

UNIVERSITY OF PIRAEUS



DEPARTMENT OF MARITIME STUDIES

M.Sc. IN SHIPPING MANAGEMENT

CREW WELLBEING AND ESG PRINCIPLES

Zygogiannis Alexandros

Master Thesis

submitted to the Department of Maritime Studies of the University of Piraeus as part
of the requirements for obtaining the Master's Degree in Shipping Management.

Piraeus

December 2024

Declaration of Authenticity / Copyright Issue:

«The person who prepares the Diploma Thesis bears the entire responsibility for determining the fair use of the material, which is defined on the basis of the following factors: the purpose and character of the use (commercial, non-profit or educational), the nature of the material used, (part of the text, tables, figures, images or maps), the percentage and importance of the department, used in relation to the whole copyright text, and the possible consequences of such use on the market or on the overall value of the copyrighted text».

[SIGNATURE]

.....

ZYGOGIANNIS ALEXANDROS

Three-member Committee of Inquiry

«This Diploma Thesis was unanimously approved by the three-member Examination Committee appointed by the General Assembly of the Department of Maritime Studies of the University of Piraeus in accordance with the Rules of Procedure of the Postgraduate Program in Maritime Management.

The members of the Committee were:

- PANTOUVAKIS ANGELOS (Supervisor)

-ANASTASIA CHRISTODOYLOY

-NIKOLAOS TSIOYMAS

The approval of the Diploma Thesis by the Department of Maritime Studies of the University of Piraeus does not imply acceptance of the author's opinions. »

Preface/Acknowledgements

Upon completion of my Master's Thesis, I would like to express my warm thanks to all those who contributed to its elaboration.

I warmly thank my supervisor, Professor PANTOUVAKIS ANGELOS, for the trust he showed me from the beginning, entrusting me with this subject, the scientific guidance, the suggestions, the perseverance, his continuous support and the undiminished interest he showed from beginning to end.

Finally, I would like to express my gratitude to my family for all their support, support and understanding throughout my studies.

Table of Contents

Declaration of Authenticity / Copyright Issue:	ii
Three-member Committee of Inquiry	iii
Preface/Acknowledgements	iv
Executive summary (Greek version)	vii
Executive summary (English version)	viii
Introduction	1
Chapter 1st: Crew wellbeing in maritime management	3
1.1. Human Resources management in shipping	3
1.2. Understanding Crew Wellbeing in Maritime Management	7
1.2.1. Promotion of physical and mental well-being	8
1.3. Promoting a Culture of Crew Wellbeing in the Maritime Industry	11
1.3.1. Safety and work performance	13
1.3.2. Linking prosperity to security.....	15
1.3.3. Retention and staff recruitment	18
Chapter 2nd: Corporate Social Responsibility	21
2.1. Conceptualization of CSR.....	21
2.1.1 The Three Pillars of CSR.....	24
2.2. Benefits of CSR.....	25
2.3. CSR in maritime management	26
2.3.1 Incentives and behaviour of the shipping industry towards CSR.....	27
2.3.2. Recent Trends in Social Responsibility	28
Chapter 3rd: ESG principles in maritime policy	30
3.1. The Role of ESG Principles in Shipping Operations	30
3.2. Integrating ESG Strategies for Sustainable Maritime Practices.....	32
3.2.1. Energy saving in shipping	35
3.3. Occupational health, safety and crew well-being.....	36
3.4. Enhancing Crew Satisfaction with ESG-Focused Policies	37
Chapter 4th: Methodology	41

4.1. Method	41
4.2. Research tool	41
4.3. Research sample	42
4.4. Research questions	42
Chapter 5th: Results analysis	43
5.1. Results overview	43
5.2. Discussion of the results.....	49
Chapter 6th: Discussion	51
6.1. Improving Seafarer Health, Safety and Wellbeing Through ESG Compliance	51
6.1.1. Equity and equality	51
6.1.2. Environmental sustainability	51
6.1.3. Health and safety	52
6.2. Navigating Challenges: ESG Implementation on Vessels.....	53
6.3. The Future of Maritime Management: Balancing Profit and Crew Welfare.....	53
Conclusions.....	56
References.....	59
Annex	68
Questionnaire	68

Executive summary (Greek version)

Η ναυτιλία, ως βασικό και κύριο μέρος της παγκόσμιας οικονομίας, αναπτύσσεται, υιοθετεί, και εφαρμόζει νέες μεθόδους και πλαίσια για την άμεση και αποτελεσματική αντιμετώπιση θεμάτων που αφορούν το περιβάλλον, την κοινωνία και την εταιρική διακυβέρνηση, τα οποία είναι πλήρως συνδεδεμένα με τη βιώσιμη ανάπτυξη. Οι ελληνικές ναυτιλιακές εταιρείες, οι οποίες διαχειρίζονται έναν από τους μεγαλύτερους στόλους πλοίων παγκοσμίως, προκειμένου να εδραιώσουν να διατηρήσουν και να αναπτύξουν τη θέση και την ανταγωνιστικότητα τους στη διεθνή ναυτιλιακή βιομηχανία, παρέχοντας ποιοτικές υπηρεσίες, δημιουργούν και ενσωματώνουν στρατηγικές και πρακτικές που ανταποκρίνονται στις αρχές ESG, επενδύοντας ισότιμα και στις τρεις διαστάσεις (περιβάλλον – κοινωνία – εταιρική διακυβέρνηση). Αντίστοιχα, με το πέρασμα του χρόνου, οι ναυτιλιακές εταιρείες, συνειδητοποιώντας τη σημασία και τη συνεισφορά του ανθρώπινου δυναμικού τους στην αποδοτικότητα, κερδοφορία και μακροπρόθεσμη επιτυχία τους, ως πιο σημαντικό και πολύτιμο κεφάλαιο τους, στοχεύουν στην αποτελεσματική διαχείριση ικανών στελεχών στις υποδομές στην στεριά και πληρωμάτων στα πλοία, εφαρμόζοντας μια σειρά στρατηγικών και δημιουργώντας κατάλληλες συνθήκες εργασίας για να ανταποκριθούν στις απαιτήσεις και δυσκολίες της βιομηχανίας .

Σκοπός της παρούσας εργασίας είναι η μελέτη των αρχών ESG, της ανταπόκρισης και ενσωμάτωσής τους από τις ναυτιλιακές εταιρείες, καθώς και η αντίστοιχη διαχείριση του ανθρώπινου δυναμικού τους, για την προώθηση της ευεξίας, της ασφάλειας και της υγείας των ναυτικών.

Συμπερασματικά, ο ανθρώπινος παράγοντας είναι ένας από τους πιο σημαντικούς παράγοντες στη ναυτιλιακή βιομηχανία. Η ενδυνάμωση και υποστήριξη των ναυτικών μπορεί να οδηγήσει σε αυξημένη απόδοση και μείωση των ατυχημάτων, καθιστώντας το ανθρώπινο παράγοντα καθοριστικό για τη βιωσιμότητα και την ανάπτυξη της ναυτιλιακής βιομηχανίας. Η φροντίδα της ευημερίας των ναυτικών δεν είναι μόνο ηθικά σωστή αλλά και επιχειρηματικά έξυπνη, καθώς οδηγεί σε βελτιωμένη απόδοση, ασφάλεια και ενισχυμένη διατήρηση του προσωπικού.

Λέξεις κλειδιά: Ασφάλεια, υγεία, ανθρώπινος παράγοντας, αρχές ESG, ναυτιλιακή βιομηχανία.

Executive summary (English version)

Shipping, being a key and major part of the global economy, is developing, adopting and implementing new methods and frameworks to directly and effectively address environmental, social and corporate governance issues that are fully intertwined with sustainable development. Greek shipping companies managing one of the largest fleets of ships worldwide, in order to consolidate, maintain and develop their position and competitiveness in the global shipping industry by providing quality services, create and incorporate strategies and practices that respond to the ESG Principles by investing equally in all three dimensions (environment - society - corporate governance). Similarly, with the passage of time, shipping companies having realized the importance and contribution of their human resources to their efficiency, profitability and long-term success, being their most important and valuable resource, aim at the effective management of competent executives in the shore infrastructure and crews on board ships, implementing a number of strategies and creating the appropriate working conditions to meet the demands and difficulties of the shipping industry.

The purpose of this thesis is to study the ESG Principles, their response and incorporation by shipping companies, as well as the corresponding management of their human resources, to promote wellness, safety and health for seafarers.

In conclusion, the human factor is one of the most significant factors in the shipping industry. Empowering and supporting seafarers can lead to increased performance and reduction in accidents, making the human factor crucial to the sustainability and growth of the shipping industry. Taking care of seafarers' welfare is not only morally right but also business smart, as it leads to improved performance, safety, and enhanced staff retention.

Keywords: safety, health, human factor, ESG principles, shipping industry.

Introduction

Maritime transport is an integral and particularly crucial factor in the global economy, as more than 80% of the volume of international trade is transported by sea worldwide (Onakpojeruo et al., 2023). As an international industry, shipping is an international industry in which companies and individuals from all corners of the globe operate and collaborate on a daily basis. A shipping company aims to establish itself in the global shipping industry, create a competitive advantage and correspondingly maximize its profitability through high quality and maximum efficiency of all the services it offers. As part of the global shipping industry, a shipping company is governed by a set of regulations and strict laws and operates in accordance with international standards defined and set by competent organizations and bodies of international standing (Sampson and Ellis, 2020).

In modern times, international institutions and organizations have set themselves the goal of creating a higher quality global economy for both external customers and the internal customers of each company, which are the human resources that make up the company, in a more sustainable and environmentally friendly way for the environment and the wider society. As sustainable development is now a main goal of the global society and economy, the term "ESG" (Environmental, Social, and Governance) was created and established to reflect and assess the overall attitude and approach of each company to environmental, social, and corporate governance issues during its production process. Therefore, shipping, as a major part of the global economy, is affected by and must harmonize and integrate the overall ESG framework and principles in all its operations (Zhao et al., 2023).

This thesis, having as its objective and object of study the ESG principles, their response and integration by shipping companies and their human resources management, consists of 6 chapters. The first chapter deals with the concept of crew wellbeing, in an attempt to understand the importance of the concept and its parameters. The second chapter discusses the concept of Corporate Social Responsibility, exploring its characteristics and benefits. The third chapter analyses the application of ESG principles in shipping, through a framework of operations, practices and the extent to which these impact on crew wellbeing. Chapter four outlines the research study methodology followed. Chapter five is devoted to

presenting the results of the research. The sixth and final chapter belongs to the discussion, where the previous literature review is related to the findings of the quantitative research.

Chapter 1st: Crew wellbeing in maritime management

1.1. Human Resources management in shipping

The human resources managing the ship fleet, i.e. the crews, are a special sort of workers due to the identifiable characteristics of the maritime profession. Due to the specific nature of the seafarer's job, in most cases each shipping company has a different treatment, management and administration of its crews compared to the rest of the human resources staffing the shore-based infrastructure (Abila et al., 2023). Working as a crew member on a ship requires a certain way of life because they live and work in the same space for a set amount of time. As the working environment of seafarers, i.e. the ship, is geographically quite distant from the premises of any shipping company, it is necessary to carefully and purposefully select and compose the crews of each ship in order to achieve and ensure maximum cohesion, efficiency and operational performance both under normal and critical conditions (Ariza-Montes et al., 2021).

The crew members of each ship live and work in the same environment for extended periods of time, away from their friends, family, and social circle, and frequently face communication challenges. This is one of the primary reasons that the seafaring profession has unique characteristics (Ariza-Montes et al., 2021). All the personal and professional activities carried out by seafarers on a daily basis are organized and carried out according to a single and common program involving all those involved and defined by the decisions and authority of the master. In addition, seafarers must cooperate and coexist peacefully and effectively in the small space of a ship, which serves as both their working and social environment. This is necessary to resolve conflicts and issues resulting from the multiculturalism of the crews and the corresponding differences in nationalities, personal perceptions, habits, religious beliefs, etc (Abila et al., 2023).

The maritime profession involves and entails a corresponding set of risks and challenges to the safety and integrity of crews due to both natural causes and human factors. As the ship constantly travels and moves across different latitudes and longitudes of the world map with different natural conditions, the working conditions of seafarers are impacted by natural phenomena (extreme weather conditions) and are

always changing. Similarly, any seafarer travelling is at risk of becoming a victim of an illegal or criminal act, as is often the case with piracy (Bolt and Lashley, 2015).

The needs for seafarers' specialized knowledge, abilities, and educational background are always growing as a result of advancements in science, technology, and the economy. Numerous international regulations, standards and legislation are shaping and influencing the way in which ships operate, resulting in a significant increase in the responsibilities, obligations and workload of each seafarer, with time-consuming and bureaucratic procedures. Lastly, seafarers must update and broaden their knowledge, expertise, and experience in order to meet the demands of the highly competitive, dynamic, and demanding maritime industry as well as the pressing situations that arise from their line of work (Ariza-Montes et al., 2021).

In order to maintain seamless operations and provide top-notch services, the majority of shipping companies incorporate a dedicated Crew Department into their organizational structure. This department is in charge of managing the human resources that staff their ships and ensures the efficient management of seafarers, a specific category of workers (Estimo et al., 2020). Likewise, a different strategy with a different organizational model followed by some shipping companies is to outsource the management and executive of crews either to a specialized subordinate or to a foreign company. The choice of the method of managing the ships' human resources, i.e. either through an in-house crew department or through outsourcing, depends on the size of the shipping company, the number and categories of ships it manages, the resources it has at its disposal and, above all, the broader strategy and organizational culture it applies (Abila et al., 2023).

The crew department of each shipping company is able to draw on human resources for manning its ships from the global seafaring labour market on the basis of its organizational and management strategy, but also on the flag chosen for its ships and the corresponding status in force if it imposes strict regulations on the nationality and composition of seafarers. The crew department's contribution to the overall operations of the company is crucial through the recruitment, selection, employment, and development of competent and quality seafarers and the resolution of any related issues (Menelaou and Violaris, 2012).

For any shipping company, the crew department is in charge for manning its ships with the right and necessary crew based on their expertise, skills and knowledge. In addition to creating suitable crew teams so that they can collaborate well and support their seamless rotation and integration without undermining their cohesion and efficiency, it will create procedures and standards for luring, assessing, and choosing qualified seafarers. In addition, the crew department shall monitor all necessary certificates to be held by seafarers and the relevant training courses to be attended at the appropriate time (Radic et al., 2020).

The Crew Department's core duties include all actions and procedures related to employment contracts, wages, insurance cover, broader terms and conditions of employment and compliance with international regulations and conventions (e.g. International Maritime Labor Convention). Furthermore, it settles and resolves any procedural issues that come up with consular authorities and public services during the assignment and departure of seafarers from the ship (Ariza-Montes et al., 2021). It also plans and organizes the procedures and procedures for the assignment and departure of seafarers from the ship. Finally, it provides consultancy services and acts as a link between the ship's personnel and the wider external environment, i.e. the shipping company itself, the State or society, for any personal, family or professional problems they may have (Abila et al., 2023).

The management of a company's human resources is part of the corporate strategy and culture that it applies and develops across its operations. Greek shipping companies rely on and invest in their human resources, seeking both through their shore-based infrastructure employees and ship crews to gain and maintain a significant competitive advantage. Through the existence and adoption of proper and effective human resource management systems utilizing their valuable and scarce characteristics, their competitive advantage becomes feasible and sustainable (Progoulaki and Theotokas, 2009).

Greek shipping companies select human resources mainly on the basis of their abilities and skills, but also on the basis of the principles, values and goals that the employees themselves have as personalities and whether they are aligned with the company's culture. A common phenomenon in Greek shipping companies is the prevalence of the shipowner's culture of authority, i.e. the whole company and the

way it is organized and managed is based on the principles and values of the owner and those who have similar authority (Theotokas, 2014). According to the culture of authority that is in place in most Greek shipping companies, a key criterion for attracting and selecting the human resources that will staff them is considered whether and to what extent the employees themselves embrace and assimilate the principles and vision that are at the core of each company and show loyalty and commitment to effective operation and the achievement of the respective goals (Sandberg et al., 2020).

The degree to which Greek shipping companies and their human resources are responsive to the needs and requirements of their workforce is a crucial and equally significant factor in the establishment and sustenance of a long-term partnership. Numerous Greek shipping companies that recognize and value the critical role that their human resources play reward their employees and foster the ideal environment for productive, efficient, long-lasting partnerships. A reward and incentive tactic that appears and is applied in some Greek shipping companies and is differentiated from foreign shipping companies is the possibility of assigning a small percentage of shares and profit participation (Menelaou and Violaris, 2012).

