains that entities should disclose information that is material from either an impact perspective or a financial perspective, or from both perspectives. The directive established the "double materiality" terminology to describe this concept.

ESRS describes these terms as follows:

🤝 Impacts

"[P]ositive and negative sustainability-related impacts that are connected with the undertaking's business, as identified through an impact materiality assessment" (paragraph 14(a)).

✓ Risks and opportunities

An "undertaking's sustainability-related financial risks and opportunities, including those deriving from dependencies on natural, human and social resources, as identified through a financial materiality assessment" (paragraph 14(b)).

Impact Materiality concerns how a company's actions impact people and the planet in the short, medium, and long term. It's not just about a company's own operations; it also involves assessing the impact on the entire value chain.

Maritime companies are particularly affected by the double materiality assessment due to the significant social and environmental impacts of their operations. The maritime industry involves complex supply chains and diverse stakeholders, including seafarers who face challenging working conditions. Therefore,

understanding and reporting on these impacts is essential for compliance and corporate responsibility.

For an example of a comprehensive double materiality assessment, featured in our references. [7]

In the following section, we will explore how these principles of double materiality apply specifically to the maritime industry, focusing on seafarers. We will discuss how addressing the social dimension, particularly the well-being of seafarers, is integral to complying with CSRD requirements and promoting a responsible approach to managing the maritime workforce.

The well-being of seafarers, is integral to complying with CSRD requirements and promoting a responsible approach to managing the maritime workforce.

NON – COMPLIANCE PENALTIES AND THE BRUSSELS EFFECT

Non-compliance with the EU Supply Chain Act (CSDDD) and the Directive CSRD can result in severe penalties, highlighting the urgent need for companies to adapt their practices. The introduction of these regulations exemplifies the Brussels Effect, where the European Union's regulatory standards set a global benchmark, influencing practices beyond its borders. Named by Professor Anu Bradford, this effect describes how EU regulations can impact global business operations. [8]

Compliance officers must implement proactive strategies to effectively manage the Brussels Effect. Staying informed about the EU Supply Chain Act (CSDDD) and CSRD is vital as these regulations will increasingly shape global compliance standards over time.

France has set the tone with its implementation of the CSRD, effective December 6, 2023. The French government has introduced significant penalties for non-compliance, including fines up to **€75,000 and the possibility of up to five years in prison**. [9]

This approach signals a serious stance on enforcement and highlights the importance of understanding the implications of non-compliance for companies operating in France.

The potential consequences of failing to comply with these regulations include: [10]

1

FINES AND PENALTIES:

Regulatory bodies can impose severe fines, often calculated as a percentage of a company's turnover. Under the CSDDD, fines can reach up to 5% of annual net worldwide revenue, which can have a substantial impact on a company's financial health.

2

LOSS OF MARKET SHARE:

Non-compliance can lead to exclusion from markets or restrictions on market activities. Companies may find themselves barred from public contracts and tenders, and products may be excluded from certain markets, resulting in reduced revenue and diminished market presence.

3

REPUTATIONAL DAMAGE: In an era where news travels quickly through social media and activist groups, a company's reputation can suffer greatly from non-compliance. Negative publicity can erode consumer trust, lead to decreased sales, and hinder efforts to attract talent and investors. Business partners committed to sustainability may also choose to sever ties with non-compliant firms.

4

SUPPLY CHAIN DISRUPTIONS: Non-compliance by suppliers or partners can disrupt supply chains, causing delays, increased costs, and additional expenses related to finding new, compliant suppliers.

5

LEGAL COSTS AND REMEDIATION EXPENSES: Legal Costs and Remediation Expenses: Legal action from regulatory bodies, stakeholders, or affected parties can result in costly legal battles. Companies may face lawsuits and need to allocate funds for settlements and remediation efforts to address environmental or social harm.

The message is now clear: **immediate action is required to ensure compliance with the CSRD and the CSDDD**. The new reporting requirements are now in effect and will have significant implications. Research from LSEG indicates that around 10,000 non-EU companies, including 3,000 U.S. firms, will be subject to these regulations. [11] Although reporting requirements for non-EU companies are expected to start in 2026, France's approach demonstrates that the penalties for non-compliance can be substantial. Companies must act now to avoid these severe consequences and align their practices with the new regulatory demands.

