Okeanis Eco Tankers Corporation & Kyklades Maritime Corporation

Introduction

Shipping is the most environmentally efficient mode of transport, both in relative and absolute terms, accounting for only 2.7% of global CO₂ emissions. Nowadays, the maritime shipping industry is heavily regulated by the International Maritime Organization (IMO), a specialized agency of the United Nations responsible for the safety and security of international shipping and the prevention of marine and atmospheric pollution by ships (The role of the International Maritime Organization, 2017). To illustrate what appears to be an effective presence of the IMO, it is notable that despite a 43% growth in sea-borne trade since 2008, the industry has improved significantly by lowering its emissions by 17% (Okeanis Eco Tankers Corp. Sustainability Report, 2021).

The Greek, Athens-based Alafouzos family has a long history of contribution to the niche market of tanker vessels, backed by three generations of experience. The family’s most recent company, established in 2018, is Okeanis Eco Tankers Corporation (OET), the first to be listed in the stock market. With a strong presence of nearly 60 years, Kyklades Maritime Corporation (KMC), another one of the Alafouzos family companies, serves as OET’s ship manager. KMC manages the ships entrusted to it by its owners by applying its comprehensive and efficient safety, quality, and environmental management.

Through multiple primary and secondary sources, the paper delves into the operations of both OET and KMC, which will hereafter be referred to as the “Organization.” By analyzing the Environmental, Social & Governance (ESG) report, the role of sustainability will be comprised within the Organization and how vital it is to the core of its business model. Interviewing three key members of upper management, the chairman Mr. Ioannis Alafouzos, the CEO of OET, Mr. Aristeidis Alafouzos, and the CEO of KMC, Ms. Alexandra Chatzi michailoglou, allowed for a holistic understanding of how leadership envisions the company’s future trajectory in the realm of sustainability. By reviewing the Organization's financial reports, the paper amalgamates measurable metrics and strategies that demonstrate its progress in combination with the direct impact of sustainability on its financials. Moreover, surveys were shared with various departments to gauge the Organization’s future endeavors. Lastly, an independent evaluation and a list of suggested actionable next steps were compiled for the Organization to bolster its sustainability and financial prosperity.

Background

Okeanis Eco Tankers Corporation (OET) owns a fleet of fourteen tanker vessels registered under the laws of the Republic of the Marshall Islands, operating out of Piraeus, Greece, and listed on the Oslo Børs Stock Exchange. With its current market cap at $631 million, OET is the only publicly listed company with pure ECO, scrubber-fitted tankers engaged in the ocean transportation of crude oil (Bloomberg, 2022). The company’s name was also strategically selected to reinforce its bold mission of always operating on the frontline of industry evolution.
while continually striving to achieve and sustain a state of excellence in the whole spectrum of the services it provides (Okeanis Eco Tankers Corp. Sustainability Report, 2021). OET’s mission, as stated in its 2022 ESG report, is to promote the concepts of safety and environmental excellence, operating under three continuous objectives: providing ships of the highest standard, collaborating with counterparties to evolve services, and expanding an already progressive trading strategy (Our business, 2022). In 2020, within its second year of operation, Lloyd’s list, one of the world's oldest continuously running journals, presented Okeanis Eco Tankers Corp. with the “Tanker Company of the Year” award for its commitment to pioneering in the sustainability sector (Greek shipping awards: The 2020 winners, 2020).

Kyklades Maritime Corporation (KMC) is similarly dedicated to providing its services at the highest possible level with respect to safety, quality, environmental protection, health, and performance standards (Mission statement, 2020). KMC manages a fleet of 22 tanker vessels, including OET’s fourteen vessels.

The chairman and CEO of OET, Mr. Ioannis Alafouzos, supports that shareholders and stakeholders have realized the importance of a balanced approach between sustainability and commercial viability, setting a direction towards a greener future (Okeanis Eco Tankers Corp. Sustainability Report, 2021). Since achieving holistic and sustainable practices sits high on the agenda in every boardroom discussion, Mr. Ioannis Alafouzos personally expressed to me that he has embarked on a mission to synergize both companies’ most appealing attributes toward a sustainable future.