In many cases, competent and loyal seafarers who have shown their potential and dedication, have contributed with their work to the success of the company and constitute an important human resource for their company, usually continue their professional career by staffing the shore infrastructure in key and key positions, in order to utilize and pass on their knowledge and experience to others. Moreover, seafarers who have been sailing for several years and have gained extensive experience on board, have a significant advantage and are selected by Greek shipping companies for specific high-level and highly demanding jobs in offices linked to the management and operation of fleets, as they have a full picture of the conditions and difficulties prevailing on board and can be the link for the immediate and effective response and resolution of critical issues (Menealou and Violaris, 2012). However, as technology evolves and international regulations applicable to shipping largely determine the way shipping companies operate and the requirements of their operations, it follows that the criteria and methods for selecting senior managers for specialized positions depend on the organizational strategy chosen by each shipowner (Sandberg et al., 2020).

In particular, the attraction and selection of crews depends to a large extent on the flag that the shipowner chooses to fly, but also on the broader strategy he applies with regard to the quality and cost of the services he offers. Some shipowners select seafarers and, in particular, crew nationalities on the basis of their skills and the quality of the services provided, and others on the basis of cost. In the past, Greek shipping companies preferred and selected Greek seafarers to man all their fleets because of their high skills and reliability, but as the conditions of both the Greek and the global seafarer workforce changed, seafarers of other nationalities started to be selected (Theotokas, 2014).

Nowadays, most Greek shipowners crew their ships with Greek officers and have the possibility to select crews of different nationalities from the global market, adapting and implementing different policies for each category of workers. For this reason, a tactic followed by Greek shipping companies, mainly large ones, is the creation and maintenance of specialized subsidiaries and crew offices in their countries of origin and in the respective countries of supply of cheap seafarers. The nationalities of crews most frequently chosen by Greek shipping companies are Greeks, Filipinos, Romanians, Ukrainians and Russians (Theotokas, 2014).

Consequently, the nature of the work and the specific characteristics of the maritime profession create the need for shore-based infrastructure staff to specialize and deal exclusively with crews or even to maintain a separate crew department. Most Greek shipping companies, having realized the catalytic contribution of seafarers to the proper and efficient overall operation of the company, the corresponding high demands involved in their management and the broader approach they adopt to the management of their entire human resources, choose either to develop an internal crew department or to outsource to third-party companies that specialize with greater efficiency (Larsen et al., 2012).

1.2. Understanding Crew Wellbeing in Maritime Management

Well-being at work is closely linked to psychological satisfaction and happiness at work. According to Armstrong (2009), happiness at work arises from its characteristics and practices, as well as from pleasant experiences and positive emotions. In addition, workplace well-being is associated with the quality of work life

and work-life balance. High quality services and practices aim to improve the physical, mental and social health of the workforce (Armstrong, 2009). In addition, well-being is associated with positive mood and commitment to work (Keyes et al., 2000).

In the maritime profession, the quality of working conditions and work-life balance are essential for the efficient and safe operation of ships. Seafarers, as a distinct employment group, face prolonged isolation and limited access to services in ports. Therefore, the International Labour Organization has prioritized the quality of work and life on board ship as defined by the Maritime Labour Convention (MLC) (ILO, 2019).

Overall, well-being in shipping and navigation affects seafarer satisfaction, retention and retention in the employer, the profession and its attractiveness, as well as the well-being of the society affected by the shipping business. However, many aspects of this issue remain unclear and require further investigation and application of the international standards set by the Maritime Labour Convention (Larsen et al., 2012).

1.2.1. Promotion of physical and mental well-being

Working on board often brings unique challenges, both psychological and physical, that differ from those of land-based occupations. Seafarers are constantly in the workplace, which makes them an isolated work group. Prolonged isolation, long periods away from home and lack of social contact can lead to loneliness and homesickness. In addition, the physical conditions on board are often demanding, with high noise, vibration, colds and high temperatures causing fatigue and other health problems. Seafarers often work long hours without adequate rest, resulting in fatigue and reduced attention (Onakpojeruo et al., 2023). All this can worsen the mental health of seafarers, who experience problems such as anxiety, depression and loneliness. Especially during the COVID-19 pandemic, seafarers faced additional challenges such as work restrictions, quarantine and coping with outbreaks. Therefore, it is important to understand and support seafarers' mental health and consider the risk factors affecting their wellbeing (Zhao et al., 2023). In December 2020, the International Labour Organization (ILO) Committee of Experts found that

governments failed in their duty of care to seafarers during the pandemic by not meeting minimum standards for basic rights such as health care, repatriation, annual leave and shore leave as defined in international law (ILO, 2019). It has also been reported that during the peak of the pandemic, the ISWAN seafarers' helpline saw a threefold increase in the number of cases. It is therefore particularly important now to understand the risk factors for poor mental health for those in maritime organizations and how to better support maritime staff (Onakpojeruo et al., 2023).

New research on seafarers' mental health has revealed a variety of risk factors and suggests recommendations for improving it. Despite the mixed results of the studies, younger age appears to be a consistent factor for better mental health. However, work needs to be done to translate these findings into practical recommendations. Brooks & Greenberg's (2020) review suggests measures that can be implemented in the workplace to promote mental health in seafarers.

Poor mental health is associated with younger age, freedom and poor physical health. Younger staff may suffer more due to less job autonomy and safety, as well as difficulty in coping with work demands due to lack of experience. In addition, seafarers with poor physical health are more likely to report mental health problems. The installation of a fitness center on board could promote socializing and physical activity. Because they have worked for longer periods of time, older workers may be more resilient. They can also be vital in spotting signs of mental health issues and offering the crew support. Well-being can also be increased by fostering positive relationships and receiving social support. In addition, providing education on maintaining healthy lifestyles and managing stress can be helpful (McVeigh et al., 2018).

Overall, the research highlights the importance of paying attention to seafarers' mental health and suggests practical measures to improve it. Addressing poor physical conditions in the maritime professions highlights a number of strategies that can improve both the physical and psychological wellbeing of staff (McVeigh et al., 2018). The proposal by Yuen et al. (2020) to reduce noise in cabins is an example that highlights the importance of action in this area. In addition, Oldenburg et al. (2010) proposals to reduce noise and enhance education on the effects of noise are practices that can be undertaken to improve workplace environmental quality.

Furthermore, because safety and mental health are closely related, receiving psychological support is crucial. By addressing mental health issues and increasing awareness, managers can play a crucial part in fostering a safe and supportive work environment. One of the most important ways to establish a positive work environment is to support psychological wellbeing and encourage open communication through suitable policies and actions (McVeigh et al., 2018).

Finally, strengthening relationships between team members and promoting diversity and inclusion can help to reduce boredom and loneliness. Creating an environment that encourages mutual support and respect plays a central role in promoting psychological well-being and safety in the workplace. With clear anti-discrimination policies and anti-bullying measures, shipping companies can create a working environment that is safe and inclusive for all (Estimo et al., 2020).

Good leadership in the maritime sector has a positive impact on both the mental health of staff and safety at work. Research suggests that improving leadership skills and training of supervisors is critical. Onboard supervisors and shore managers should receive appropriate training to effectively manage their staff. Reducing work overload and ensuring adequate staffing levels are vital. This can be achieved by increasing the number of crews and rest hours. Also, reviewing duty periods at sea and reducing the length of time on board can improve staff welfare. Increased autonomy and control over tasks can reduce seafarers' stress. In addition, job security and support for training can improve insecurity and well-being (Abila et al., 2023).

Finally, management should be sensitive to signs of over-commitment to work and provide appropriate support. The proposed solutions are based on scientific research and seek to improve work culture and staff well-being (Abila et al., 2023). Feelings of job insecurity could potentially be improved by engaging in further training to improve perceived employment prospects and by employers supporting their employees' training through financial support and giving them sufficient time to engage in training (Lebert and Antal, 2016). There was some evidence that over-commitment to work, i.e. finding it difficult to disengage from work outside of working hours, was negatively associated with mental health. Previous research has linked over-commitment to burnout. Increasing opportunities for recreational activities, which may be easier if working hours are reduced, and promoting social

events on board could potentially help staff to disengage. This would also be useful in strengthening social support networks in the workplace (Estimo et al., 2020). We acknowledge that maritime organizations might not always have the funding to put all of the recommendations into practice, and that even in those cases, staff members will likely experience some level of occupational stress because of the nature of their jobs. Because of this, supervisory staff members ought to be trained in identifying and addressing stress in both themselves and others (Oldenburg et al., 2010).

1.3. Promoting a Culture of Crew Wellbeing in the Maritime Industry

Both objectively and subjectively, human well-being is impacted by rising labor productivity. Specifically, this increase's impact on real earnings suggests an improvement in overall well-being (Grech et al., 2016). Similarly, an increase in labor productivity also has an impact on subjective well-being, which is determined by an individual's subjective perceptions and opinions. However, while objective well-being can be measured by explicit economic and non-economic indicators, subjective well-being is determined by the sense of satisfaction with work, which is formed through its positive or negative effects. Therefore, understanding the factors that influence subjective well-being remains crucial (Sandberg et al., 2020).

In this regard, the maritime industry stands out as one where employee retention is significantly impacted by job satisfaction. Research has indicated that job satisfaction plays a role in both shipping productivity and safety. The variables affecting job satisfaction in the maritime industry are still unknown, though. Therefore, factors that negatively affect seafarers' job satisfaction are the growing pressure to respond quickly and the diminishing benefits of working at sea (Sampson and Ellis, 2020).

The theory of equal treatment lays the foundation for the development of a framework that links job satisfaction with the performance of employees and, in this case, seafarers. An important factor that can affect their satisfaction is the lack of recognition. This situation can lead to discouragement and disappointment. Other factors that can have a negative effect on seafarers' job satisfaction are the treatment of the public, working conditions, and pay (Ariza-Montes et al., 2021). In addition, stressful working conditions, unfavorable conditions of seafarers' daily life on board, difficult work, and workload are some other parameters that negatively affect

seafarers' job satisfaction (Abila et al., 2023). Also, the type of work seafarers do directly and negatively affects their social and family life, isolating them and leading to a lack of support from their family, as well as increased anxiety and depression before and after their deployment. Despite efforts to provide rewards and rewards, working on board ship remains unbearable due to the lack of social contact and long-term isolation from their families (Zhao et al., 2020).

The study acknowledges the importance of rewards in seafarers' job satisfaction, however it highlights the need to consider other approaches that may influence job satisfaction that have not been sufficiently discussed. One such approach is the effect of job stress, which is negatively associated with job satisfaction according to the study by Fairbrother and Warn (2003). Job stress can be caused by the work environment, such as noise and lack of privacy, and job characteristics such as role ambiguity and high workload. Moreover, in shipping, stress is directly related to the psychological health and job satisfaction of seafarers, as has been shown by previous studies (Kim and Jang, 2016).

Hackman and Oldham (1976) proposed the concept of job characteristics, which argues that people are motivated by genuine satisfaction resulting from performing their tasks. Among the five job characteristics that influence job satisfaction include skill variety, job identity, job importance, job autonomy and job feedback. These characteristics lead to three psychological states that influence job satisfaction, contributing to a sense of responsibility and knowledge of job outcomes (Nielsen et al., 2013).

Finally, the study examines the contribution of seafarers' personality to job satisfaction. According to the personality-job fit theory, employees who possess the right personality for their job tend to be more satisfied. Some of the personality factors associated with job satisfaction include positive or negative affectivity, internal or external locus of control, and burnout tendencies (Fetzner et al., 2012). Overall, the study suggests a more comprehensive framework for comprehending the problem by highlighting the significance of both personal traits and working conditions in seafarers' job satisfaction.

The study suggests that seafarers' job satisfaction is related to burnout tendency and positive dispositional characteristics. This is linked to the need for a

positive attitude due to the long isolation and lack of social contact during their stay at sea. The resulting hypotheses branch into four categories, including rewards, job stress, job characteristics, and the influence of mood. Job satisfaction is important in organizational behavior as it is linked to job performance. In addition, scholars argue that satisfied employees perform better and are more willing to stay with the organization. However, this relationship varies between occupations and has not been formally tested for maritime careers (Ariza-Montes et al., 2021).

1.3.1. Safety and work performance

The shipping sector is vital to modern societies. In the past, the fleet size, overall trade volume, and fishing capacity of the shipping and fishing industries have all shown steady growth. As a result, shipping has long served as the main mode of transportation and a vital conduit for communication between coastal nations, cities, and continents. Next to rail transport, maritime transport is economically and environmentally the most efficient way to travel or transport goods and, nowadays, around 90% of world trade is carried out by the international shipping industry (Uzuegbunam et al., 2023).

An increase in offshore hydrocarbon exploration and production is necessary due to the world's population growth and the resulting rise in energy needs in both developed and developing nations (Bolt and Lashley, 2015). Similar to the space industry, numerous advancements in exploration, drilling, storage, and transportation techniques have opened up a new era in energy production. Drilling operations off the coasts of 74 countries worldwide have involved numerous countries. Activities inextricably linked to shipping and transport. About 50,000 merchant ships, registered in more than 150 countries and manned by over a million seafarers of almost every nation, carry all kinds of cargo worldwide. Many thousands of oil rigs and offshore support and supply vessels are engaged in oil and gas exploration and drilling in almost every corner of the globe. Nearly four million commercial fishing vessels perish in the seas and oceans at any time. And a myriad of pleasure vessels (with approximately 45,000 privately owned vessels operating) including several hundred large and small cruise ships, offer the most diversified leisure and tourism services to an expanding market (Ariza-Montes et al., 2021).

Maritime activity has been a continuous expansion, with several advantages for local communities. Commercial maritime activities, marine oil wells, commercial fishing and cruise lines are part of the shipping industry, which, as now and in the future, will provide a large share of international social and economic development, increasing economic competition between countries, despite the constantly changing environment, with the formation of new companies. Today, the shipping industry has expanded its activity in Europe, Asia and North America (Sandberg et al., 2020; Zhao et al., 2020).

The socio-economic environment has changed dramatically in recent years compared to the trends seen in previous decades. Globalization and the development of low-cost manufacturing centers in Eastern Europe, China and India, the aging and shrinking workforce in developed countries, the rising costs of environmental regulation, the rise of global terrorism, piracy, international crimes (human /drugs and smuggling) and the illegal use of the sea (poaching and crime) together with the cost of security measures to combat such phenomena and the aforementioned increasing global demand for energy and food, are key factors in a period of significant change, development and new challenges (Estimo et al., 2020).

From the above, it can be concluded that shipping activity has considerable benefits for the energy sector and the management/exploitation of natural resources. It also extends to the trade, science and tourism industries. For the well-being of the global community, and the long-term sustainability of shipping, it is important to understand local and global regulations that define the proper functioning of shipping, so that issues that may arise, such as issues relating to social and labour rights, international ship registration, taxes, protection of the marine environment, etc., can be managed in a timely manner. There has also become a great need to understand how global ecosystems and the environment work. This realization is the beginning of a sustainable future, through the respect but also the prevention and proper management of environmental issues such as climate change, disruption of ecosystems, deforestation, destruction of the ozone layer or rising sea levels, has made research and study of the marine environment a high priority, as have issues relating to safety, welfare and the overall management of issues affecting ship crews (Zhao et al., 2023).

1.3.2. Linking prosperity to security

Additionally, seafarers are also exposed to work environment stressors such as adverse weather conditions, noise, high job demands, shift work and isolation from family and friends. Research results from other occupations show that these kinds of physical and psychosocial factors in the work situation are important predictors of workers' health and well-being. Therefore, it is logical that the specific characteristics of the job in the shipping industry affect the quality of seafarers. Although there has been considerable interest in the health and well-being of workers in other industries, little attention has been paid to the occupational well-being of workers in the shipping industry (Abila et al., 2023).

In terms of work demands, the shipping industry includes both universal demands, such as high workload and pressure, and more profession-specific demands, such as high potential for hazards. For example, ship handling has many mentally demanding aspects, such as navigating in coastal waters, at night and in heavily trafficked straits. Deck workers and engine room crew will be exposed to heavy lifting, restricted work spaces, noise and mental strain. In terms of labor resources, the ship's leadership, routines and safety measures, and team cohesion among crew members are obvious factors. The findings from the offshore oil industry have demonstrated that high levels of risk perception are associated with reduced job satisfaction, but that this effect is moderated when employees rate the safety climate as positive. Therefore, high levels of safety appear to be an occupational resource that protects workers from the negative effects of hazards and accidents (Radic et al., 2020).