DOUBLE MATERIALITY COMPLIANCE AND SOCIAL SUSTAINABILITY IN SHIPPING

This section explores the crucial role of the social dimension within Environmental, Social, and Governance (ESG) frameworks, with a particular focus on seafarers. It highlights how addressing seafarer well-being is a vital element of the double materiality assessment mandated by the CSRD. By understanding and integrating social sustainability into their corporate strategies, maritime companies not only guarantee compliance with CSRD requirements but also promote a more responsible and transparent approach to managing the well-being of their seafaring workforce.

A. Importance of Social Sustainability

Sustainability encompasses environmental, social, and governance (ESG) dimensions, with the social aspect being particularly impactful for seafarers. A thorough sustainability report that addresses the social impact on seafarers is crucial for demonstrating a company's commitment to their welfare, ensuring transparency in working conditions, and highlighting efforts to enhance their quality of life and mental health.

Sustainability encompasses environmental, social, and governance (ESG) dimensions, with the social aspect being particularly impactful for seafarers. Addressing social sustainability is necessary for various stakeholders:

1. ***Maritime Industry:*** Focusing on social sustainability can help the maritime sector attract new talent. As the industry seeks skilled workers, a commitment to seafarer well-being can make it more appealing to potential recruits.

2. ***Shipping Companies:*** For shipping companies, prioritizing social sustainability boosts competitiveness and profitability. By investing in crew well-being, companies can enhance operational efficiency, lower turnover, and improve their reputation, leading to better financial performance and market positioning.

3. ***Customers of Shipping Companies:*** Companies relying on shipping services must consider the social sustainability of their suppliers. Meeting social standards not only complies with regulations but also aligns with public expectations, especially in business to consumer scenarios. This can strengthen a company's brand and customer loyalty.

Although sustainability is a prevalent topic in the maritime industry, ESG focus often leans heavily towards environmental

concerns, especially under the pressure to decarbonize. Only recently has the social dimension of sustainability in shipping begun to receive attention. However, despite an increase in related publications, research on social sustainability in this sector remains limited.

In Theite Krämer's thesis, *"The Seafarer Perspective in Social Sustainability Reporting,"* several studies are highlighted that analyze sustainability reporting within the shipping industry.[12] For example, Christen Olsen's exploratory study of the ten largest container shipping companies showed that social reporting lags significantly in quality and quantity.[13]

Another significant study by Maria Karakasnaki, *"Maritime Social Sustainability: Conceptualization and Scale Development,"* identifies five components of maritime social sustainability: physical, functional, health, communication, and cultural aspects.[14] Similar to Olsen's findings, Karakasnaki noted that social sustainability and working conditions are largely overlooked.

The unique challenges of the seafaring profession highlight the importance of addressing social sustainability. Seafarers endure confined living and working conditions, extended separations from family, and limited leisure time. Their environment is often cramped, noisy, has bad air quality, and lacks privacy and daylight. They face tight schedules, changing time zones, adverse weather, job stress due to reduced crew sizes, sleep deprivation, social isolation, and restricted shore access, all of which affect their well-being.

Despite many maritime companies claiming that seafarers are their most valuable asset, it is essential to verify this through accurate reporting from the seafarers' perspective.[15] Addressing social sustainability in compliance with the CSRD

and its double materiality assessment can set maritime companies apart, attracting more customers, investors, and employees. Thus, to ensure high performance while meeting the professional and personal needs of seafarers, shipping companies, forwarders, and the receivers of goods must prioritize social sustainability. By doing so, all parties involved can contribute to a more ethical and efficient supply chain, enhance operational performance, and respond to regulatory and consumer expectations for sustainable practices.

B. Addressing Social Sustainability: Key Components

To effectively address social sustainability in the maritime industry, it is essential to consider several key components that directly impact seafarers' well-being. This section explores critical aspects of social sustainability, such as physical well-being, mental well-being, and proactive healthcare, and highlights how addressing these components not only improves seafarers' quality of life but also aligns with the requirements of the CSRD. By focusing on these areas, maritime companies can enhance their social responsibility practices and achieve long-term compliance with CSRD standards.