**Definition of Sustainability**

Based on secondary sources, the Organization reports a yearly standardized ESG Framework providing clarity and actionable insights to all three pillars; Environmental, Social, and Governance. The Organization has been monitoring all relevant data for sustainability & ESG reporting according to the industry's highest standards (Okeanis Eco Tankers Corp. Sustainability Report, 2021). Consistent with its commitments towards ESG, OET has developed its inaugural ESG Report to inform its stakeholder groups regarding its sustainability performance. The 2021 ESG Report is in accordance with the internationally accepted Sustainability Accounting Standards Board (SASB) for Marine Transportation and the GRI standards, which are significant to the Organization's financial performance and growth.

1. **Environmental**

The Organization's environmental initiatives in 2021 venture to continuously improve its vessels’ environmental metrics and Greenhouse Gas (GHG) emissions. The Organization controls one of the industry's youngest, most fuel-efficient fleets with vessels that burn less fuel and emit industry-low greenhouse gas emissions per nautical mile traveled. Compared to GENCO Shipping ltd., a shipping company that has been awarded the top spot in the Webber Research 2022 ESG Scoreboard, OET has 44% less Scope 1 emissions (Genco Shipping: ESG 2021 Sustainability Report, 2022). Additionally, all its vessels are part of the Environmental Ship Index (ESI) (Okeanis Eco Tankers Corp. Sustainability Report, 2021). The ESI is a project from
the World Port Climate Initiative aiming to distinguish ships whose air emissions are below regulatory limits and contribute to improving air quality and reducing GHG emissions in the shipping sector.

KMC measures and reviews its fleet's environmental performance through a continuous improvement process, endeavoring to minimize the impact of the company's operations on the environment. KMC has identified areas of shipboard operations that affect the ships' environmental performance, establishing quantifiable targets for improving environmental performance. Most importantly, KMC's "Just in Time & Virtual Arrival" initiatives have effectively reduced its fleet's environmental footprint (Okeanis Eco Tankers Corp. Sustainability Report, 2021). By reducing speed to reach the destination at a mutually agreed arrival time (Just in Time Arrival), the vessel can avoid spending time at the anchor awaiting berth, which results in a reduction in emissions, prevention of congestion, and improved safety in ports (Okeanis Eco Tankers Corp. Sustainability Report, 2021). The "Virtual Arrival" initiative reduces speed to meet a revised arrival time, resulting in lower fuel consumption and reduced GHG emissions (Okeanis Eco Tankers Corp. Sustainability Report, 2021). These policies, in combination with OET's "Young Fleet and Newbuilding Strategy" and the construction of eco-design vessels fitted with exhaust gas cleaning systems ("scrubbers"), have exceeded the industry's emission benchmarks, awarding the Organization a strong competitive advantage (Okeanis Eco Tankers Corp. Sustainability Report, 2021). The scrubber-fitted vessels resulted in combined savings of $32,100 per day for its Very Large Crude Carriers (VLCCs) and $21,100 per day for its Suezmax (Annual Report, 2021).

Consistent with this demonstrated sustainability commitment, KMC has developed a "Ship Recycling Policy" to ensure that future recycling of its ships—sold as scrap—may only take place at approved yards, compliant with the IMO Convention and the Hong Kong Convention (Okeanis Eco Tankers Corp. Sustainability Report, 2021). Additionally, KMC has established an "Inventory of Potentially Hazardous Materials" to provide information and documentation about hazardous materials in the ship's construction and equipment (Okeanis Eco Tankers Corp. Sustainability Report, 2021). Kyklades Maritime Corporation uses its "Garbage Management Plan" as a standard practice following the Regulation of Marpol Annex V. Accordingly, discharge is restricted to food waste, identified cleaning agents, and additives that are not harmful to the marine environment (Okeanis Eco Tankers Corp. Sustainability Report, 2021). Lastly, the discharge of "sewage" is always carried out in compliance with Local Port State Regulations. The installed sewage treatment plants are capable of treating greywater, which is not discharged within coastal and port areas (Okeanis Eco Tankers Corp. Sustainability Report, 2021).