The diverse aspects of the shipping industry may contribute to differences in perceptions of safety and welfare between ships in the same industry or even the same company. Additionally, empirical evidence suggests that ships with crews of only one nationality or with only two nationalities had more positive attitudes towards safety and risk than those with multi-national crews (Estimo et al., 2020). According to Nielsen (2013), who studied the impact of a multicultural environment on the well-being of a ship's crew, seafarers' wellbeing is primarily influenced by physical, psychological and social parameters, as well as job satisfaction and

commitment/attitude to stay at work. According to this study, therefore, it was found that often crew members from the Philippines experience harassment. The environment that defined such incidents was a negative climate, with inadequate and liberal leadership, no clear boundaries and regulations, and inadequate security. The survey, however, showed that despite higher rates of intent to leave work among Filipino crew workers, no substantial difference was found between Europeans and Filipinos in job satisfaction. Interaction analyses showed that Filipino crew members reported higher job satisfaction when management prioritized safety over production. The JD-R (Job demands-resources model) was applied in this study. According to this model, long-term physical and mental exhaustion in the work environment can have significant negative effects on the health and well-being of workers. Nielsen (2013) also found that, in general, negative impacts on crew mental health due to work demands appear to be outweighed by available work resources such as safety measures, team cohesion and ship management. However, particularly in this particular case, few correlations between crewmembers' well-being and their ratings of the ship's leadership style. This may be due to specific characteristics of the shipping industry profession, such as specialized personnel with clearly defined roles and shorter shift periods.

The leadership of a ship could influence a lot more on well-being of the crew than other work factors, such as safety and team cohesion. Although the direct relationship between leadership and well-being is limited, it could be possible that leadership has indirect effects on employment and turnover intention. For example, as authentic leadership is related to social processes that promote change and growth and therefore act as role models that promote a positive climate in organizations, authentic leaders should be able to create high levels of cohesion and identity within workgroups. Based on this rationale, authentic leadership is associated with high levels of well-being through the maintenance of a favorable climate within the group, characterized by positive behaviors among its members and concern for conflict resolution. Furthermore, as leadership is regarded as a key predictor of safety, it is possible that leadership has indirect effects on well-being through enhancing followers' safety perception. In order to determine if such indirect effects exist, future research should examine the mediating role of team cohesion and safety. Meta-analytic evidence has demonstrated strong associations between exposure to

harassment and job satisfaction, as well as intention to leave. Although similar associations were found in bivariate correlation analyzes in the study of Radic et al. (2020), as no relationships emerged when adjusted for other work factors in linear regression analysis. Following the JD-R model, a plausible explanation for this is that the negative effects of job harassment (as a job demand) depend on job resources. For example, it is reasonable to assume that strong team cohesion protects team members from exposure to workplace harassment, as this type of negative behavior should not be tolerated in a cohesive work setting with a high team orientation (Radic et al., 2020).

Consistent with the research of Nielsen (2013), that has found cross-cultural differences in seafarers regarding factors such as emotional intelligence and accident involvement, the findings of the study by Radic et al. (2020) European and Filipino seafarers differ in their perception and evaluations of important work factors such as safety, leadership, exposure to harassment and group cohesion. Although some of these differences may be attributed to work characteristics, such as the fact that Filipino crew members often have longer work periods, genuine cross-cultural differences may also be a factor. In terms of group cohesion, a major difference between European and Asian cultures is that the latter is individualistic, while the latter is collectivist. Collectivism is described as a set of concepts and practices that emphasize an individual's relationship with his group and, more generally, with the world. It is evident that individualism is a set of meanings and practices that emphasize the individual as bounded, unique, and independent. The higher levels of group cohesion may be due to the strong collectivist orientation of Filipinos. Regarding methodological implications, an advantage of the present study is that it is based on a relatively large and uniform sample with a sufficient response rate, which applies internationally recognized instruments with satisfactory psychometric properties, which strengthens the validity of the findings. Therefore, their findings should be generalizable to the wider population, as well as to research on the work environment and well-being in general (Radic et al., 2020).

It is clear, therefore, that the well-being of seafarers at sea is closely linked to safety as when seafarers are physically and mentally well, they are more likely to be sufficiently focused and effective in carrying out their duties and assessing risks. Good mental health and well-being affects the ability of seafarers to make quick and

effective decisions and respond to emergency situations or emergencies, but also promotes communication, mutual understanding and cooperation among crew members, thus helping to effectively deal with risks and safety issues. The well-being of seafarers affects the effectiveness of their training and their ability to apply the knowledge and skills they have acquired during their training in situations that require the safety of the crew and the ship. Thus, the well-being of seafarers on board is vital to the safety of the ship and its passengers, as it affects their ability to carry out their duties safely and effectively (McVeigh et al., 2018).

1.3.3. Retention and staff recruitment

Shipping companies and ports, like all organizations and especially service organizations, rely heavily on the performance of their employees. Effective human resource management has been positively linked to higher employee productivity and better financial results, as well as maintaining competitive advantage. Employee motivation is a key feature of effective human resource management. Motivation at work has attracted psychologists, economists and sociologists as they have tried to explain the direction of behavior and actions to improve the performance of organizations. Given the ability and opportunity, people will normally perform the task assigned to them. However, the level of effort they put in or the pace of their work can vary significantly depending on their level of motivation and this will affect the operation of the business in many ways (Abila et al., 2023).

Researchers have focused on a number of factors to explain variations in employee motivation, ranging from innate needs and cognitive processes to extrinsic and environmental influences. People may be motivated to act in a particular manner in an attempt to satisfy unsatisfied, innate needs, which are ranked on an ascending scale- that is, physiological needs, safety needs, social needs, esteem needs, and self-actualization needs. According to Larsen et al. (2012), a business environment, lower-order needs are usually satisfied by pay (physiological needs), safe working conditions, medical insurance, job security, pension, and programs (security needs). Higher order needs correspond to the most psychological human aspects and are therefore usually satisfied within the individual, but can also be helped by the actions of the business, for example by encouraging the development of formal and informal

group structures (social needs), by using social recognition, job feedback, promotions, titles and other symbolic gestures to reinforce self-esteem needs, and by nurturing and providing opportunities for the growth and creativity of employees, with demanding jobs, for example the utilization of their full potential (self-actualization needs). Behavior is dictated by conscious expectations that specific actions will lead to specific, desired outcomes (Ariza-Montes et al., 2021).

When effort-performance and performance-reward relationships are strong and when financial and non-financial rewards satisfy employees, then staff will be motivated. The key to motivation is understanding the wants and needs of individuals and the link between effort and performance, performance and rewards, and finally between rewards and individual satisfaction (Larsen et al., 2012). Because these drive human behavior, managers can also attempt to instill in their staff the need for achievement, the need for power, and the need for affiliation. Employee achievement training programs have been effective in raising employees' motivation and need for success, enabling them to think and behave in ways that result in high performance. The need for achievement has been linked to successful entrepreneurial activity. People's personal goals and objectives, as well as a sense of fair or equal reward for effort have also been considered to play an important role in determining behavior in terms of motivation (Abila et al., 2023).

It is important for the leadership of a shipping company, and by extension a ship, to be able to create a positive atmosphere for the crew members and the entire staff of the organisation. This means establishing a fair working environment, maintaining positive interpersonal working relationships, providing adequate supervision and setting the goal of employee satisfaction and well-being. Employee motivation and satisfaction can be influenced by factors such as job duties, workload, opportunities for personal growth and development, recognition of effort, cooperation of leadership, productive communication, taking responsibility and positive interpersonal relationships (Abila et al, 2023). According to Zhao et al. (2020), it has been found that the range of skills, task format, the importance of a task, autonomy and feedback from management, when combined, form a sense of internal reward in employees and increase motivation. This is because they help employees experience the meaning and responsibility of their work and realize the progress they make in it (Zhao et al., 2020).

Warr (2002) produced an expanded list of job characteristics that are related to critical psychological states of employees and that can serve as predictor variables for job satisfaction. The ten most important such features are as follows:

- Autonomy, related to discretion and the absence of close supervision
- Opportunity to utilize skills
- Externally generated goals, related to work and task demands, workload, role demands and conflicts
- Variety of tasks and skills
- Environmental clarity, which is related to role clarity, job security, feedback
- Availability of money related to both income level and financial resources
- Physical safety, which concerns good working conditions, safety at work
- Supportive supervision / Effective leadership
- Opportunity for interpersonal contacts
- Wider social status, for example employment status

A variety of work-related variables have been examined in the motivation literature, highlighting the interplay between extrinsic motivators such as pay that enables the individual to obtain valued outcomes and intrinsic motivators such as the satisfaction derived from the experience of successful performance of the activity. Other work factors that have been found to be important in motivating employees include: the effect of performance control systems on motivational techniques, the role of quality work relationships and fair contract terms (Rose and Manley, 2010), the commitment of the organization to the employee and the commitment of the employee to the organization, as well as the effect of other relationships such as for example with the supervisor and the work attitudes of employees such as the degree of competitiveness (Murphy, 2004).

Chapter 2nd: Corporate Social Responsibility

2.1. Conceptualization of CSR

Corporate Social Responsibility (CSR) focuses on all the company's business activities and their impact on the economy, society, and the environment in the context of sustainable development. It is aimed at adopting an approach of value and benefit creation strategy for customers and stakeholders that also contributes to the reduction of the environmental footprint, sustainable development and the satisfaction of affected parties (Vadasi et al., 2021). The company's business operations and actions should reflect a sensitive attitude towards issues of public concern and project a 'model image' of the company that shows a good example to the outside world and mobilizes society positively towards the imperatives of sustainable development. The assumption of social responsibility by entrepreneurs involves the formulation of business strategy and policy, decision-making and the establishment of relevant practices in accordance with international commitments to sustainable development and the local code of values (Yuen et al., 2018).

CSR may also include charitable activities, but it is a strategy for managing the overall environmental and social aspects and impacts of business operations and its products and services. The company must address threats and opportunities for sustainable development under three main objectives: economic growth, ecological balance, and social progress. It is now possible to improve the quality and business results of our economic activities with a truly ethical motivation, i.e. only if we

choose to adopt ethical behaviour for business reasons thus promoting the diversification of the company's culture (Wang et al., 2020).

In globalization conditions, CSR objectives include:

1. Improving the quality of products and services
2. Direct response to customer needs and expectations and customer satisfaction
3. Improvement of corporate image and reputation among the transacting parties and the wider society.
4. Improvement of overall relations with the local community

The Enterprise 2020 program is a CSR Europe initiative that also supports the development of sustainable development in the field of entrepreneurship, provides the necessary assistance in optimizing and working with stakeholders or interested parties, and makes Europe's global leadership on CSR issues even stronger. These social guidelines refer to and address, among others, the challenges for new global governance, climate change, resource scarcity, demographic change, social discrimination and segregation inequalities, gender equality at work and, in general, sustainable development globally and locally. The stakeholder identification approach is the essential tool for understanding the structure and dimensions of the relationship between business and society. This answers the question: To whom should the business be accountable (Wang et al., 2020).

The basic idea is that an organization's long-term success depends on how it manages its relationships with key stakeholders such as customers, suppliers, communities, owners and shareholders, politicians and opinion leaders and others who shape the operating context and can exert influence on the organization's ability to achieve its objectives. Corporate Social Responsibility is the firm's chosen strategy that is aimed at the future of society (Siew, 2015).

According to the above, CSR includes issues related to the long-term success of the company in the three dimensions: economic, environmental/ecological and social. Regarding the legitimacy of business operations, it can be concluded that CSR is an outgrowth of social expectations, as defined by the will of business leaders and innovative businesses. In this way, businesses gain social acceptance and 'legitimacy'

to operate in accordance with the various legal regulations they claim. The legitimacy model concentrates more on compliance than on innovation. The details of what is legalized echo the various social expectations of entrepreneurs at the sector, country, domain level at a given time (Rashid, 2018).

Carroll (2000) proposed a definition of CSR by suggesting that companies have four conditions that companies must carry out in order to be successful members of society:

- economic, fiscal self-sufficiency and profitability
- legal, compliance with legal and regulatory obligations
- ethical, ethical conduct in accordance with the values of the local community
- charitable, offering assistance to vulnerable groups in society

For Khan (2010), there are three forms of CSR: ethical, altruistic and strategic. Khan (2010) is a proponent of CSR in terms of its positive view. He asserts that the concept of CSR is somewhat complex, with vague boundaries and possess debatable legitimacy. On the contrary, he disagrees that it should be mandatory for businesses. It also concerns the legitimacy of altruistic CSR. Finally, it supports the idea that companies should aim to limit the philanthropic character in their strategy. Carroll (2000) asserts that it would be misleading to define CSR as an entirely voluntary approach, as a company's responsibilities to society also include its legal obligations.

Ethics and CSR are essential in nature and help the company to avoid social accidents even if the company does not benefit financially directly by acting in accordance with ethical requirements. The humanitarian or altruistic approach of CSR envisions companies preventing a disaster, thus acting actively, rather than only acting 'therapeutically' after it has occurred. CSR is contained within a noble framework that promotes virtue. However, it is considered to be outside of the company's activities, which is why the concept is less frequently encountered (Ramadhini et al., 2020).

CSR strategy for business purposes, as opposed to humanitarian or altruistic strategy above, seeks to create mutually beneficial relationships with stakeholders (win-win condition) for business profit purposes, operating in a socially and ethically responsible manner. According to Parviainen et al. (2018), the business rationale for

CSR is best summarized in the definition of the concept of shared value creation. Robert Owen, in the early 19th century, established rules on maximum working hours, banned child labour and highlighted the business and social benefits of the CSR approach. CSR does not directly contribute to wealth creation. It is argued that if entrepreneurs focus on the profit-making perspective of the firm, where paying taxes, employing workers properly and providing goods and services that fully meet customer satisfaction are observed, maximum social benefits for society in general result (Syriopoulos and Tsatsaronis, 2011).

2.1.1 The Three Pillars of CSR

Corporate Social Responsibility as mentioned above is a strategy for long-term success which covers issues relating to labor relations, health, safety and well-being at work, human rights, corporate and environmental ethics, social responsibility and corporate ethics. Social responsibility issues are directly linked and interdependent with sustainable development, and through CSR, companies are called upon to integrate practices into their strategy with the aim of ensuring harmonious relations with society, the economy and the wider social and natural environment. Lastly, through these indicators, the company can be able to increase its profits and measure its operational success (Esa and Mohd Ghazali, 2012).

From the above we can conclude that CSR has three dimensions - economic, environmental and social - which it will be examined in detail below (Giannakopoulou et al., 2016):

Economic Dimension - It refers mainly to reducing the complexity of business operations, undertaking socially responsible investments, adopting practices and taking measures to fight corruption, bureaucracy and bribery, reducing corporate costs and business costs, while improving the quality of products and services provided. The company following the CSR strategy rationalizes costs, improves business results, maximizes profits in business flows, and becomes more competitive.

Environmental Dimension - The environmental dimension focuses on the adoption of measures to protect the environment, ecosystems and, life in them and to maintain natural resources in as good a condition as possible and to ensure as little damage as possible from the operation of the business. Indicatively, it concerns efforts to reduce

pollutants and waste, the use of new innovative technologies and environmentally friendly innovations, the encouragement of investment in the environment, reduced production and distribution costs throughout the life cycle of the product and increased product knowledge, as well as the communication of the above environmental policies.

Social Dimension - Respect for human life, ensuring equality and equal treatment of employees regardless of gender, age and sexual orientation. Every business is a part of human society, operating and developing in it. The production process, the provision of services, the creation of new jobs, and, by extension, the distribution of income and additional tax collection. As it creates jobs, every business has a direct influence on labor issues, insurance to reduce workplace accidents, and a focus on implementing measures to safeguard these.

2.2. Benefits of CSR

Enterprises that adopt socially responsible practices, adapted to the demands arising from the new economic and social conditions, gain benefits both in terms of their overall productivity and in terms of their reputation and image and their ultimate financial performance (Giannakopoulou et al., 2016). More specifically, the benefits and comparative advantages of companies adopting CSR strategies are (Ramadhini et al., 2020):

- Satisfied and more productive human resources.
- Improved corporate image, reputation, and reputation of the company's customers.
- Better response to the needs of customer-consumers.
- Improved quality of products and services.
- Positive public opinion through the improvement of corporate image.
- Improvement and reorganization of relations between the company and stakeholders in the local area.
- Recognition of diversity and equal opportunities, as well as systematic and two-way communication between management and employees.

- Maintaining and continuously improving the health and safety conditions at work and the quality of workplaces.
- The rational management of natural resources and systematic efforts to save them.