1. Physical Wellbeing

Physical well-being is a fundamental aspect of overall health that directly impacts seafarers' daily lives and job performance. In the unique environment of a ship, physical well-being encompasses more than just the absence of illness. It includes the quality of living conditions, the impact of the ship's operations on health, and the adequacy of rest and recovery. Addressing physical well-being effectively requires a comprehensive approach that considers how the ship's environment influences seafarers' health and productivity.

Measuring physical well-being at the individual level necessitates assessing the

psychological and emotional states of seafarers. In 1992, Mary Jo Bitner's study on the impact of physical surroundings on customers and employees highlighted that the workplace setting significantly influences employee behaviors and outcomes, such as satisfaction, stress, and productivity.[16] This principle is particularly relevant to vessels, where the confined and challenging environment necessitates a holistic approach to well-being. This includes managing chronic diseases, monitoring the quality of food and exercise options, and addressing overall physical health. Ignoring physical well-being would not only fail to comprehensively conceptualize maritime social sustainability but also fall short of meeting the requirements set by the CSRD.

Sleep deprivation is a significant issue on ships, often resulting from irregular schedules and environmental factors like noise. Research indicates that approximately 25% of marine accidents are attributed to fatigue.[17] Providing comfortable, quiet sleeping quarters is essential in mitigating this risk. In addition to sleep deprivation, poor air quality can adversely impact respiratory health and overall well-being.

A recent study, *A Survey Exploring How Watch Officers Manage Effects of Sleep Restrictions during Maritime Navigation*, highlights the severity of sleep issues onboard. The study found that 42.6% of watch officers reported inadequate sleep while at sea, with sleep patterns being influenced by factors such as time spent on board, the nature of their duties, and the watch system in place. Moreover, sleepiness was notably more prevalent during monotonous sailing compared to more engaging or demanding activities.[18]

Proper ventilation and air filtration systems are crucial for maintaining a healthy environment onboard. Crew members spend significant time indoors—whether working, eating, or resting. Long-term exposure to poor air quality can severely impact their health and well-being.

A recent study, *An Investigation of Air Pollution on the Decks of Four Cruise Ships,* highlighted that air quality on these ships was comparable to that found in some of the world's most polluted cities, including Beijing and Santiago.[19] This highlights the urgent need for better air quality management on ships.

Addressing air quality is essential for meeting the Social aspect of Environmental, Social, and Governance (ESG) criteria. Improving air quality also aligns with sustainability objectives and adheres to the Corporate Sustainability Reporting Directive (CSRD) and the Corporate Sustainability Due Diligence Directive (CSDDD). By enhancing air quality, companies can support crew health, reduce operational impacts, and demonstrate their commitment to ESG standards and long-term sustainability goals.

2. Mental Wellbeing

Mental health is a critical component of social sustainability within the maritime industry, particularly under the framework

of the CSRD and its double materiality assessments. Seafarers face unique mental health challenges that need to be addressed to ensure compliance with CSRD requirements and enhance overall workforce well-being.

Seafarers are more susceptible to mental health issues compared to the general population due to factors intrinsic to their profession. Long-term separation from home, social isolation, and the intense nature of their work can contribute significantly to mental strain. The confined living conditions, lack of privacy, and limited shore leave further exacerbate these challenges. Additionally, issues such as bullying, job insecurity, and the stress associated with multinational crewing can impact mental health negatively.

Studies, such as those conducted by Lefkowitz and Slade at Yale University, have highlighted that seafarers experience higher rates of depression and mental health issues compared to other worker groups. These findings underscore the necessity for maritime companies to integrate mental well-being into their social sustainability practices.[20]

To address these issues, maritime companies should incorporate regular mental wellness checks, mental health training, and awareness programs into their routines. Regular wellness checks and training sessions are effective for identifying and managing potential challenges early, while awareness programs help create a supportive atmosphere among crew members. Additionally, maintaining high standards of food quality is essential, as it directly affects both mental and physical health. Social activities that promote interaction and build camaraderie are also important for supporting mental well-being onboard. By fostering a connected and supportive environment, these efforts can enhance overall morale and well-being among crew members.

The importance of mental well-being within the ESG framework cannot be overstated. The CSRD's focus on double materiality requires maritime companies to evaluate and report on how their operations impact seafarers' mental health. This includes acknowledging and addressing the specific pressures faced by seafarers and implementing measures to support their mental well-being.