2. Social

The Organization's second ESG pillar focuses on generating a positive impact on society through its sustainable operations. The Organization’s culture, which I have witnessed first-hand as an intern, strongly supports that its employees are its most important and valuable asset, driving its impactful course and growth. Its primary focus is to ensure the welfare and safety of
the staff’s working environment, respecting individuality and human rights while supporting their continuous development. To ensure the seafarers' work environment, the Organization promotes "Occupational Health & Safety" measures that encourage risk evaluation for the safety of employees (Okeanis Eco Tankers Corp. Sustainability Report, 2021).

To fulfill its social responsibility, the Organization has invested in its "Diversity, Equity & Inclusion." (Okeanis Eco Tankers Corp. Sustainability Report, 2021) As an equal opportunity employer committed to creating and fostering a diverse working environment, the Organization makes employment decisions based on merit alone and is committed to recruiting, training, and promoting diverse persons across all job levels. Specifically, in the vastly male-dominated work environment of the maritime shipping industry, Okeanis Eco Tankers' workforce consists of 42% women.

At the same time, based on OET’s reports, the Organization contributes to the local communities where it operates, enhancing its community engagement and leveraging its social responsibility and sustainability priorities. Through its contributions to the NGO “All Together We Can – Oloi Mazi Mporoume,” the Organization has gathered 192,345 kg of food and cleaning supplies, planted 15,000 trees, collected 55,000 packs of medicines and supplies, and supported education by giving 1,020 boxes of school supplies in 2021 alone (Okeanis Eco Tankers Corp. Sustainability Report, 2021). Additionally, the Organization responded immediately to the ever-increasing needs of Ukraine's displaced people by providing shelter to 142 refugees, sending over 704 tonnes of humanitarian aid, and 35 solar panels and battery packs (Okeanis Eco Tankers Corp. Sustainability Report, 2021).

3. Governance

The Organization’s third ESG pillar, governance, is committed to ensuring trust and enhancing shareholder value through efficient decision-making and transparent communication between management, the Board of Directors, and its shareholders (Okeanis Eco Tankers Corp. Sustainability Report, 2021). Aligned with the main principles of the Norwegian Code of Practice for Corporate Governance, the Organization supports the achievement of effective governance, aiming at securing the greatest possible value creation over time for its shareholders, employees, and other concerned parties (Okeanis Eco Tankers Corp. Sustainability Report, 2021). Mr. Aristeidis Alafouzos stressed the importance of the company’s sustainability strategy in carefully curating a desired investor-friendly status: “As a company, our main duty is to serve the shareholders in the best way. So, of course, we aim for high profitability. Our strategy of having young and efficient ships achieves exactly that.” (A. Alafouzos, 2022) The above statement is validated through OET’s 2021 annual earnings report, recording a 54% return to its investors, contrary to its closest competitor of 11%. It is noteworthy that the fourth closest competitor offered returns of 3% (Annual Report, 2021).

From the above carefully crafted objectives of the Organization, it is evident that sustainability is becoming more attractive to financial institutions and investors. As a visionary CEO, Mr. Aristeidis Alafouzos emphasized that “the whole world is going into an energy crisis, so now more than ever, our stakeholders are seeking partnerships with the most energy-efficient
vessels that burn less fuel. The industry is aware that we are prepared to take advantage of the given circumstances.” Throughout the years, the industry’s strongest traders and oil majors, such as Equinor, have shown an ever-increasing interest in partnering with companies that are held to the highest environmental and corporate sustainability standards. Due to the stakeholders’ strong preference for a sustainable supply chain, OET has the opportunity to charter its vessels at premium prices. Similarly, the Organization has the luxury of carefully selecting the oil majors and shipyards it partners with, always opting for the most environmentally friendly and socially respectful.

**Sustainable Leadership**

Since Okeanis’ inception, leadership has been determined to impact the environment positively. When I asked the chairman of OET, Mr. Ioannis Alafouzos, what his vision was while building such a company, he instinctively replied, “my vision was to create a company that stands true to the following three pillars: 1. Owning the right fleet delivered at the right time, 2. Having the best-in-class corporate governance and shareholder alignment, 3. Having a demonstrable track record of commercial and technical outperformance” (I. Alafouzos, 2022). In an effort to progress the Organization’s decarbonization journey, they are fully committed to conducting Materiality and Climate Risk sessions to identify climate risks and understand their interaction with investment decisions (Okeanis Eco Tankers Corp. Sustainability Report, 2021). In line with these targets, OET has signed its first sustainability-linked loan, acknowledging climate risk as an investment risk (Okeanis Eco Tankers Corp. Sustainability Report, 2021). When asked why OET chose to be the first company in Greece to take on a sustainability-linked loan, the CEO, Aristeidis Alafouzos, stated that “the global average fleet age is about 13 years old, giving OET’s 2.6 average fleet age, among other metrics, a huge advantage for the company. There is a minimal real risk of not performing on this loan” (A. Alafouzos, 2022).