This can ultimately lead to competitive advantages for a company, as it safeguards it in the event of a sudden market crisis and contributes to attracting and retaining customers and to the long-term retention of employees. Companies that incorporate corporate responsibility as an integral part of their daily business practice are able to anticipate and confront a multitude of social and environmental issues that may have a positive influence on their competitive character, resulting in improved social, economic and environmental performance over time (Ramadhini et al., 2020).

It is also particularly important to note that caring for human resources is one of the essential areas of application of CSR. First of all, it contributes to the creation and cultivation of good working relations, which is one of the necessary conditions if the aim is to develop the company itself, while at the same time it is a pillar for the cultivation and development of the creativity and other abilities, skills and aptitudes of employees. In this way, a company that incorporates socially responsible practices fosters in its employees the perception that they are not just participating in a faceless function, but that they are contributing to an effort in which the whole team is involved and that they are being rewarded deservedly and proportionately for their share of the contribution (Esa and Mohd Ghazali, 2012).

2.3. CSR in maritime management

In the shipping industry, CSR standards and disclosure needs are constantly adapted due to periodic amendments, changes or new regulations. There are many concerns at this level because there is no single and stable regulatory framework for the sector, despite its specificities (Lund-Thomsen et al., 2016). Moreover, disclosure is on a voluntary basis. The global shipping industry is a 'global society' with its 'members' (shipping companies) having different internal/external settings, strategies, visions and objectives. The point is that shipping companies are 'sailing in the same waters' of global shipping, so it would be particularly important not only to raise awareness but also to publicize sustainability-related issues in order to ensure a better future at the social-environmental level, to add value to the chain that connects global

transport and, first and foremost, internally to the business itself (Lu and Abeysekera, 2014).

2.3.1 Incentives and behaviour of the shipping industry towards CSR

Companies are mainly interested in gaining legitimacy through engagement in corporate responsibility, rather than in actually adopting the concept of sustainability (Siew, 2015; Yuen et al., 2018). In the research of Syriopoulos and Tsatsaronis (2012), the person who operated these issues and activities was the owner. The main motivations that make the shipping industry to adopt CSR management are: moral obligation, sustainability of the company, appreciation among the industry and "permission" to be able to operate.

The purpose of Small and Medium Enterprises (SMEs) to implement CSR, targeting the community, employees, shareholders, is to be categorized as either "right" or "leading" companies. Finally, in terms of shareholders, shipping SMEs focus their attention on the "moral duty to society" (Fjørtoft et al., 2020). Some of the key points were as follows (Zhou et al., 2019):

- CSR was mainly linked to health and safety, which is based on more recent research. This is followed by codes for environmental activities.
- Companies that had incorporated CSR practices had not established any CSR department.
- The company types according to their behaviour were classified as opposing, formal or supportive towards CSR.
- They did not associate CSR with increasing productivity or improving relationships with customers and investors.
- Finally, the shipowner had a dual role. He was not only making strategic but also operational decisions. There was no 'person' or 'committee' that aligned its actions with CSR principles.

Charterers are the people who are responsible for a significant role. The literature indicates that shippers as 'customers' are in favor of CSR practices. Socially responsible shippers tend to be loyal, willing to buy (Yuen et al., 2018). Therefore, it

is suggested that more resources should be invested to promote CSR in the shipping industry, so that shippers can be positively influenced and this will result in good performance of the shipping company (Yuen et al., 2018).

2.3.2. Recent Trends in Social Responsibility

In recent years, awareness of the social responsibility of organizations has increased significantly. Along with globalization, the expansion of technological equipment and accessibility to the latter has contributed to individuals and organizations around the world gaining easy access to the decisions and activities of organizations, even in remote locations. Based on the above, it provides an innovative way in terms of gaining a new perspective in terms of problem solving. This means that the decisions and activities of organizations, before they are seen the light of day, are rigorously scrutinized by a wide range of groups and stakeholders (Vadasi et al., 2021).

Policies or practices implemented by organizations in different regions are developed globally. This global nature of certain environmental and health concerns, the rising living standards and cultivation of people, the recognition of global responsibility to combat cultural and social poverty, increasing financial and economic interdependence ,the phenomenon of urbanization (Siew, 2015). Value chains mean that issues related to an organization can extend far beyond those that exist in the organization immediate area in which the organization is located. It is essential for organizations to address social responsibility regardless of social or economic circumstances.

Through the Rio Convention (1994) on Environment and Development, the Johannesburg Declaration on Sustainable Development (2002), the establishment of the Geneva-based World Commission on Environment and Development (1983), the Millennium Development Goals and the ILO Declaration on Fundamental Principles and Rights at Work highlight this urgent need for change (Garcia et al., 2016).

In recent decades, globalization has resulted in an increase in the impact of different types of organizations - including those in the private sector, NGOs and government - on communities and the environment (Vadasi et al., 2021). The World Commission on Environment and Development (WCED) defined this development in

an oft-cited report as meeting 'the needs of the present without compromising the ability of future generations to meet their own needs' (Vadasi et al., 2021). This definition highlights two key concepts:

- The concept of 'needs', particularly when studying the developing and poor countries of the world, and
- The concept of 'constraints' imposed on the ability of the environment to meet current and future needs.

NGOs and corporations have greatly expanded their activities, usually working with each other and usually with government, particularly in still developing countries where governments have faced serious health and education challenges and constraints and have been unable to cope. As the administrative capacity of country governments expands, the responsibilities of government and private sector organizations continue to change (Garcia et al., 2016).

In times of economic and social crisis, organizations should seek to maintain the coexistence of their social responsibility-related activities. Such crises have significant impacts on more vulnerable groups, and therefore indicate a greater need for increased social responsibility. They also provide additional opportunities for social inclusion, economic and environmental considerations in policy reform and organizational decisions and activities. Government has a critical role to play in realizing these opportunities (Jamil et al., 2021).

Consumers, customers, donors, investors and owners exert, in various ways, economic influence organizations in relation to social responsibility. Society's expectations of the influence of these organizations continue to evolve. There has also been an increase from EU legislation on the right to knowledge in many places to providing people with access to detailed information about the decisions and activities of organizations. A growing number of organizations are collaborating with their stakeholders about meeting a variety of their needs, as well as for information about the performance of the organization. These and other factors provide the basis for social responsibility and contribute to the desire for organizations to demonstrate their social responsibility (Lister et al., 2015).

Chapter 3rd: ESG principles in maritime policy

3.1. The Role of ESG Principles in Shipping Operations

ESG reporting in the maritime sector addresses issues such as recycling, greenhouse gas emissions, other air pollutants, ecological impacts, business ethics, worker health and safety, and accident and safety management, just like it does in other sectors. Sustainability reports and ESG reports seek to assess the performance of metrics related to all three areas that are significant to the business's operations. The reporting satisfies stakeholder requests for openness regarding corporate responsibility matters. Additionally, it informs that the business has plans, policies, and initiatives to control the opportunities and risks related to ESG (Nommela et al., 2022).

A significant part of the local and regional logistics and transportation network, the maritime industry is a vital component of both the economy and the lives of people (Fratila et al., 2021; Zaucha and Matczak, 2018). In the European Union (EU), the blue economy—which includes maritime renewable energy, ports, shipbuilding and repair, maritime transportation, and coastal tourism—contributed 2.3% of employment and 1.5% of gross value added to the EU's economy in 2019 (European Commission, 2022). Because the maritime industry generates renewable energy, promotes tourism, offers transportation options, and supplies resources, maritime countries depend heavily on the growth of this industry (Fratila et al., 2021). The sector primarily affects people's employment and material well-being, how communities identify themselves, and how local individuals are affected by changes in the environment (MMO, 2014).

To preserve the environment, promote social satisfaction, and foster economic prosperity, a deeper understanding of the effects of the maritime sector on regional sustainable development and other sectoral activities is necessary. By altering the conventional methods of sectoral policy-making and dilemmas and bringing national policies to the forefront of global objectives, this strategy can create new opportunities for sustainable growth. Currently, the maritime industry, which is crucial to the nation's economic growth, is frequently subjected to the same consideration when policy is implemented. However, the maritime industry transcends sectoral lines in a maritime nation and must be taken into account for all national strategic objectives (Kronfeld-Goharani, 2018).

At all levels of governance, a number of international sustainable strategies, objectives, and standards have been agreed to promote sustainable development. To evaluate the success of these agreements, local businesses and stakeholders must report on their sustainability progress. Globally operating businesses, such as those in the maritime industry, frequently struggle to select and implement appropriate reporting standards and sustainable management protocols. Strong cooperation between all major stakeholders and support from local governmental institutions are required to achieve the internationally agreed-upon goals, gain economic growth, and maintain ecosystem services, a healthy environment, and a healthy society (Masuda et al., 2022).

Members of the UN have committed to pursuing coherent policies for sustainable development with the aim of attaining the SDGs, which are the focus of achieving Agenda 2030 (United Nations, 2015). The 17 SDGs, with 169 associated objectives, set high expectations for all business sectors, including the maritime sector. The responsibility of the maritime sector is primarily seen in SDG 14 “Life below water”, but the development of the maritime sector is highly relevant to all other SDGs, for example (Wang et al., 2020):

1. Reducing pollution associated with maritime activities
2. Reducing waste disposal and dumping at sea.
3. Ensuring that workers, including seafarers, have a supportive and healthy work environment
4. Reducing emissions from the maritime and shipping sectors

5. Ensuring maritime enterprises are safe, secure, and environmentally friendly.

A variety of sustainability reporting frameworks, standards, and guidelines are employed to assess the progress of sustainable development. The most widely used are various national standards, the Global Reporting Initiative Standards, the SDGs and guidelines of the United Nations, the recommendations of the Task Force on Climate-related Financial Disclosures, the International Labor Organization guidelines, the Organization for Economic Cooperation and Development (OECD) guidelines, etc., according to the European Financial Reporting Advisory Group. Since (EFRAG, 2021) 2030 was adopted, the EU has given a lot of attention to sustainability-related non-financial statement reporting a lot. The European Commission (EC) established comprehensive guidelines for non-financial reporting in order to enhance transparency and enhance the transparency of environmental, social, and governance data provided by enterprises across all industries. A non-financial statement had to be included in the annual management report of large companies and large groups of companies (reporting on a consolidated basis) representing public-interest entities with an average of 500 employees during the financial year. This statement contained the barest minimum of details regarding the company's growth, performance, and standing as well as the effects of its actions on social, environmental, and employee issues as well as respect for human rights, anti-corruption, and bribery issues. The European Commission (EC) suggested that businesses utilize national, union-based, or international frameworks to report data (European Parliament, 2014).

3.2. Integrating ESG Strategies for Sustainable Maritime Practices

In their early years of operation, cargo ships were required to have waste management systems. However, there has been an increase in the number of regulations on this issue due to environmental concerns. With the shipping industry constantly expanding, port authorities are imposing rules that go beyond mandates in response to threats to the environment and public health (Wu et al., 2020).

Discharge of pollutants from ships has been associated with health issues and various socioeconomic issues. These include a decrease in cancer deaths, marine litter

contamination, and a decrease in fish populations (Bowes, 2019). However, the obstacles that ship crews face in complying with environmental protection guidelines are often overlooked due to their role in promoting sustainability in the transport sector.

In examining how seafarers handle waste types such as garbage, sewage, ballast, and oily waste on board ships, the focus is mainly on their methods of managing such waste. In addition, their initiatives to minimize air pollution are examined. The MARPOL Convention adopted by the IMO on 2 November 1973 was a result of efforts to regulate ocean pollution. This global agreement covers a variety of different aspects of pollution such as oil spills, hazardous chemicals, waste disposal, sewage treatment, and air emissions. There are also increasing demands from businesses, organizations, and individuals to support sustainability in shipping activities as they seek shipping activities to protect the environment (Narula, 2014).

The increased awareness gained by the implementation of environmental protection obligations at both international levels has led to an understanding of the ecological impacts associated with shipping activities. This awareness is widespread at both national and global levels. As a result of compliance with these regulations, there has been a reduction in accidents over the past decade (Vejvar et al., 2020). Ship managers have set specific guidelines for crew members to ensure that they comply with the standards and thus avoid any penalties (Ducruet, 2017).

Despite the challenges and difficulties that beset the seafaring profession, there are still seafarers who are committed to reducing their environmental footprint (Mohagheghi et al., 2017). According to the study by Yuen et al. (2017), a seafaring officer from the Philippines emphasized the importance of the term thought and warned of the consequences of environmental neglect for future generations. In addition, many people in this field have proposed concepts such as time and ecological balance as drivers behind environmental conservation (Yuen et al., 2017). The way seafarers operate on board and manage marine pollution is directly linked to the way they operate on land, with regard to environmental issues. People who are environmentally conscious and interested in recycling follow the same regulations on board (Jepsen et al., 2015).

Despite efforts to reduce ship emissions by using fuels from accredited suppliers, crew members have expressed concerns about damage or performance issues caused by them. Addressing these concerns is crucial, as they could lead to increased fuel consumption and emissions. To minimize risks, bunkers are tested for chemical contamination before use to ensure they come from certified suppliers. Regular maintenance of engine components such as fuel pumps and injection systems was essential to meet nitrous oxide emission regulations enforced by International Air Pollution Prevention (IAPP) (Buniamin et al., 2015). The disposal of waste generated on company vessels was carefully managed by storing clean and dirty water in tanks before being treated at a specialized wastewater facility. Following the regulations, the treated wastewater was transformed into liquid form and then discharged into the sea. By containing the waste in special tanks within the ship's machinery areas, such as sludge holding tanks and bilge tanks, the ship remains compatible with MARPOL regulations (Carotenuto et al., 2013).

Crew members are responsible for conservation efforts that require dedication and hard work. Many individuals believe that these initiatives will guarantee a future for their families and the environment. However, there is no doubt about the practical implementation of these measures. Seafarers may be concerned about penalties and legal consequences if they breach environmental protection regulations. Having experience in the industry may make it difficult for seafarers to comprehend the consequences of their actions on board. Burnout is not a significant issue in shipping, and certain friendly gestures can contribute to burnout. In addition, regulations in Northern Europe and California require ship crews to change fuel when entering water zones. However, this process is complicated as it involves estimating fuel consumption during their breaks (Acciaro, 2012).

When using low-sulphur fuel, ship's crew members experience difficulties such as dealing with supply and storage challenges for ships with single-service tanks. In addition, the crew must manage fuel types that can lead to delays in fuel transition. In fact, mariners often encounter difficulties when implementing protocols on ships. Their concerns go beyond health risks and proper waste disposal. They also face pressures associated with adopting green practices. The unpredictable nature of inspections further enhances their abilities in fulfilling their duties despite training and support from employers (Alamouh et al., 2021).

Seafarers are also particularly concerned about the consequences of breaching regulations. This issue, combined with the pressures associated with adopting green behaviours, can lead to considerable mental stress among seafarers, particularly in areas where the rules are stricter. Although seafarers are aware of the importance of protecting the environment, they express dissatisfaction with the regulations imposed on the industry. They argue that such regulations are a burden compared to land-based companies that do not consistently adhere to friendly practices. Seafarers' concerns regarding the legality of the regulations echo the concerns of their supervisors who view pollution control measures as unachievable. It is important to examine how other regulated companies assess their compliance with the regulations, as the uneven distribution of requirements between sectors may negatively affect seafarers. It is necessary to ensure fairness in the industry and to ensure compliance with the regulations.

3.2.1. Energy saving in shipping

The shipping sector is part of the wider transport sector, which, according to available data, accounts for 16% of global emissions. The study shows that the shipping industry has an impact of 1.7%. However, with IMO requirements becoming increasingly stringent regarding the reduction of greenhouse gas emissions, shipping companies have already undertaken several actions to inform their investing public about the new policies they are implementing in order to bring their business practices even more in line with ESG principles, of which the environment and its protection is a fundamental component. In order to reduce shipping's impact on climate change, IMO has begun to consider technical and operational measures to improve the energy efficiency of ships. In 2011, IMO implemented amendments to MARPOL Annex VI to require technical and operational energy efficiency measures to reduce the amount of CO₂ emissions from international shipping (Dahalan et al., 2012).

The Energy Efficiency Design Index (EEDI) and the Ship Energy Efficiency Management Plan (SEEMP) were launched on 1 January 2013. These measures are the first global mandatory GHG-reduction regime for an international industry sector and have been promoting energy efficiency improvements across the global fleet for more than a decade. The use of energy-efficient technologies such as hull air

lubrication, wind assisted propulsion, waste heat recovery, etc. has led to the use of energy-efficient technologies such as hull air lubrication, wind assisted propulsion, waste heat recovery, etc.