By prioritizing mental health, companies not only comply with regulatory requirements but also enhance their overall ESG performance. Addressing these issues proactively can lead to improved crew satisfaction, better retention rates, and a more supportive working environment, all of which contribute to a company's long-term success and sustainability.

3. Proactive Healthcare

Implementing a proactive healthcare model is essential in addressing the unique health challenges faced by seafarers. Health encompasses various factors, including food, nutrition,

vibrations from the ship's operations, sleep quality, and both mental and physical well-being. A 2017 article by Yui-yip Lau and Tsz Leung Yip emphasized that providing safe, fresh, and nutritious meals is vital, as seafarers face chronic disease risks due to poor nutrition.

Implementing a proactive healthcare model can address these challenges effectively. This approach focuses on preventive measures, ensuring that seafarers maintain good health and well-being. Quality food, regular exercise, mental health counseling, recreational facilities, and access to shoreside doctors are crucial components of this model.

When seamen fall sick, they usually do not have the same access to healthcare onboard as they do onshore. The cruise industry, with its well-equipped medical clinics, is an exception. However, commercial ships do not have access to the same well-equipped medical facilities. Therefore, it is most important that seafarers get the best possible access to healthcare during the voyage through quality telehealth assistance from external medical teams. If seafarers have to end their contracts early due to sickness and cannot support their families, this can be an existential issue. However, moving to a proactive healthcare model will reduce these existential issues.

Access to a telehealth service that adopts a proactive approach is particularly essential. Telehealth allows for continuous monitoring and early intervention, preventing minor health issues from becoming serious problems. It also provides mental health support, which is critical given the isolation and stress seafarers often face. To improve overall wellness onboard on an individual level, it is important that seafarers have access to appropriate mental health counseling.

By prioritizing proactive healthcare, companies can significantly reduce turnover rates, enhance crew well-being, and ensure a healthier, more resilient workforce.

Further, addressing these health concerns aligns directly with the requirements of the CSRD and its double materiality assessment. Proactive healthcare models contribute not only to the social sustainability aspect by enhancing the quality of life for seafarers but also offer financial benefits for commercial shipping companies, freight forwarders, and other entities involved in maritime operations. This approach aligns well with the double materiality assessment by addressing both impact and financial sustainability, ensuring that these companies meet their obligations while fostering a healthier and more stable working environment for seafarers. By integrating such health-focused initiatives, these companies can better adhere to CSRD requirements and improve their overall operational effectiveness.

Healthier, more satisfied crews are more productive and less likely to leave, reducing recruitment and training costs. This financial benefit ties directly into the financial impact, as it showcases the positive economic impact of proactive healthcare measures. These comprehensive health measures, including proactive healthcare, can be highlighted in sustainability reports, demonstrating a company's commitment to the well-being of its employees and compliance with CSRD standards.

While a reactive healthcare model might initially meet CSRD requirements, its limitations become evident over time. This approach, which addresses health issues only after they arise, often results in higher costs, greater disruption, and increased turnover due to untreated or poorly managed health conditions. In the maritime industry, relying on such a model—where issues are only addressed after they occur—can lead to more complex problems that strain limited onboard medical resources and disrupt vessel operations. For instance, if a seafarer's health problem isn't caught early, it could escalate into more severe conditions requiring costly interventions and potentially impacting the safety and efficiency of the entire crew and ship. This approach focuses on crisis management without improving the overall situation, failing to contribute to long-term sustainability. In contrast, a proactive model, which emphasizes prevention and early intervention, better supports sustainable practices and enhances overall health and operational efficiency.

Proactive healthcare, however, focuses on preventing problems before they arise. Effective data gathering is essential in this model, as it allows for continuous monitoring of various health and environmental factors, such as nutrition, mental health, and air quality. By analyzing this data, potential health risks can be identified early, enabling timely interventions. Telehealth enhances this approach by providing access to remote medical consultations and expertise, which can address issues without the need for immediate physical presence. These proactive measures not only improve individual crew member health but also contribute to smoother vessel operations and reduced overall healthcare costs by addressing issues early and preventing escalation.