To get a deeper understanding of the leadership's ethos, I interviewed Mrs. Alexandra Chatzimichailoglou, the recently appointed female CEO of Kyklades Maritime Corporation. During our in-depth interview, she was keen to impart her rejuvenating vision for the company. Mrs. Chatzimichailoglou is convinced that the optimal course to follow is to combine the traditional values of a long-standing company, such as KMC, with the progressive targets of OET. When discussing how the Organization has achieved zero fatal or other accidents, the CEO firmly stated, "seafarers are our first priority! These people put their lives at risk, so the companies that don't respect them are only reducing their employees' life expectancy. Prior to embracing such ignorant corporate strategies, these companies are not asking the most important question: have I achieved a better world as a whole?" (Chatzimichailoglou, 2022). It is heartening to see that a CEO that manages close to a billion-dollar fleet feels such a strong sense of responsibility and respect toward the crew's well-being while not lagging financially.

The CEO's statements were consistent with the thorough stakeholder mapping section on OET's ESG report. Its meticulous mapping and analysis of each stakeholder group—ranging from investors, suppliers, shipbrokers, financial institutions, and regulatory authorities to peers
and civil society members—prove its commitment, dedication, and sense of responsibility toward every party affected, directly and indirectly, by its activities and operations. Those groups shape the internal and external environment of the company and are, evidently, central to the Organization’s effective performance and growth. Okeanis Eco Tankers' operations and business decisions are on track to meet stakeholders' expectations related to economic, social, and environmental issues (Okeanis Eco Tankers Corp. Sustainability Report, 2021).

**Sustainable Strategy & Metrics**

Early in KMC's operations, the Alafouzos family noticed the shift in direction that the business world was undergoing. Therefore, they decided to incorporate environmental and social sustainability practices at the core of the Organization's business operations. As the chairman, Mr. Ioannis Alafouzos, expressed in OET's ESG report: "we can proudly state that we have had a head start vis-à-vis GHG emissions relative to market and peers thanks to our investment in young, ECO vessels built at world-class yards" (Okeanis Eco Tankers Corp. Sustainability Report, 2021). Evidently, building the most fuel-efficient fleet in the industry played a catalytic role in the Organization's revenue growth, allowing its profitability to increase by 300% in 2020 and its stock to nearly triple in 2022 (*Annual Report, 2020*). It is derived from the above that implementing sustainable practices has deep roots within the Organization's business model, and unlike industry peers who have been sustainability laggards, OET’s commitment to said practices is far from just another publicity campaign.

Starting as early as 2014, KMC strived to build a sustainable culture and develop green technologies around GHG awareness and vessel fuel performance. In this context, it designed and developed an in-house Vessel Monitoring & Performance System (VMPS), an innovative monitoring tool capable of meeting current and future GHG regulatory and compliance requirements (Okeanis Eco Tankers Corp. Sustainability Report, 2021). The VMP KMC system monitors fuel capacity and emissions in real-time, significantly improving the decision-making process, voyage performance management, and technical vessel maintenance (Okeanis Eco Tankers Corp. Sustainability Report, 2021). It ensures the day-to-day reporting creating, validating, and delivering offshore reliably and on the pre-set time (Okeanis Eco Tankers Corp. Sustainability Report, 2021).