3.3. Occupational health, safety and crew well-being

The institutional framework, which defines the policies on board the ship, also forms the basis for the well-being of the crew. The institutional framework that shapes the rules of health care, living conditions on board the ship and compliance with regulations such as the Maritime Labour Convention (MLC) are key factors and their enforcement directly affects the well-being of seafarers during a voyage. Such an institutional framework determines the observance of specific safety protocols, providing the necessary training and information to the crew. Such protocols contribute to the development of a climate of safety, limiting the risks and threats of unpleasant incidents during the voyage, and by extension create a climate of preparedness (Carotenuto et al., 2013). These protocols leverage modern methods, which are based on data and predictive analytics, such as data analytics techniques and tools (Andrei et al., 2020).

Furthermore, it is important to recognize that the changing regulatory environment has an important role in training and developing skills among employees. This includes training, simulations and scenario-based exercises to help seafarers navigate emergency situations effectively. To ensure the safety and well-being of crew members, it is important that they have the necessary knowledge and skills to respond quickly and effectively to emergency situations (Andrei et al., 2020).

In addition to preventing risks, these protocols contribute to training the crew to manage stress in conditions that are a burden on health (mental or physical). The focus is on managing mental health issues among seafarers, prioritizing strengthening safety measures, conducting safety audits, assessments and feedback mechanisms, to improve processes based on real-time information and lessons learned. By adopting an approach that promotes learning from accidents or, proactively, safety standards can be improved while ensuring seafarers' well-being (Baumler et al., 2021).

There is also a growing interest in projects aimed at strengthening cooperation in governance. In the shipping industry, industry associations and regulatory bodies

are working to establish safety standards, share practices and focus on seafarers' well-being. These collective efforts extend beyond company policies. As a result of this governance approach, a transformation is taking place in the way the maritime sector approaches safety (Baumler et al., 2021).

The protocols also address the treatment of crew, setting out wage scales, reasonable working hours and basic resources. These frameworks aim to improve the well-being of seafarers by protecting them from labour exploitation. Through the hierarchy of governance systems, they create relationships of trust and camaraderie among crew members. This enhances both their health and job satisfaction. Furthermore, there is a focus on transparency and accountability in the workplace. Effective communication and fair procedures help to alleviate stress among seafarers, ultimately enhancing their health. Governance is also involved in enforcing regulations, international standards and establishing requirements for working conditions and safety measures to ensure the rights and well-being of seafarers. The way governance is observed affects the accuracy of measurements related to seafarers' well-being (Dahalan et al., 2012; Alamoush et al., 2021).

3.4. Enhancing Crew Satisfaction with ESG-Focused Policies

In the knowledge economy era, industry and academia have devoted considerable attention to the increasing role that human capital plays in generating corporate value. There is a general concern about the subject of employee satisfaction. In the field of organizational behavior, employee satisfaction is generally considered to be the most important and often studied work attitude. According to their evaluation of their employment or work experiences, employees who are satisfied with their jobs are in a positive or pleasant emotional state (Zhang et al., 2024). This work-related sense of fulfillment encompasses both physical and mental components. It is negatively correlated with employees' desire to leave the company, as well as indicating how much employees' actual experiences match their expectations about the organization (Zhang et al., 2024). Workers who are unhappy with their jobs are more likely to exhibit a greater propensity to quit. On the other hand, the greater the degree of commitment between the organization and the employee, the less likely it is

that the employee will leave when they are dedicated and loyal to the organization and the organization offers more opportunities for personal growth (Ahmad et al., 2021).

These days, discussions about employee satisfaction center on the variables that affect it and the results that follow. On the one hand, the literature currently in publication examines variables including job type, pay, prospects for advancement, and interpersonal connections with coworkers that impact people's attitudes toward their jobs. The most widely recognized Two Factor Theory divides these into motivator factors and hygiene factors, which are factors that affect employee motivation. The argument is that the only things that can motivate workers over the long term are intrinsic rewards and factors relating to the nature of their jobs. Employee satisfaction and motivation are more likely to come from within when motivator factors are present, which enhances the job performance. Employee dissatisfaction may be due to the absence of hygienic factors, which are connected to working conditions and the external environment, but their presence does not always imply higher employee satisfaction and motivation at work (Zhang et al., 2024).

Empirical research currently exists generally supports the notion that high job satisfaction and positive employee sentiments are beneficial for improving corporate performance. There is a strong correlation between increased labor productivity efficiency and employee-friendly organizations on an internal level. Through the creation of competitive welfare benefits, these organizations encourage innovation (Ahmad et al., 2021), which enhances organizational performance and produces favorable business results. A company's investment efficiency can be impacted by variations in job satisfaction because high job satisfaction effectively reduces moral hazard and adverse selection issues caused by information asymmetry. Additionally, a company's long-term stock returns and shareholder returns are significantly impacted by higher employee satisfaction. It can reduce the cost of debt financing and increase the company's external financing conditions (Zhang et al., 2024).

ESG, a recently developed concept in corporate development, addresses the three fundamental aspects of the environment, society, and governance. It encourages a shift in corporate objectives from maximizing value to taking into account social and environmental as well as economic values (Zhang et al., 2024). According to Raimo et al. (2021), proactive ESG behavior eases corporate financing constraints by

demonstrating to the market the shipping company's commitment to sustainable development, winning investors and other stakeholders over with their financial support, and raising awareness of the issue. In addition, according to Ahmad et al. (2021), a strong ESG performance contributes to the formation of a working environment with strong internal controls that can effectively handle risks related to work-related information, daily crew life operations, and compliance in daily procedures, as well as risks related to transformation encountered in the sustainable development process (Zhang et al., 2024). According to Sun et al. (2024), by promoting better stakeholder relationships and providing access to a variety of external knowledge, resources, and funding to support technological innovation initiatives, corporate ESG behavior can effectively increase the overall productivity of a company's stakeholders. Also, according to Deng et al. (2023), ESG principles can be applied at the corporate level, measuring traditional financial forecasts/performance. Corporate practices of ESG principles can reduce inefficiency, reduce company issues, and reduce managerial opportunistic behavior (Zhang et al., 2024).

Employee satisfaction may be impacted by ESG practices, which are becoming more and more common in the current context of sustainable development in social and economic development. CSR efforts can be beneficial to employees from a social and environmental standpoint (Zhang et al., 2024). First, the concept of "Social Identity" can be utilized to explain the relationship between employee satisfaction and corporate compliance with environmental and social obligations. The self-image that individuals create of themselves based on the social categories they believe they belong is referred to as their social identity. Individuals choose and support behaviors in organizational behavior that are consistent with their social identity when they are aware of their membership in a particular social group and comprehend the feelings and values that accompany it. Positive employee evaluations and identification with the company are associated with this social identity. Employee loyalty and satisfaction rise when organizational identification increases and employees are more likely to support the organization's principles and practices. Employees who have pro-ESG attitudes are therefore more likely to identify and support corporate ESG behavior, which enhances their social identity within the company. Employee satisfaction is enhanced by this positive sentiment, which also

helps them actively support organizational norms and value objectives (Zhang et al., 2024).

The "Job Embeddedness" theory provides a theoretical perspective on corporate ESG behavior and employee satisfaction. The term "job embeddedness" refers to the combination of different economic, psychological, and social factors that limit workers within the confines of their current workplace and organization. Embeddedness theory states that employees' attachment and sense of belonging to the organization strengthen when they have multiple connections with people in the organization and community, perceive a good fit with the organization and community, and understand that leaving would result in significant losses (Chan et al., 2019). Offering employees the opportunity to participate in ESG activities makes them feel good about giving back to the community. It also enables them to build stronger relationships and be more compatible with the company, the community, and the environment. This platform enhances job compatibility and satisfaction by bringing organizational values into line with employees' personal values. In conclusion, studies suggest that stakeholders, including workers, are becoming more aware of a business's sustainable practices in the social and environmental sectors. In addition to enhancing a company's reputation, ESG initiatives also motivate staff members and enhance their sense of pride in the organization, which increases organization identification (Meng et al., 2023).

Chapter 4th: Methodology

4.1. Method

The research conducted was a primary quantitative survey. This research was decided because its purpose is to measure opinions and this measurement is done more effectively and more objectively with the quantitative method because it leaves any biases of the researcher out of the research. The purpose of the survey is to collect numerical data from a large sample in a short period of time. Finally, quantitative research does not require high costs (Creswell, 2016).

4.2. Research tool

The primary research instrument in quantitative research is the questionnaire. Therefore, the instrument of the present quantitative research is the questionnaire. The questionnaire is used to collect data by requesting each respondent to answer the same set of questions in the same manner. The questionnaire provides the following advantages: easy to create, freedom of expression to the respondent, standard methods of analyzing the material and it is less time consuming. The main drawback of the

questionnaire is the restriction it places on the respondent to answer in a particular manner (Creswell, 2016).

The present questionnaire consists of 2 parts (see annex). The first part is asked to gather information on the demographic characteristics of the sample (gender, age, class). The second part is asked to provide information regarding the understanding of ESG principles in the shipping industry by the sample respondents.

All the questions in the questionnaire are closed to keep the questionnaire short to complete and not to irritate the respondent. In particular, in the second part of the questionnaire, respondents are asked to answer, according to their level of agreement, on a five-point Likert-type scale: 1=Very poor to 5=Excellent.

4.3. Research sample

In convenience sampling (non-randomly selected sample - non-probability sampling), as many people as are willing and available to participate in the survey are selected. Of course, it cannot be said that these individuals are representative of the population and hence the results of the present survey cannot be generalized to the entire population. (Farrokhi and Mahmoudi-Hamidabad, 2012; Creswell, 2016).

The sample of the quantitative research was 25 participants, employees of a shipping company. The selection of positions was random, from a big range, from ordinary crew to administrative.

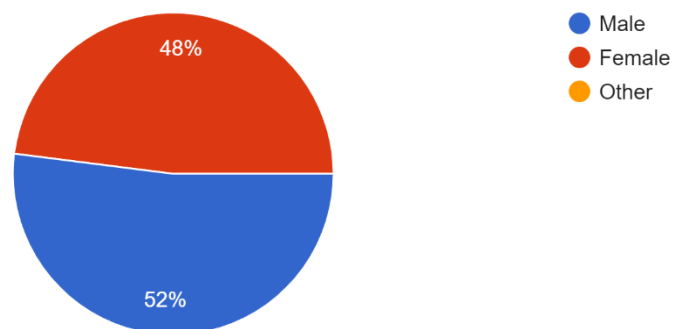
4.4. Research questions

1. Can the health and safety of a shipping company's workers and crew be improved through compliance with ESG principles?
2. How do the ESG principles affect the well-being of the shipping company's staff, as well as job satisfaction and performance?
3. Is sustainability in a shipping company's principles linked to the well-being of its staff?

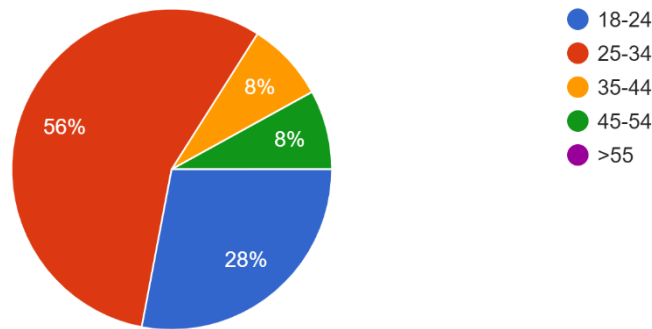
Chapter 5th: Results analysis

5.1. Results overview

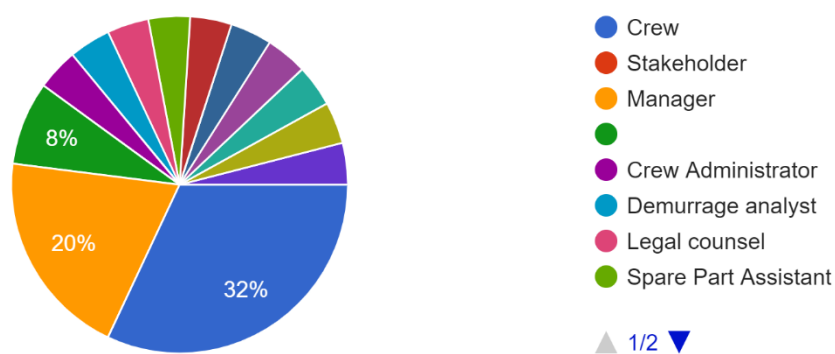
Of the respondents, the majority of the sample - with a slight difference - were men (52% men and 48% women). The almost equal distribution of the sample helps to obtain more global results, as it will not be a one-sided approach.



In terms of age, the sample population had a higher gradient. The majority of the sample belonged to the 25-34 age group (56%). In second place, the 18-24 age group came in second, at 28%. The remaining participants were evenly split, with 8% participation of people aged 35-44 and another 8% for the 45-54 age group.

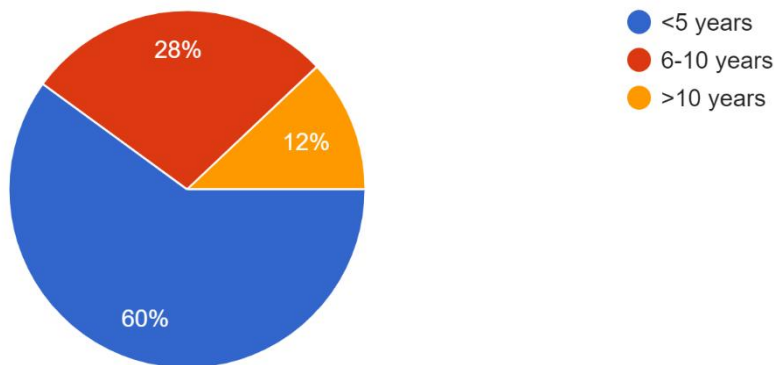


The sample is also highly diverse in terms of employment position in the shipping company, which benefits the results for a more global approach. 32% of the respondents belong to crew members of the shipping company. This is followed closely by 20% employed in management positions. An 8% concealed their job position and the remaining participants were divided into positions such as: crew administrator, analyst, legal counselor, spare part assistant, operator, accountant, officer, crew operator, accounting department in general and purchasing department.

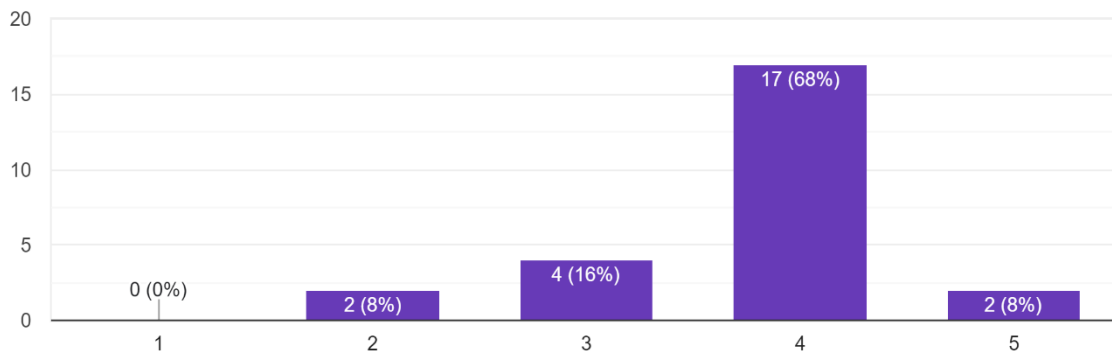


Regarding the work experience of the respondents, the majority of the sample and 60% have less than 5 years of work experience, which is logical considering the solar group to which the majority of the sample belongs. In second place and 28% of

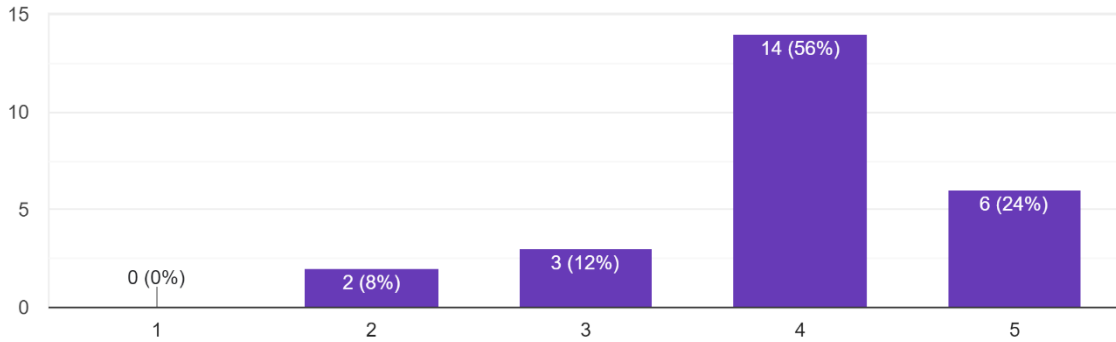
the respondents have 6-10 years of work experience and finally only 12% of the respondents have more than 10 years of experience.