In the long term, relying solely on reactive healthcare can lead to higher costs and greater operational disruptions. Proactive models, supported by effective data gathering and telehealth services, offer a more sustainable solution by addressing health issues early and minimizing escalation. Transitioning to such a model will support ongoing compliance with the CSRD and contribute to a more resilient and productive maritime workforce.

4. Ship-to-Shore Communication

Effective communication is a fundamental aspect of social well-being for seafarers, impacting both their mental health and overall job satisfaction. Staying connected with family and friends helps alleviate the challenges of being away from home. Beyond just keeping in touch, technology can be used to improve social interactions onboard.

Providing access to shared activities like sports broadcasts or organized games can help seafarers bond and feel more connected. These activities create a sense of community, making them feel like they are part of a family away from home. This social support can lessen feelings of loneliness and reduce the impact of negative news from home.
The new MLC Amendments, effective this December, ensure seafarers have reasonable access to telecommunication services. While this improves connectivity, it's also important to use this technology to enhance the onboard environment. Setting up social activities and creating spaces for crew interaction can make a significant difference in their overall well-being.

CONCLUSION: PRAGMATIC WAYS FOREWARD ARE AVAILABLE IN THE MARKET
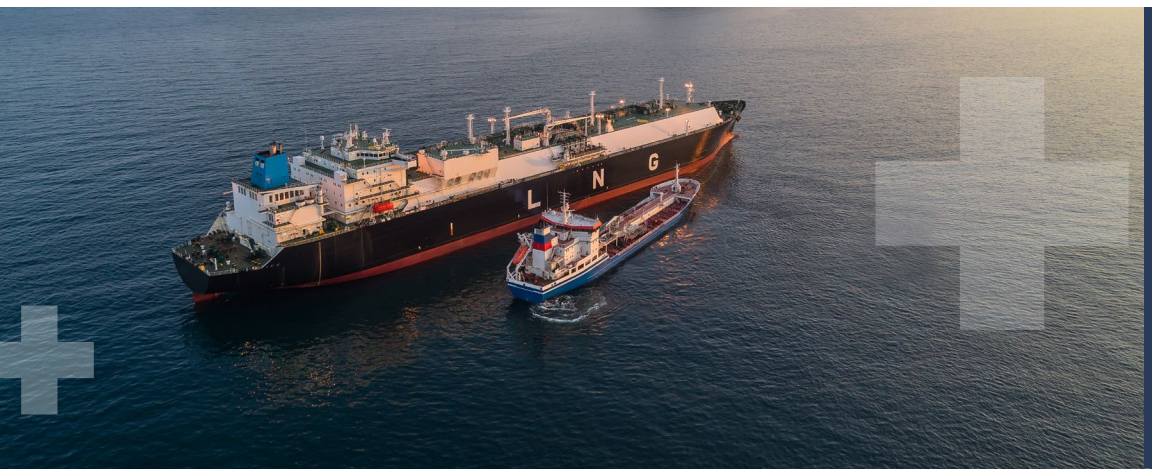
As maritime companies adjust to new due diligence requirements, focusing on both effective communication and a supportive social environment will help meet compliance standards and support seafarers' mental health. Practical steps, such as checklists for social activities and communication practices, can guide the creation of a more connected and positive onboard experience.

The introduction of the CSRD and the upcoming EU Supply Chain Act (CSDDD) is pushing maritime companies and global trade entities into a fundamental transformation to address seafarer welfare and sustainability, whereby compliance extends beyond merely ticking boxes; it involves a genuine commitment to improving the lives of those who are essential to global trade.

To support maritime (related) companies in this transformation, a variety of modern workforce solutions that focus on seafarer well-

being through better health measures, smart-communication, collaboration and proactive care, are available in the market and can roughly be clustered (and taken on as projects) as follows:

Proactive and holistic healthcare

✚ IP based video applications and platforms that remove hurdles and support easy two way access to proactive medical care, mental health awareness and support, regular wellness reviews and real time advise for seafarers, vessels and fleets and that are crucial for meeting the social sustainability criteria of the CSRD and the due diligence requirements of the EU Supply Chain Act (CSDDD). This guarantees that seafarers receive the essential support needed for optimal health and performance.

Real time seafarers feedback

➕ Network integrated systems, that proactively (and AI supported) sample seafarers opinion and behavior and that provide continuous real time and anonymous feedback from seafarers about their onboard experiences. This allows crewing, safety, and fleet managers to swiftly identify and address issues as they arise which is essential for creating a safer and more responsive operational environment while meeting the CSRD's social sustainability requirements.