In further monitoring the ongoing environmental performance of its vessels, the Organization has issued a Ship Energy Efficiency Management Plan (SEEMP) certified in accordance with ISO 14001 and ISO 9001, which sets an energy baseline for each vessel. The leadership has made a conscious decision to purchase vessels with an attained Energy Efficiency Design Index of 2.38 CO\textsubscript{2} per ton/nautical mile, which is significantly less than the industry average of 4.84. The strong results of this strategy can be depicted by the vessel's Energy Efficiency Operations Index, which stands at 4.77 compared to the industry's 9.22, translating to 48% less energy usage than its competitors. KMC has established an energy baseline for each vessel based on the Energy Efficiency Operational Indicator (EEOI), which evaluates the vessels' energy performance on a voyage, yearly, and fleet basis to evaluate the vessels' energy
performance (Okeanis Eco Tankers Corp. Sustainability Report, 2021). Based on OET's ESG report, the company's vessels traveled a total of 863,324 nautical miles in 2021 compared to 587,854 in 2020—a 47% increase. However, the management's decision to recycle its fleet at a young age led to a 69% decrease in total fuel consumed in 2021 (Okeanis Eco Tankers Corp. Sustainability Report, 2021).

While transporting crude oil, small accidents, such as the January 2022 oil spill in Peru, the environmental contamination of which will last for the next 15 years, prompted the Organization to strive for a zero-tolerance policy regarding spills and releases (Taylor, 2022). The CEO of KMC, Mrs. Alexandra Chatzimichatloglou, has underlined transparency as one of the main means of attaining sustainability; hence, since the beginning of 2022, the Organization has started measuring and reporting its vessels' CO\textsubscript{2} emissions using the G4 method. By installing the G4 system to its entire fleet, the Organization aimed to measure and transparently publicize its metric tons of CO\textsubscript{2} Scope 1 emissions (Okeanis Eco Tankers Corp. Sustainability Report, 2021). The G4 system, combined with KMC's VMP system, is a milestone for the company, allowing it to understand trends and track crucial metrics such as the NOx and SOx air emissions.

Through primary research, I have observed that the Organization doesn't only rely on the standardized ESG framework but has also implemented a specialized department responsible for the Health, Safety, Quality, and Environment (HSQE) of all of its operations. The HSQE department plays the most central role in KMC’s operational structure, ensuring the managed fleet's safe and environmentally sound operations through implementing multiple internal office and vessel audits (Mission statement, 2020). Notably, the Organization has achieved nine UN goals across the board. A preeminent mention is the accomplishment of the "Peace, Justice & Strong Institutions" goal (Okeanis Eco Tankers Corp. Sustainability Report, 2021). Through the past year, with the Ukrainian-Russian war threatening the livelihood of all seafarers, the Organization has been galvanized in protecting the lives of its people, safeguarding its vessels, and reinforcing global peace and justice initiatives. Additionally, the Organization’s commitment to the "Industry, Innovation & Infrastructure" UN goal resulted in the innovation and adoption of clean and environmentally friendly technologies and processes to reduce its operational environmental impact.

The Organization also holds in high regard its social metrics. Its 99% retention rate for crew and officers in 2020 and 2021 has confirmed Mr. Ioannis Alafouzos’ values of treating its employees as its most important and valuable asset, focusing on their career goals in a healthy, challenging, and rewarding environment (Okeanis Eco Tankers Corp. Sustainability Report, 2021). In his own words, "these actions have played a significant role in the companies' success during tough periods, such as covid" (I. Alafouzos, 2022). Concrete proof that these efforts are not a promotional campaign, but an honest effort to build a sustainable company, is portrayed by the Organization's lost time incident rate, which is imperative for the profitability of each vessel's trip. This metric indicates the efficiency of the company's operations through the time a vessel loses away from work which can be derived from a rapid decrease in the "lost time incident
rate,” which dropped below 1% in 2020 and continued dropping to 0.62% in 2021 (Okeanis Eco Tankers Corp. Sustainability Report, 2021). At the same time, it was one of the few companies in the industry to conclude the year with zero class actions and zero recommendations.

Analyzing the Future of Sustainability

It is clear from some of the world’s largest maritime shipping Organizations that achieving sustainable practices is at the forefront of their priorities. The International Maritime Organization adopted global 2050 goals, which are of critical importance given the role of shipping in the worldwide economy. Its goals are to reduce 40% of CO₂ emissions per transport work by 2030 while gradually increasing those targets to 70% by 2050, as well as reducing 50% of GHG emissions by 2050 (Initial IMO GHG strategy, 2021). Notably, the European Commission proposed to include the shipping sector in the EU Emissions Trading System (ETS) from 2024 (Lin, 2022). Evidently, for Okeanis to maintain its leading position within the industry, it is bound to not only maintain but double down on its sustainable initiatives.