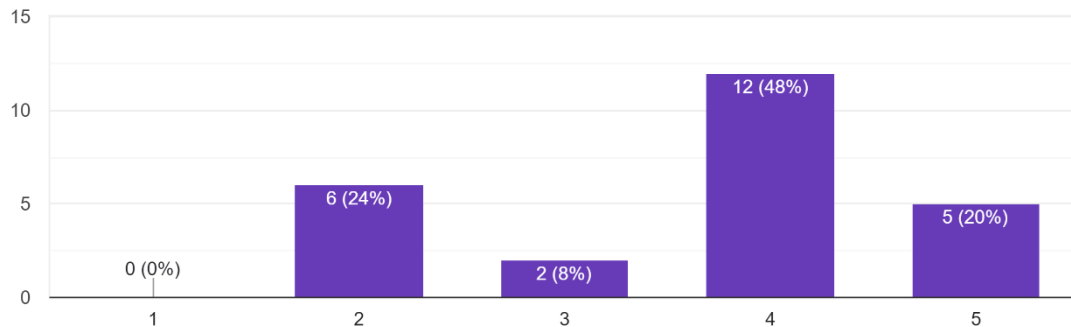
Moving to the main body of the questions and the question regarding the feeling left by the leadership and management of the organization, the majority of respondents, 68% of them are satisfied. Only 2 persons out of the total sample find the leadership and management of the organization unsatisfactory. 16% have a neutral feeling, while only 8% find it excellent. Responses were given on a Likert scale score, where 1=very poor to 5=excellent.



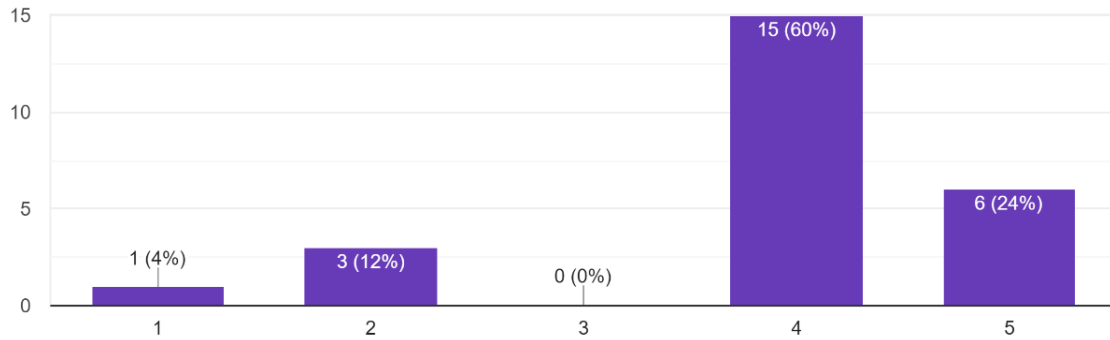
Regarding the image of the sample of respondents, regarding the climate in the shipping industry, the answers were as follows: the majority of the answers, 56%, find the climate very good. This is followed by 24% of respondents who find the climate of the shipping company excellent. Only 8% consider that there are shortcomings and 12% remain neutral. Responses were given on a Likert scale score, where 1=very poor to 5=excellent.



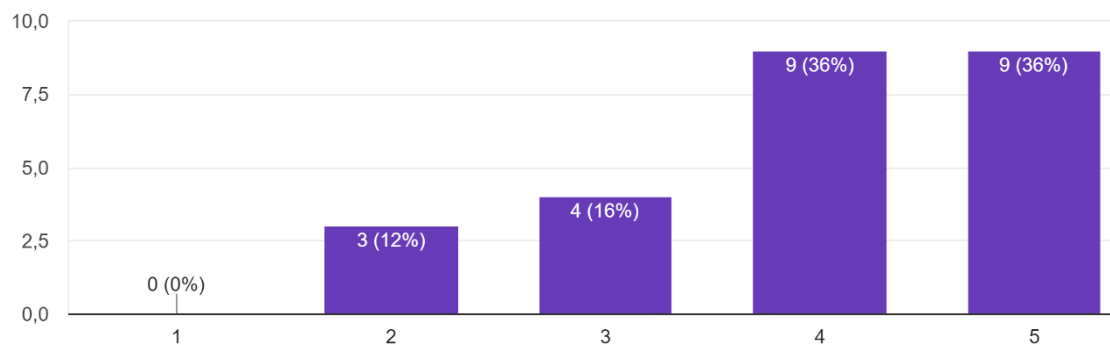
In the next question, the role of ESG principles in respondents' job satisfaction was assessed. The majority of the sample, 48%, find ESG principles important for job satisfaction. In fact, 20% consider them to be extremely important. In second place, at 24%, are respondents who do not find ESG principles important in terms of their job satisfaction. And finally, 8% maintain a neutral attitude. Responses were given on a Likert scale score, where 1=not at all to 5=very important.



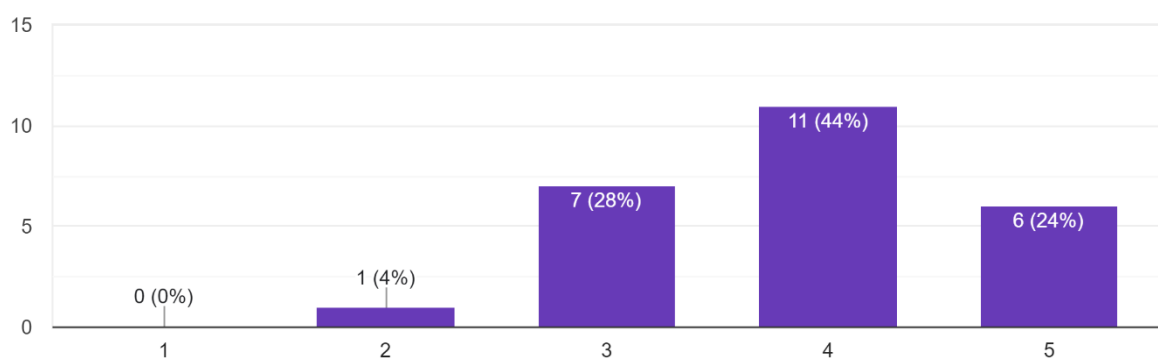
Regarding the extent to which the shipping industry applies the principles of sustainability and is interested in equitable and inclusive growth, employment and an integrated employment, the responses were as follows: the majority of the sample and 60% agree with this formulation. In fact, in second place, 24% of the sample is strongly in agreement. Only 16% of all respondents do not agree with this wording for the shipping company where they are employed.



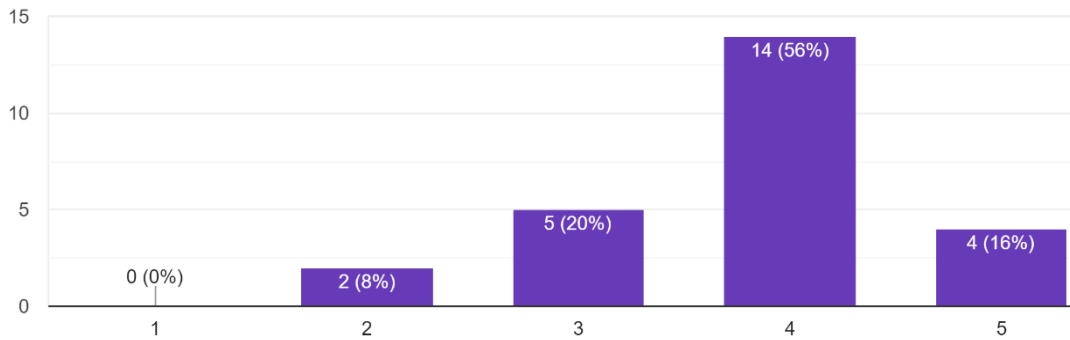
The next question looks at the extent to which the shipping company cares about the health and well-being of its staff. The percentages were excellent. A tie at 36% was for the answers "totally agree" and "agree". 16% of respondents remained neutral on the answer, while 12% disagreed with the statement that the shipping company they work for is concerned about the health and welfare of its staff.



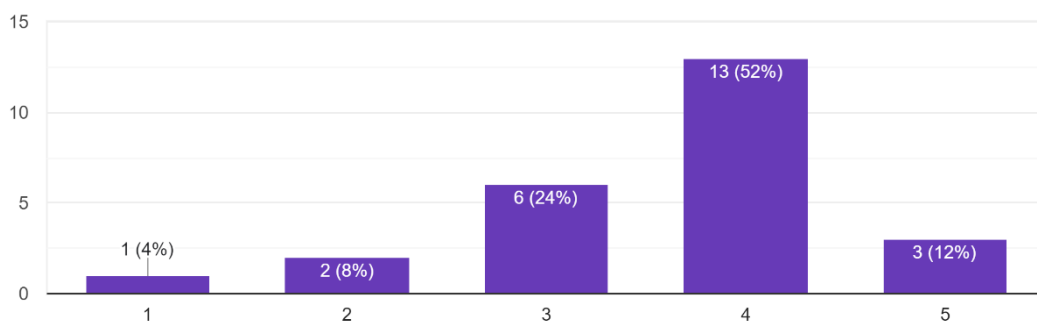
Here, the question concerned the extent to which the shipping company takes care of the smooth running of the working environment and the management of the workload. At 44%, the sample was in agreement with this formulation and indeed a 24% strongly agreed. 28% remained neutral in their opinion, while a 4% did not agree with this wording for the shipping company in which they are employed.



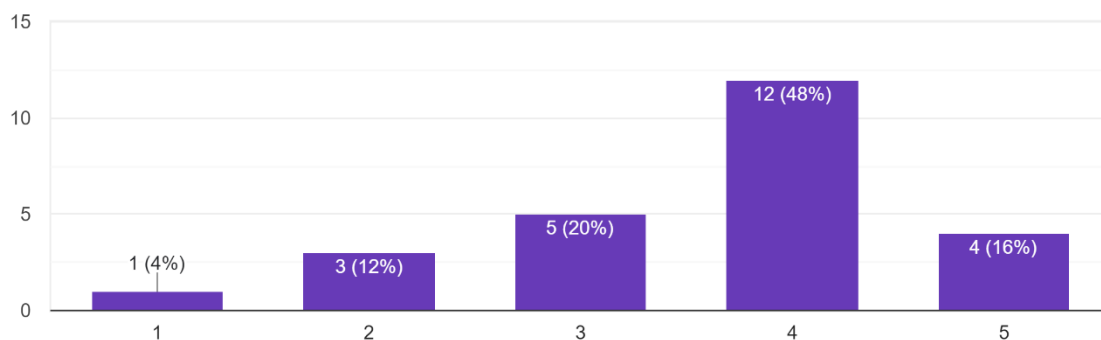
The next question raises the issue of adopting ocean sustainability strategies. The majority of the sample, 56%, agree with this formulation for the shipping company in which they are employed. In fact, 16% are highly in agreement. 20% have a neutral opinion and only 8% do not agree with this wording.



Regarding the issue of the climate crisis, the question asked for an assessment of the level of implementation by the shipping industry of practices to manage the climate crisis, such as energy saving. The majority of the sample, 52%, agreed that the company is implementing such strategies. 12% strongly agree. 24% of the respondents maintain a neutral opinion, while 3 participants disagree.



The penultimate question concerns the extent to which the shipping company contributes to the coexistence and sustainability of local communities. 48% agree with this formulation. In fact, 16% strongly agree. A total of 5 participants maintain a neutral opinion, while 4 participants disagree.



In the last question, two answers stood out, concerning the strategies of the shipping industry, which the respondents consider most important.

1. The company implements the "Typhoon Project" , which is a Project that aims to decontaminate the coasts and transport the waste collected to recycling or proper disposal structures.
2. Freedom for low level employees to take initiations and make suggestions for work related matters.

5.2. Discussion of the results

The majority of respondents in a survey expressed their appreciation for the leadership and management of their organization, with 68% feeling satisfied. They also found the shipping industry's climate to be very favorable, with 56% finding it excellent. ESG principles were found to be important for job satisfaction, with 48% valuing them. The shipping industry implemented sustainability principles, focusing on equitable and inclusive growth, employment, and integrated employment. The company was concerned about the health and well-being of its staff, ensuring the smooth functioning of the working environment and workload management.

The majority agreed to adopt ocean sustainability strategies, with 56% agreeing with this concept. The shipping industry was also surveyed on the level of implementation of measures to address the climate crisis, such as energy saving. The majority affirmed that the company is implementing such strategies, while 12% strongly affirmed.

The shipping industry contributed to the coexistence and sustainability of local communities, with 48% agreeing with this statement. The respondents considered two key strategies: the "Typhoon Project" to decontaminate coasts and transport waste collected to recycling or proper disposal structures, and the freedom for low-level employees to take initiatives and make suggestions for work-related matters. The shipping industry's commitment to sustainability and employee wellbeing is highly valued.

Chapter 6th: Discussion

6.1. Improving Seafarer Health, Safety and Wellbeing Through ESG Compliance

6.1.1. Equity and equality

The maritime industry's ESG performance is greatly impacted by the promotion of gender diversity and equality. Despite the progress, the industry remains male-dominated, with women accounting for only a small portion of the workforce. This lack of representation can lead to gender-based discrimination, harassment, and other issues that negatively impact social and governance (Acciaro, 2012). In this survey, it was found that the importance that employees attach to ESG principles is high, at least for the majority of the sample, in terms of job satisfaction. Equal treatment, anti-discrimination and a pleasant working environment contribute to job satisfaction.

In order to address this issue, companies and organizations in the maritime industry can promote gender diversity and equality in recruitment, career development, and implementation strategies to prevent and address gender-based discrimination (Buniamin & Ahmad, 2015). Additionally, companies can provide training and support to women, including mentoring programs and access to networks and resources. By promoting diversity, the maritime industry can create a more inclusive and welcoming workplace environment, improve social and governance performance, and attract and retain talented individuals, regardless of gender (Fjørtoft et al., 2020).

6.1.2. Environmental sustainability

One way for the shipping industry to promote sustainability principles is to reduce its carbon footprint by using sustainable fuels, focusing on investment plans for infrastructure, technology and regulatory frameworks. However, although zero-emission fuels are under consideration for use, their commercial availability is not yet feasible (Lu & Abeysekera, 2014).

Another important effort that shipping companies are making towards sustainability is the adoption of energy-saving practices. However, there is still a future for the shipping industry towards a global sustainable transformation. To

achieve fuel cost and emission reduction, operational efficiency can be maximized. Optimizing speed through improved communication with charterers and ports can improve energy efficiency. Accessible fuels at reasonable prices and supporting infrastructure are crucial for this transition, benefiting the environment, creating new business opportunities and promoting innovation (Parviainen et al., 2018).

6.1.3. Health and safety

According to the study by Onakpojeruo et al. (2023), the well-being of seafarers is influenced by factors of physical and mental health, readiness and self-confidence. In this direction, it is necessary to protect both the human and labor rights of the crew, but also to improve decisions regarding the well-being of their daily lives to their benefit. In this direction, institutional frameworks contribute, which promote crew well-being policies, emphasizing healthcare, living conditions on board and compliance with regulations that can prevent risks and adverse events, through the observance of safety protocols and appropriate training. Furthermore, according to the study by Sun et al. (2024), predictive techniques and data analysis are utilized to predict risks in a timely manner, with the aim of maintaining safety and taking preventive measures. Crew education and health support are now integrated into seafarer training programs, with a focus on stress coping mechanisms and health awareness. Efforts to implement these frameworks aim to prepare crews to manage work-related issues by providing tools and resources to address mental health issues. In addition, a culture that prioritizes safety enhancement is facilitated by safety audits, assessments, and feedback mechanisms (Sun et al., 2024).

The shipping industry is undergoing a transformation in its approach to governance, with industry associations and regulators working to establish safety standards, share practices, and prioritize seafarer well-being. This collective effort extends beyond company policies, creating a sense of shared responsibility and accountability. Governance protocols focus on safety regulations, training, proactive risk assessments, mental health support, and collaborative efforts across the industry (Sun et al., 2024; Vadasi et al., 2021).

Governance practices also focus on transparency and accountability in the workplace, ensuring effective communication and fair procedures, enforcing

regulations, international standards, and establishing working conditions and safety measures. Transparent reporting practices allow companies to be accountable and encourage improvements in crew well-being policies, fostering a culture of accountability and continuous development (Vadasi et al., 2021).

6.2. Navigating Challenges: ESG Implementation on Vessels

It is a major issue because, according to the literature, there is a "fragmentation" of the governance architecture in the environmental sector due to the multiplicity of standards. This is a problem that exacerbates rule making, implementation time and enforcement 'strength'. This contributes to either non-disclosure of ESG data, or disclosure with quantitative or qualitative limitations (Lister et al., 2015).

A major issue has been the very nature of ESG standards, implemented by relatively large companies. Small businesses due to lack of resources and short-termism did not comply. A further obstacle to ESG implementation was the very nature of the services provided by shipping companies and to whom they are addressed. The majority of the shipping industry addresses companies to provide them with the safe and timely transportation of their cargoes, with the ultimate aim of maximizing their profits, not to improve its reputation in society. In the early days of ESG, shipping companies viewed it as a "burden". Another problem was that the objective and the benefits that the whole sector derives from the implementation of ESG regulations are not widely understood. Following the above, it is clear that any issues in the rule-making process, or even a lack of perception of their importance, are factors that hinder adequate and quality disclosure of ESG issues (Lund et al., 2016).

6.3. The Future of Maritime Management: Balancing Profit and Crew Welfare

In the context of international maritime trade, crew welfare has consistently been an area that demands attention. Various factors come into play, some being inherent to the seafaring profession, while others are derived from operational and external elements imposed by trade policies and economic considerations. This part of the article aims to critically assess how crew welfare may deteriorate due to various

reasons such as a significant number of port calls, diversity in trading areas, intense bureaucracy onboard, multicultural disputes among crew members, challenges of inaccessible ports, constraints caused by volume and size of the ship, and finally limitations due to the age of the ship (Sun et al., 2024).

The crew's well-being on a ship is critical to ensure their health and happiness and the overall efficiency and safety of the voyage. It is in this context that a seafarer can play a pivotal role. Firstly, a seafarer, given their extensive knowledge of life at sea, can provide valuable suggestions to improve living and working conditions onboard. This could include recommending changes to accommodation facilities, recommending changes in food and recreation options, and advocating for other facilities to enhance the crew's living experience at sea (Onakpojeruo et al., 2023).

Communication with the ship operator is another area where a seafarer can contribute significantly. As the operator could be remote, the seafarer is a crucial link conveying the onboard real-time and actual situation. Therefore, through regular and constructive interactions, the seafarer can convey the crew's needs, concerns, and suggestions to the operator, which can greatly improve the crew's welfare. This bilateral understanding is essential, as it will motivate seafarers to align their actions with welfare policies on board, resulting in a harmonious and high-quality work environment (Wang et al., 2020).

The seafarer can assist in establishing crew welfare committees on board, serve as a representative to voice fellow crew members' concerns and contribute significantly to policy formation. Running regular feedback sessions ensuring that the policy is fair and covers all aspects of crew welfare - from psychological support to healthcare provision - are also some practices that can be instrumental in developing a conducive crew welfare environment (Wang et al., 2020).

Ship operators, who are responsible for managing vessels and ensuring operational efficiency, perceive crew welfare from a different angle. While they acknowledge the importance of seafarers' well-being, they often prioritize factors such as cost-effectiveness, regulation compliance, and risk management. Ship operators interpret crew welfare as providing the minimum requirements necessary to meet industry standards and avoid legal repercussions. However, progressive operators

acknowledge that investing in crew welfare can enhance performance, reduce turnover rates, and enhance overall safety (Wu et al., 2020).

The “Oil Companies International Marine Forum” (OCIMF) and the “Dry Bulk Management Standard” (DryBMS) play significant roles in establishing industry guidelines and standards. Both organizations consider crew welfare to be an integral component of their frameworks. OCIMF emphasizes the importance of providing seafarers with a secure and secure working environment, promoting mental health, and ensuring access to adequate resources and support systems. DryBMS focuses on enhancing the quality of life on board, fostering a positive workplace culture, and promoting seafarers' rights (Zhang et al., 2024).

The "Seafarers Happiness Index", an initiative that assesses the quality of seafarers, provides valuable insights into their perception of crew welfare. It examines various factors, such as workload, connectivity, shore leave, and access to welfare facilities. This index analyzes crew welfare by examining seafarers' level of satisfaction with these factors. The index aims to improve seafarers' overall happiness and quality of life by monitoring and addressing issues (Zhang et al., 2024).

The Port state controls, responsible for enforcing maritime regulations, view crew welfare as a crucial aspect of vessel inspections. They assess the compliance with international labour standards, ensuring that seafarers have adequate working and living conditions. Port state regulates the interpretation of crew welfare by examining factors such as crew certification, working hours, rest periods, and access to medical care. Their primary objective is to safeguard seafarers' rights and well-being while promoting a culture of compliance in the industry.

In conclusion, as much as stakeholders exploiting crew welfare for their various benefits is a cause for concern, it is relieved to a great extent by the efforts of stakeholders determined to uphold the real purpose of crew welfare. It's an ongoing battle of profit versus people - a battle that tests the moral integrity and integrity of those in the maritime industry. However, for every unscrupulous ship owner or for-profit organization seeking to exploit crew welfare to improve their bottom line, there are still individuals who are committed to the welfare of the seafarers. This distinction must be abolished as it would not only safeguard the interests of seafarers but will enhance the overall growth and development within the maritime industry. The future

of crew welfare hinges on collective will and action from all stakeholders to maintain a focus on the welfare of seafarers above all else.

Conclusions

In today's competitive international environment, of constant change and globalization, society demands tangible proof instead of a blind faith. Businesses now have to demonstrate that they are socially responsible and that they are promoting sustainable development. Companies that integrate ESG gain a significant competitive advantage. Various social pressures, as well as stricter regulations, have forced companies to change their behavior, establishing informal ethical rules and codes of conduct, trying to comply with the latter. The complexity of human thinking, however, often leads to new challenges that are far removed from the regulatory framework. However, society needs business, and the reverse is also true, as it is through the use of resources that a business becomes more powerful.

Furthermore, businesses have begun to comprehend and operate on the basis that ethical failure is inevitably linked to commercial failure as they need to operate in return to society. Furthermore, integrity must be established, with a company's private information protected and transparency prevailing to maintain their competitive advantage. In contrast, their disclosure can reduce the actual value of the inputs and outputs of that business, with the ultimate effect of defiling its ethics, as well as its commercial growth. At the same time, companies are aiming to continuously improve their social status in terms of public relations and image. Therefore, companies should employ an integrated plan that serves long-term needs and is part of the company's management strategy. Especially in a modern society facing an economic and moral crisis, any action that promotes and promotes the protection of the environment and cultural cohesion is considered valuable and necessary.

In shipping, ESG is an essential component due to the need to ensure compliance with international environmental regulations and international universality. Greek shipping is leading the way in implementing ESG measures, under pressure to comply with international standards. ESG and Greek Shipping are inextricably linked, with the latter complementing each other when the Greek economy needed or needed it, and with ESG significantly assisting its actions and operations in the public interest and environmental sustainability. What must be done in Greek shipping is to effectively address ESG issues, either in the internal

management of companies, the general coordination of the competent bodies, or in society.

This research highlights the interdependence between seafarers' safety and wellness at work. The physical and mental health of seafarers is directly affecting their efficiency and general wellbeing. In particular, the promotion of physical and mental wellbeing through appropriate methods such as counselling and exercise programs can reduce stress and enhance both the mental and physical safety of seafarers on board. Improved safety across the board, in turn, makes the working environment more enjoyable and productive.

In shore-based positions, the relationship between employee well-being and job satisfaction is close. The same is true in the maritime profession. When seafarers feel that their needs are taken into account and that the company cares about their health, their job satisfaction increases. This increased satisfaction enhances their performance and commitment to the job, thus reducing their intention to leave and increasing their retention in the workforce.

It is important to note that the good mental and physical well-being of seafarers has a positive impact on productivity, reduces accidents and achieves high levels of performance. Policies that promote well-being, such as providing opportunities for exercise, healthy diet, and adequate rest time, have a significant impact on seafarers' job satisfaction. Reduced fatigue and lower levels of stress enable seafarers to perform their duties more accurately and attentively and automatically promote levels of job satisfaction, which will contribute to their retention in the profession.

Taking a closer look, the motivation and resilience of seafarers are critical factors in keeping personnel at sea. Seafarers who feel supported and have access to preventative or mental health counselling are more likely to remain in the workplace. The establishment of a supportive environment that provides counselling, psychological support, and wellness programs can reduce the desire to leave and also contribute to attracting new seafarers. It is essential to meet the need for on-board recreational activities and psychological support. It has been particularly devoted to ways of enhancing mental, physical and social well-being, such as planning meetings on best practices for resilience, improving recreational and nutritional facilities and organizing on-board activities.

In conclusion, the human factor is one of the most significant factors in the shipping industry. The performance, safety, and efficiency of shipping operations depend on the individual's mental and physical well-being. Empowering and supporting seafarers can lead to increased performance and reduction in accidents, making the human factor crucial to the sustainability and growth of the shipping industry. By promoting the welfare of seafarers and implementing the above suggestions, it is possible to increase staff retention and enhance the overall functioning of the shipping industry. Taking care of seafarers' welfare is not only morally right but also business smart, as it leads to improved performance, increased safety and enhanced staff retention.

While concluding this research effort, it is important in relation to the importance of seafarers' ability to increase retention in the profession to highlight suggestions for future research. Future research could focus on the impact of ESG principles on seafarers' retention in the profession. After all, well-being and retention and commitment to work are interrelated.

References

1. Abila, S. S., Kitada, M., Malecosio, S., Tang, L. and Subong-Espina, R. (2023) 'Empowering Seafarers as Agents of Their Mental Health: The Role of Information and Communication Technology in Seafarers' Well-Being', *Inquiry*, vol. 60, Article 00469580231162752.
<https://doi.org/10.1177/00469580231162752>
2. Acciaro, M. (2012) 'Environmental social responsibility in shipping: Is it here to stay?', *The Quarterly Newsletter of the International Association of Maritime Economists*, vol. 32(1), pp. 27–30.
3. Ahmad, M. R. and Raja, R. (2021) 'Employee Job Satisfaction and Business Performance: The Mediating Role of Organizational Commitment', *Vis. J. Bus. Perspect.*, vol. 25, pp. 168–179.
4. Alamoush, A. S., Ballini, F. and Dalaklis, D. (2021) 'Port sustainable supply chain management framework: Contributing to the United Nations' sustainable development goals', *Maritime Technology and Research*, vol. 3(2), pp. 137–161.
5. Andrei, D. M., Grech, M. R., Griffin, M. and Neal, A. (2020) 'Assessing the determinants of safety culture in the maritime industry', *The International Journal of Maritime Engineering*, vol. 162(A4). doi: 10.3940/rina.2020.a4.620
6. Ariza-Montes, A., Radić, A., Fuentes, J. M. A., Han, H. and Law, R. (2021) 'Job quality and work engagement in the cruise industry', *Asia Pacific Journal of Tourism Research*, vol. 26(5), 469-487.
<https://doi.org/10.1080/10941665.2020.1866625>
7. Armstrong, M. (2009) *Armstrong's handbook of HRM practice*. 11th edition, Kogan Page, London, UK.
8. Baumler, R., Bhatia, B. S. and Kitada, M. (2021) 'Ship first: Seafarers' adjustment of records on work and rest hours', *Marine Policy*, vol. 130, Article 104186.
9. Bolt, E. E. T. and Lashley, C. (2015) 'All at sea: Insights into crew work experiences on a cruise liner', *Research in Hospitality Management*, vol. 5(1), p. 40. <https://doi.org/10.1080/22243534.2015.11828345>
10. Bowes, M. (2019) *Future trends in impact investing*.

11. Brooks, S. K., Dunn, R., Sage, C., Amlot, R., Greenberg, N. and Rubin, G. J. (2015) 'Risk and resilience factors affecting the psychological wellbeing of individuals deployed in humanitarian relief roles after a disaster', *J Ment Health*, vol. 24(6), pp. 385-413.
12. Buniamin, S., Nik, A. and Nik, N. (2015) 'An integrative perspective of environmental, social and governance (ESG) reporting: A conceptual paper', *International Conference on Accounting Studies (ICAS) 2015*, Aug 17-20, 2015, Thistle Johor Bahru Hotel, Johor, MALAYSIA.
13. Carotenuto, A., Fasanaro, A. M., Molino, I., Sibilio, F., Saturnino, A., Traini, E. and Amenta, F. (2013) 'The Psychological General Well-Being Index (PGWBI) for assessing stress of seafarers on board merchant ships', *Int. Maritime Health*, vol. 64(4), pp. 215-220. doi: 10.5603/imh.2013.0007.
14. Carroll, A. B. (2000) 'Corporate social responsibility: Evolution of a definitional construct', *Business Society*, vol. 38(3), pp. 268-295.
15. Chan, W. L., Ho, J. A., Sambasivan, M. and Ng, S. I. (2019) 'Antecedents and outcome of job embeddedness: Evidence from four and five-star hotels', *Int. J. Hosp. Manag.*, vol. 83, pp. 37-45. doi: 10.1016/J.IJHM.2019.04.011
16. Creswell, J. (2016) *Research in Education: Design, Conduct and Evaluation of Quantitative and Qualitative Research*. Translated by Kouvarakou, N., Ion, Athens.
17. Dahalan, W. A., Zainol, Z. A., Yaa'kub, N. I. and Kassim, N. M. (2012) 'Corporate social responsibility (CSR) from shipping companies in the straits of Malacca and Singapore', *International Journal of Business and Society*, vol. 13(2), pp. 197-208.
18. Deng, X., Li, W. and Ren, X. (2023) 'More sustainable, more productive: Evidence from ESG ratings and total factor productivity among listed Chinese firms', *Financ. Res. Lett.*, vol. 51, Article 103439.
19. Ducruet, C. (2017) 'Multilayer dynamics of complex spatial networks: The case of global maritime flows (1977–2008)', *Journal of Transport Geography*, vol. 60, pp. 47-58.
20. Estimo, E. T., García, E. S., Araya, Z. B., Flores, K. M., Estrabo, S. V. P. and Lacson, J. B. (2020) 'Millennial Seafarers as Today and Tomorrow's Generation of Marine Officers: Implications and Future Directions', *Journal*

- of Shipping and Ocean Engineering*, vol. 10, pp. 18-28.
<https://doi.org/10.17265/2159-5879/2020.02.002>
21. Esa, E. and Mohd Ghazali, N. A. (2012) ‘Corporate social responsibility and corporate governance in Malaysian government-linked companies’, *Corporate Governance*, vol. 12(3), pp. 292-305.
 22. European Commission. (2022) *The EU Blue Economy Report*. Publications Office of the European Union: Luxembourg. Available online: <https://op.europa.eu/en/publication-detail/-/publication/156eecbd-d7eb-11ec-a95f-01aa75ed71a1/languageen>.
 23. European Financial Reporting Advisory Group. (2021) *Current Non-Financial Reporting Formats and Practices, Appendix 4.6: Stream A6 Assessment Report*. Available online: https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FSiteAssets%2FEFRAG%2520PTF-NFRS_A6_FINAL.pdf
 24. Fairbrother, K. and Warn J. (2003) ‘Workplace dimensions, stress and job satisfaction’, *J. Managerial Psychol.*, vol. 18(1), pp. 8–21.
 25. Fetzner, M. G., Collimore, K. C., Carleton, R. N. and Asmundson, G. J. (2012) ‘Clarifying the relationship between AS dimensions and PTSD symptom clusters: are negative and positive affectivity theoretically relevant constructs?’, *Cognitive Behaviour Therapy*, vol. 41(1), pp. 15–25.
doi: 10.1080/16506073.2011.621971
 26. Fjørtoft, E. B., Flø Grimstad, M. S. and Glavee-Geo, R. (2020) ‘Motivations for CSR in the Norwegian maritime cluster: stakeholder perspectives and policy implications’, vol. 47(8), pp. 1010-1026.
 27. Fratila, A., Gavril, I. A., Nita, S. C. and Hrebenciuc, A. (2021) ‘The Importance of Maritime Transport for Economic Growth in the European Union: A Panel Data Analysis’, *Sustainability*, vol. 13(14), Article 7961.
<https://doi.org/10.3390/su13147961>
 28. Garcia, S., Cintra, Y., Ribeiro Torres, R. S. and Guasti Lima, F. (2016) ‘Corporate sustainability management: a proposed multi-criteria model to support balanced decision- making’, *Journal of Cleaner Production*, vol. 136(A), pp.181–196. doi: 10.1016/j.jclepro.2016.01.110

29. Giannakopoulou, E. N., Thalassinou, E. I. and Stamatopoulos, T. V. (2016) 'Corporate governance in shipping: an overview', *Maritime Policy & Management*, vol. 43(1), pp. 19-38.
30. Grech, M. (2016) 'Fatigue Risk Management: A Maritime Framework', *Int J Environ Res Public Health*, vol. 13(2), p. 175. <https://doi.org/10.3390/ijerph13020175>
31. ILO. (2019) *Maritime Labour Convention, as amended. Consolidated text established by the International Labour Ofce, including the Amendments of 2014 and 2016 to the Code of the Convention*, International Labour Organization, Geneva.
32. Jamil, A., Mohd Ghazali, N. A. and Puat Nelson, S. (2021) 'The influence of corporate governance structure on sustainability reporting in Malaysia', *Social Responsibility Journal*, vol. 17(8), pp. 1251-1278.
33. Jepsen, J. R., Zhao, Z. and van Leeuwen, W. M. A. (2015) 'Seafarer fatigue: a review of risk factors, consequences for seafarers' health and safety and options for mitigation', *International Maritime Health*, vol. 66(2), pp. 106-117.
34. Keyes, C. L. M., Hysom S. J. and Lupo, K. L. (2000) 'The positive organisation: leadership legitimacy, employee well-being and the bottom-line', *The Psychologist- Manager Journal*, vol. 4(2), pp. 143-153.
35. Khan, M. H. U. Z. (2010) 'The effect of corporate governance elements on corporate social responsibility (CSR) reporting: empirical evidence from private commercial banks of Bangladesh', *International Journal of Law and Management*, vol. 5(2), pp. 82-109. doi: 10.1108/17542431011029406
36. Kim, J. H. and Jang, S. N. (2016) 'The relationship between job stress, job satisfaction, and the symptom Checklist-90-revision (SCL-90-R) in marine officers on board', *J. Prevent. Med. Public Health*, vol. 49(6), pp. 376-385. doi: 10.3961/jpmph.16.046
37. Kronfeld-Goharani, U. (2018) 'Maritime economy: Insights on corporate visions and strategies towards sustainability', *Ocean Coast. Manag.*, vol. 165, pp. 126–140. <https://doi.org/10.1016/j.ocecoaman.2018.08.010>
38. Larsen, S., Marnburg, E. and Øgaard, T. (2012) 'Working onboard- Job perception, organizational commitment and job satisfaction in the cruise sector', *Tourism Management, Elsevier*, vol. 33(3), pp. 592-597.

<https://doi.org/10.1016/j.tourman.2011.06.014>

39. Lebert, F. and Antal, E. (2016) 'Reducing employment insecurity: further training and the role of the family context', *SAGE Open*, vol. 6(4), pp. 1-17.
40. Lister, J., Taudal, P. R. and Ponte, S. (2015) 'Orchestrating transnational environmental governance in maritime shipping', *Global Environmental Change*, vol. 34, pp. 185–195. doi: 10.1016/j.gloenvcha.2015.06.011
41. Lu, Y. and Abeysekera, I. (2014) 'Stakeholders' power, corporate characteristics, and social and environmental disclosure: Evidence from China', *Journal of Cleaner Production*, vol. 64(1), pp. 426-436.
<https://doi.org/10.1016/j.jclepro.2013.10.005>
42. Lund-Thomsen, P., Poulsen, R. T. and Ackrill, R. (2016) 'Corporate social responsibility in the international shipping industry: state-of-the-art, current challenges and future directions', *The Journal of Sustainable Mobility*, vol. 3(2), pp. 3-13. doi: 10.9774/GLEAF.2350.2016.de.00002
43. Marine Management Organisation. (2014) *Social Impacts and Interactions Between Marine Sectors; A Report Produced for the Marine Management Organisation*. MMO Project n. 1060, Marine Management Organisation, Newcastle, UK, 273.
44. Masuda, H., Kawakubo, S., Okitasari, M. and Morita, K. (2022) 'Exploring the role of local governments as intermediaries to facilitate partnerships for the Sustainable Development Goals', *Sustain. Cities Soc.*, vol. 82, Article 103883.
45. McVeigh, J., MacLachlan, M., Coyle, C. and Kavanagh, B. (2018) 'Perceptions of Well-Being, Resilience and Stress Amongst a Sample of Merchant Seafarers and Superintendents', *Maritime Studies*, vol. 18(1–4), pp. 1-20. <https://doi.org/10.1007/s40152-018-0129-1>
46. Menelaou, A. A. and Violaris, I. (2012) 'Enhancement of productivity through an integrated crew management system', *Higher Education, Skills and Work-based Learning*, vol. 2(2), pp. 201-215.
<https://doi.org/10.1108/20423891211224829>
47. Meng, Z., Zhou, Y., Li, E. Y., Peng, X. and Qiu, R. (2023) 'Environmental and economic impacts of drone-assisted truck delivery under the carbon market price', *J. Clean. Prod.*, vol. 401, Article 136758.
<https://doi.org/10.1016/j.jclepro.2023.136758>

48. Mohagheghi, V., Mousavi, S. M., Aghamohagheghi, M. and Vahdani, B. (2017) 'A new approach of multi-criteria analysis for the evaluation and selection of sustainable transport investment projects under uncertainty: A case study', *International Journal of Computational Intelligence Systems*, vol. 10, p. 605.
49. Murphy, W. H. (2004) 'In pursuit of short-term goals: anticipating the unintended consequences of using special incentives to motivate the sales force', *Journal of Business Research*, vol. 57, pp. 1265-1275.
50. Narula, K. (2014) 'Emerging trends in the shipping industry- Transitioning towards sustainability', *Maritime Affairs*, vol. 10(1), pp. 113-138. doi: 10.1080/09733159.2014.928473
51. Nielsen, M. B., Bergheim, K. and Eid J. (2013) 'Relationships between work environment factors and workers' well-being in the maritime industry', *Int Marit Health*, vol. 64(2), pp. 80-88.
52. Nõmmela, K. and Kõrbe Kaare, K. (2022) 'Incorporated Maritime Policy Concept: Adopting ESRS Principles to Support Maritime Sector's Sustainable Growth', *Sustainability*, vol. 14, Article 13593. <https://doi.org/10.3390/su142013593>
53. Oldenburg, M., Baur, X. and Schlaich, C. (2010) 'Occupational risks and challenges of seafaring', *J Occup Health*, vol. 52, pp. 249-256. doi: 10.1539/joh.k10004
54. Onakpojeruo, D., Jeong, B. and Park, C. (2023) 'Mental wellbeing; Human reliability assessment of seafarers during the COVID-19 era', *Journal of International Maritime Safety, Environmental Affairs, and Shipping*, vol. 7(1), Article 2184604. <https://doi.org/10.1080/25725084.2023.2184604>
55. Parviainen, T., Lehtikoinen, A., Kuikka, S. and Haapasaari, P. (2018) 'How can stakeholders promote environmental and social responsibility in the shipping industry?', *WMU Journal of Maritime Affairs*, vol. 17(1), pp. 49-70.
56. Progoulaki, M. and Theotokas, I. (2009) 'Human resource management and competitive advantage: An application of resource-based view in the shipping industry', *Marine Policy*, vol. 34(3), pp. 575-582. <https://doi.org/10.1016/j.marpol.2009.11.004>
57. Radić, A., Fuentes, J. M. A., Ariza-Montes, A., Han, H. and Law, R. (2020) 'Job demands-job resources (JD-R) model, work engagement, and well-being

- of cruise ship employees’, *International Journal of Hospitality Management*, vol. 88, Article 102518. <https://doi.org/10.1016/j.ijhm.2020.102518>
58. Raimo, N., Caragnano, A., Zito, M., Vitolla, F. and Mariani, M. (2021) ‘Extending the benefits of ESG disclosure: The effect on the cost of debt financing’, *Corp. Soc. Responsib. Environ. Manag.*, vol. 28(4), pp. 1412-1421. doi: 10.1002/csr.2134
59. Ramadhini, A., Adhariani, D. and Djakman, C. D. (2020) ‘The Effects of External Stakeholder Pressure on CSR Disclosure: Evidence from Indonesia’, *DLSU Business & Economics Review*, vol. 29(2), pp. 29-39.
60. Rashid, A. (2018) ‘The influence of corporate governance practices on corporate social responsibility reporting’, *Social Responsibility Journal*, Emerald Group Publishing, vol. 14(1), pp. 20-39. doi: 10.1108/SRJ-05-2016-0080
61. Rose, T. and Manley, K., (2010) ‘Motivation toward financial incentive goals on construction projects’, *Journal of Business Research*, vol. 64(7), pp. 765-773. doi:10.1016/j.jbusres.2010.07.003
62. Sampson, H. and Ellis, N. (2020) ‘Stepping up: the need for proactive employer investment in safeguarding seafarers` mental health and wellbeing’, *Maritime Policy and Management*, vol. 48(8), pp. 1069-1081. <https://doi.org/10.1080/03088839.2020.1867918>
63. Sandberg, C., Hult, C., Österman, C. and Praetorius, G. (2020) ‘The Committed Service Crew- The Impact of Passenger Proximity on Organizational Commitment and Job Satisfaction’, *International Journal on Marine Navigation and Safety of Sea Transportation*, vol. 4(3). <https://doi.org/10.12716/1001.14.03.10>
64. Siew, R. (2015) ‘A review of corporate sustainability reporting tools (SRTs)’, *Journal of Environmental Management*, vol. 164, pp. 180-195. doi: 10.1016/j.jenvman.2015.09.010
65. Sun, H., Bai, T., Fan, Y. and Liu, Z. (2024) ‘Environmental, social, and governance performance and enterprise sustainable green innovation: Evidence from China’, *Corporate Social Responsibility and Environmental Management*, vol. 1(4), pp. 3633-3650. <https://doi.org/10.1002/csr.2761>

66. Syriopoulos, T. and Tsatsaronis, M. (2011) 'The corporate governance model of the shipping firms: financial performance implications', *Maritime Policy & Management*, vol. 8(6), pp. 585-604.
67. Theotokas, G. (2014) *Organization and Management of Shipping Businesses*. Alexandria editions (in Greek), Athens.
68. United Nations. (2015) *Transforming Our World: The 2030 Agenda for Sustainable Development*. Resolution Adopted by the General Assembly, A/RES/70/1, United Nations, New York, NY, USA.
69. Uzuegbunam, T. D., Forster, R. M. and Williams, T. (2023) 'Assessing the Welfare of Technicians during Transits to Offshore Wind Farms', *Vibration*, vol. 6(2), pp. 434-448. <https://doi.org/10.3390/vibration6020027>
70. Vadasi, C., Tasios, S. and Bekiaris, M. (2021) 'Corporate governance and voluntary disclosure: The case of listed firms on the Athens Stock Exchange', *Journal of Accounting and Taxation*, vol. 13(4), pp. 270-282. doi: 10.5897/JAT2021.0495
71. Vejvar, M., Lai, K. and Lo, C. K. Y. (2020) 'A citation network analysis of sustainability development in liner shipping management: A review of the literature and policy implications', *Maritime Policy & Management*, vol. 47(1), pp. 1-26. doi: 10.1080/03088839.2019.1657971
72. Wang, X., Yuen, K. F., Wong, Y. D. and Li, K. X. (2020) 'How can the maritime industry meet Sustainable Development Goals? An analysis of sustainability reports from the social entrepreneurship perspective', *Transportation Research Part D Transport and Environment*, vol. 78, pp. 102-173. doi: 10.1016/j.trd.2019.11.002
73. Warr, P. B. (2002) 'The Study of well-being, behaviour and attitudes', in: PB Warr, *Psychology at Work*, Penguin Books, London.
74. Wu, X., Zhang, L. and Luo, M. (2020) 'Discerning sustainability approaches in shipping', *Environment, Development and Sustainability*, vol. 22(6), pp. 5169–5184. doi: 10.1007/s10668-019-00419-z
75. Yuen, K. F., Thai, V. V. and Wong, Y. D. (2017) 'Corporate social responsibility and classical competitive strategies of maritime transport firms: A contingency-fit perspective', *Transportation Research Part A: Policy and Practice*, vol. 98(C), pp. 1-13. doi: 10.1016/j.tra.2017.01.020

76. Yuen, K., F., Thai, V., V., & Wong, Y., D. (2018). An investigation of shippers' satisfaction and behavior towards corporate social responsibility in maritime transport. *Transportation Research*, 116(C), 275-289. doi: 10.1016/j.tra.2018.06.027
77. Yuen, K. F., Bai, X. W. and Wang, X. Q. (2020) 'Safety behaviour at sea: Policy implications for managing seafarers through positive psychology', *Marine Policy*, vol. 121(11), Article 104163. doi: 10.1016/j.marpol.2020.104163
78. Zaucha, J. and Matczak, M. (2018) 'Role of maritime ports and shipping in the creation of the economic value of the sea areas', *SHS Web Conf.*, vol. 58, Article 01033.
79. Zhang, T., Zhang, J. and Tu, S. (2024) 'An Empirical Study on Corporate ESG Behavior and Employee Satisfaction: A Moderating Mediation Model', *Behav. Sci.*, vol. 14, p. 274. <https://doi.org/10.3390/bs14040274>
80. Zhao, Z., Tang, L., Ma, Y., Wu, Y., Lin, S., Wu, Z., Zheng, Z., Wang, X. and Wang, X. (2023) 'Fatigue at sea during and after the COVID-19 pandemic: A comparative study of two matched samples of seafarers'. <https://doi.org/10.1016/j.marpol.2023.105730>
81. Zhao, Z., Wadsworth, E., Jepsen, J. R. and Leeuwen, W. V. (2020) 'Comparison of perceived fatigue levels of seafarers and management approaches in fatigue mitigation: Case studies from two Chinese and two European shipping companies', *Marine Policy*, vol. 116, Article 103897. <https://doi.org/10.1016/j.marpol.2020.103897>
82. Zhou, Q., Wong, Y. D., Loh, H. S. and Yuen, K. F. (2019) 'ANFIS model for assessing near-miss risk during tanker shipping voyages', *Maritime Policy and Management*, vol. 46(4), pp. 377-393. doi: 10.1080/03088839.2019.1569765

Annex

Questionnaire

Crew Wellbeing- ESG Principles

Information

You will be involved in research to investigate the welfare of ships' crew, based on the use of principles by the shipping company. Please read the following information carefully and if you have any questions direct them to the researcher.

Participation conditions:

Participate if you have been active crew or special education personnel for more than one year in a school unit.

Consent Form:

Before your participation and after reading carefully, please sign the consent form. By accepting you are under no obligation to complete the survey. You can interrupt at any stage without consequence.

Confidentiality:

The data will remain completely anonymous and cannot be linked to you in any way. The data will be stored on a computer that can be accessed using passwords. Only the research team will have access to them, which is absolutely bound by the ethical principle of confidentiality. The research has been approved by the Panteion University Ethics and Ethics Committee.

Thank you.

Demographic questions

1. What is your gender?

Male

Female

Other

2. What is your age?

18-24

25-34

35-44

45-54

55+

3. What is your position in the shipping company?

Crew

Stakeholder

Manager

Other

4. How many years of working experience do you have in this position?

<5 years

6-10 years

>10 years

Main body

1. What is your impression of the leadership and management of the shipping company you work at the moment? (Rate 1 to 5: 1=very poor, 5=excellent)
2. What is your impression of the environment of the shipping company you work at the moment? (Rate 1 to 5: 1=very poor, 5=excellent)
3. How important is the role of ESG principles for your job satisfaction? (Rate 1 to 5: 1=not at all, 5=Very important)
4. The shipping company cares for the continuous sustainable, equal and inclusive development, work, offering full employment, with decent conditions for all. (Write how much you agree with this statement, rating from 1 to 5)
5. The shipping company takes care of the wellbeing and health of all crew. (Indicate how much you agree with the above statement, rating from 1 to 5)
6. The shipping company implements strategies for the smooth formation of the working environment and the management of the workload. (Indicate how much you agree with the above statement, rating from 1 to 5)
7. The shipping company promotes ocean sustainability strategies. (Indicate how much you agree with the above statement, rating from 1 to 5)
8. The shipping company implements practices to address the climate crisis, such as energy saving strategies. (Indicate how much you agree with the above statement, rating from 1 to 5)
9. The shipping company implements strategies for the peaceful coexistence and sustainable development of local societies. (Indicate how much you agree with the above statement, rating from 1 to 5)
10. List some examples of strategies implemented by the shipping company you work for, and which you consider most important.