### Health risk profiling and advise

➕ Real time data management and analysis tools - again supported by AI - that integrate and interprete healthcare data into actionable insights and necessary proactive interventions, all relative to seafarers health risk profiles. These support compliance with the CSRD's double materiality assessments and the due diligence requirements of the CSDDD, enabling organizations to understand and report on their social and environmental impacts effectively at all times.

Enhanced Collaboration software

➕ Addressing and integrating the human aspects of collaboration, by fostering greater connectivity and adopting suites of software applications that focus on communication i) between seafarers, ii) their company and/or iii) their home/domestic/social/religious stakeholders supports human capital management and drives sustainability in the shipping sector from a social perspective.

Automated auditing and reporting

➕ And last but not least, integrated reporting, combining real time status of all of the above in an automated reporting and auditing system, that feeds into corporate platforms, would ensure visibility of compliancy wherever needed.
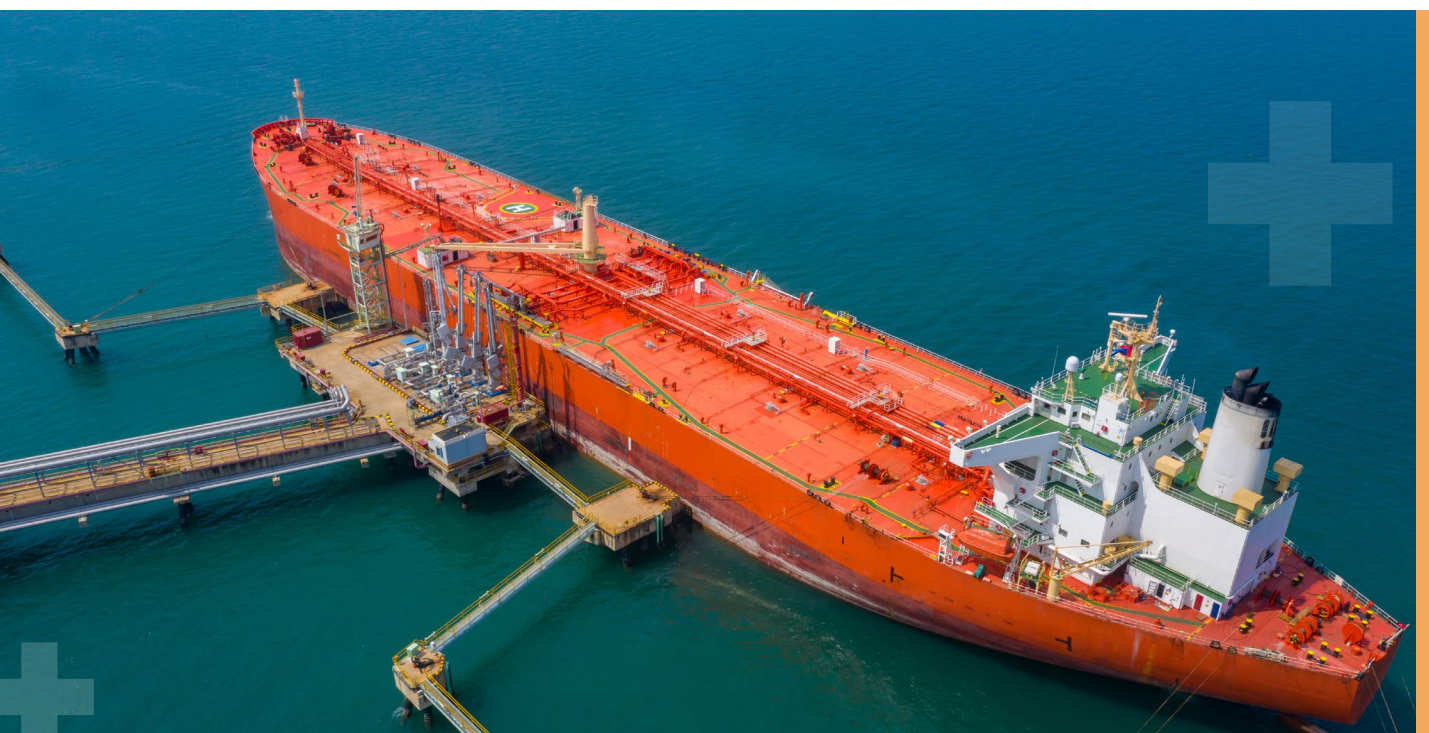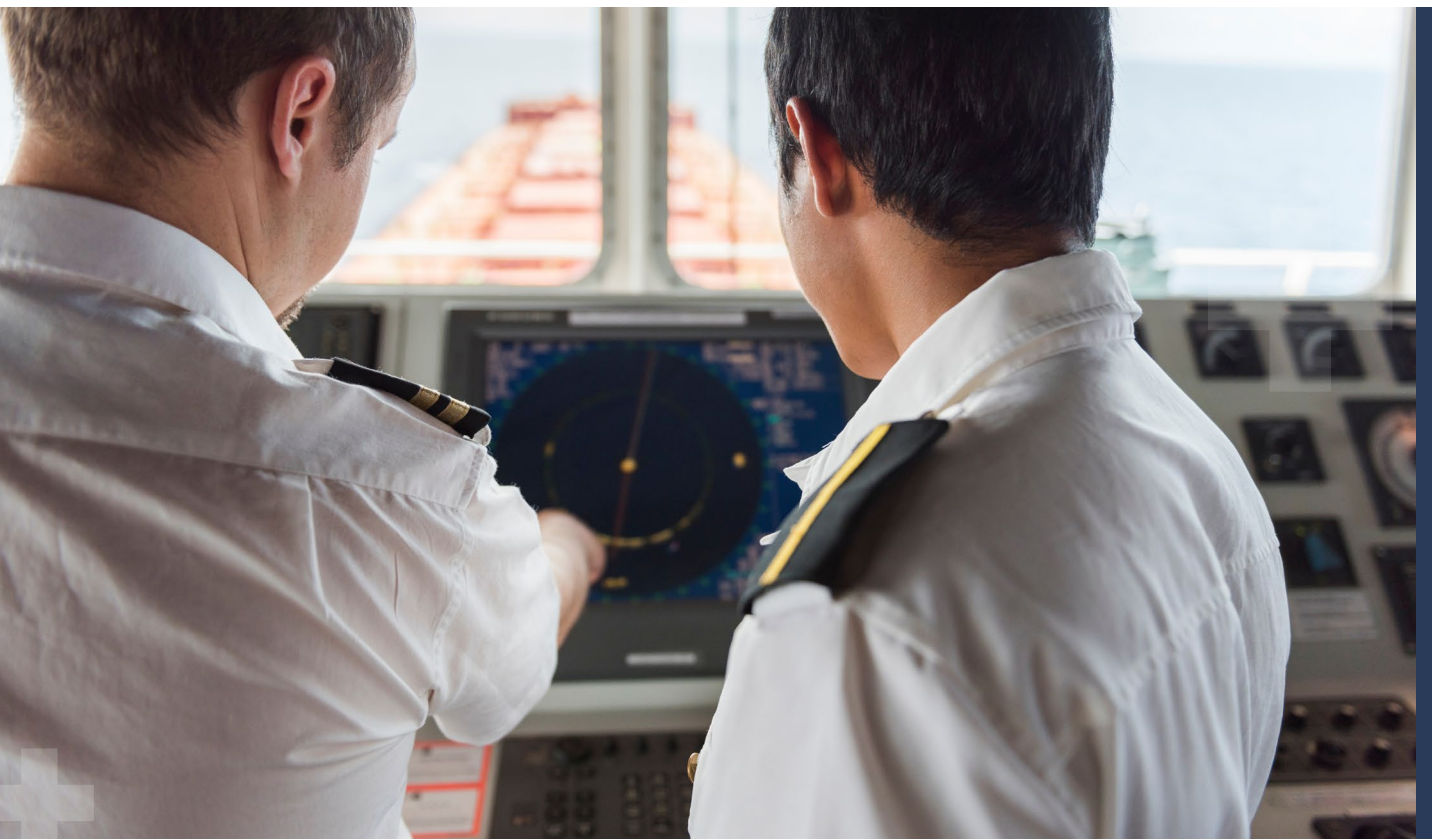
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