As a response, the Organization intensified its sustainable practices setting new, aggressive ESG Targets for the upcoming decades. Its top priorities affirmed its strict environmental goals through a 50% reduction of CO₂ emissions by 2040, an EEOI< 9.00E-06 tons CO₂/Cargo ton-mile, a 30% reduction of total waste incinerated onboard by 2026, as well as zero harmful spills or releases to the environment (Okeanis Eco Tankers Corp. Sustainability Report, 2021). Furthermore, its goals also target safety and social progress by aiming for zero cyber security incidents and 50% female employees by 2025 (Okeanis Eco Tankers Corp. Sustainability Report, 2021). Based on the survey collected from the manager of the Training and Development department of KMC, Mr. Kourkoumelis, the Organization pays special attention to the education of its human resources through a set of responsible and well-communicated strategies.

The Organization has a clear competitive advantage because of its leading eco position in the industry. Due to the industry’s rapid shift towards sustainable practices, the Organization should actively strive to position itself one step ahead of its competitors to be able to take advantage of new policies. Losing its competitive edge will not only hurt its image but its financial stability as well. The Organization’s biggest competitive advantage is that in the current environment, building new vessels is almost impossible, unlike other industries, due to the current market position and high energy prices. As Mr. Aristeidis Alafouzos said, “We are certain that for the next 5-11 years, there won’t be any new competitors entering the market, so by having the largest and youngest eco fleet in the world, we are perfectly positioned to take full advantage of the current environment.”

Sustainable Recommendations

The Organization’s sustainable targets that stretch until 2040 will bolster its competitive advantage. However, it should not be complacent about its progress thus far. OET and KMC were among the first companies in the industry to set the direction for a green, sustainable future.
The only logical step for them to maintain their momentum is to become a beacon of sustainable development. Like Allbirds’ strategy, which created the life cycle assessment tool to revamp the footwear industry, KMC should leverage and advance its in-house Vessel Monitoring & Performance system. Advancing the tool and making it available to all tanker companies in an effort to set it as the industry’s standard measurement tool for calculating the vessels’ carbon emissions will increase energy efficiency worldwide, enabling on-the-spot solutions and helping educate seafarers.

Mr. Ioannis Alafouzos has emphasized that the Organization’s business model is based on transparency. Therefore, as KMC environmentally advances its VMP, it should expand its reach in the social ESG pillar. Similar to buildings that are assigned an energy efficiency grade, the VMP could evaluate each company’s social actions and the quality of life that it provides to its seafarers by assigning a corresponding letter grade. Despite the Organization’s relatively small market power, it should leverage its leading position into the tanker sustainability niche, promoting the advanced VMP in becoming the industry’s gold standard. This industrywide effort towards transparency will attract green investors, creating a more sustainable outlook. Further down the line, it will also push the whole supply chain, including oil majors and shipyards, towards more sustainable and transparent practices.

Updating the industry’s fuel technology towards using biofuels has been an immediate goal of the International Maritime Organization. Despite fuel advancements in other industries, such as cars that started from petrol, progressed to EVs, and even adopted hydrogen, the maritime shipping industry, which has been at the forefront of commercial trading, has seen minimal development. A similar trend is noticed in other industries that have been pioneers in fuel technology trends, such as Formula 1, which has established biofuels as the next generation’s fuel. Investing early in the research and development of biofuels will position them ahead of the curve for the next decade.

Conclusion:

Through primary and secondary research, it is evident that the Organization has bet into holistic, sustainable development since its early inception for ideological reasons and as a means to expand its profitability. Nonetheless, these results must be interpreted with caution, as a number of limitations should be borne in mind. Most insights to construct this paper came either from the organization’s ESG and financial reports or from my recent empirical evidence. Despite Deloitte’s approval, the Organization prepared and published these reports. A limitation of this paper is that it has been based on the interviews and surveys of current employees that strive to promote the Organization’s sustainability goals. Similarly, its Business-to-Business (B2B) model limits access to third-party data. Still, the Organization’s commitment to sustainability has proven the management’s bet fruitful, as seen through its financial trajectory, positioning it perfectly to ride the market wave.
Sources:


