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GREENWASHING IN MARITIME TRADE- A TORRENT OF MISINFORMATION

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Abstract

As the world's population continues to grow, especially among developing countries, low-cost and efficient maritime transport has a vital role to play in growth and sustainable development. Due to growing concerns about climate change and stringent constraints on the environment, the appeal of environmentally friendly products and services has captivated the public's eye. As the general public is growing more concerned about the state of the environment, more corporations are adopting sustainable practices to stay in their good faith. Unfortunately, this trend may have a dark side. This article delves into the heart of the matter, dissecting the intense heat surrounding green washing and the potential gaps between perception and reality

Green washing or "green sheen" is a decoupling behaviour which tend to deflect attention to minor issues or lead to create 'green talk' through statements aimed at satisfying stakeholder requirements in terms of sustainability but without any concrete action. As it misleads the public and policymakers by portraying a misleading picture of eco-friendliness and deflecting resources away from genuine sustainability initiatives, greenwashing in maritime trade poses a serious environmental hazard. This dishonest practise not only continues the maritime industry's damaging effects on the environment, but it also discourages the adoption of cleaner technologies and policies by undermining trust, ultimately impeding progress in addressing the serious environmental issues that maritime trade present

Through an analytical lens, this examination will unravel the diverse aspects of green washing, green technologies, green trademarks,exploring its environmental implications,

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sustainability challenges, alignment to SDG goals and other international conventions. By doing so, we aim to bring forth a nuanced perspective that neither wholly glorify nor dismisses this new movement but rather calls for a critical analysis and reconsideration in this matter.

Keywords: green washing, sustainable development, maritime trade, green shipping, International conventions

Introduction

Amidst the current global economic and market conditions, the significance of marine transport and the role of international shipping cannot be understated, as sea transport is becoming an increasingly popular mode of transportation. The increase in maritime fleet in the past 50 years exhibits a growth in shipping international trade with its share ranging between 80 and 90 percent of trade. The maritime international trade has increased by a total world fleet of 95402 in 2019 with 1.86 billion DWT as compared to a fleet of 320 million DWT in 1970. There are almost 10000*3 ships of various purposes, sizes, ages, energy efficiency, etc. travelling around the world every single day. Despite being the most efficient means of goods transportation, shipping is one of the world's major emitters of greenhouse gases due to its vast volume. The threat of pollution from ships as the maritime industry grows due to the highest fleet growth has substantially increased since 1970. Ships create pollution in many ways, such as carbon dioxide (CO₂), nitrogen oxides (NO_x), sulphur oxides (SO_x), oil sulfur oxides (SO_x), and oil spills. Waste and garbage generated onboard ships, including other hazardous substances, by its operation. Oil spill disasters have been one of the major concerns of the marine world for a long time now. Major oil spills from ships during the decades 1967-76, 1977-86, and 1987-96 were recorded as 4,22,000, 8 35,000, 9 41000 tonnes, respectively.

The imperative for sustainable practices in maritime trade stems from environmental, social, and economic considerations. These practices aim to reduce the industry's environmental impact, including pollution and emissions, while fostering fair labour conditions and minimizing negative social effects on local communities. Sustainable approaches enhance economic viability by optimizing resource efficiency, adapting to regulations, and driving

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innovation through the adoption of green technologies. The commitment to sustainability also encourages global collaboration, promoting international cooperation to address shared challenges.

Conversely, Greenwashing in maritime trade involves companies misleadingly portraying themselves as environmentally responsible or sustainable without genuine commitment or substantial actions. This deceptive practice often includes exaggerating eco-friendly efforts, using misleading labels or providing incomplete information to create a false perception of environmental responsibility. The term greenwashing surfaced for the first time in 1986 by the American environmentalist Jay Westerveld, when he published an essay about how the hotel industry was promoting towel reuse to serve environmental protection when it was designed as a cost-saving measure. Greenwashing is a problem as it makes the consumer think they are being "green" with misleading information, increasing confusion around the concept of sustainable development and unfair business practices. It undermines trust, hinders industry progress, and can lead to reputational damage. Genuine sustainability practices require transparency, adherence to global standards, and concrete actions to address environmental and social concerns. Ultimately, embracing sustainable practices is essential for the long-term resilience, positive impact, and responsible growth of the maritime trade industry.

Greenwashing as a Marketing Tool

Greenwashing in marketing is a deceptive practice where companies exaggerate or falsely present their environmental efforts. They do this to capitalize on growing consumer interest in sustainability, gain a competitive edge, improve their brand image, and potentially charge higher prices. While it may offer short-term benefits, greenwashing is unethical and can backfire if exposed, damaging the company's reputation and consumer trust.

Many marine companies have been successful in using their environmentally friendly business operations as a marketing tool; many others have made unfounded claims about the environmental benefits of various goods and services.

In the shipping industry, greenwashing may be used as a marketing tool by companies seeking to create a positive image without making significant efforts towards environmental

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sustainability. Using eco-friendly certificates or badges that are opaque and devoid of independent verification is one popular strategy that gives the image of environmental responsibility without actually adhering to accepted standards. Additionally, shipping corporations may use hyperbolic or unsubstantiated claims regarding the benefits of their operations to the environment, such as lower emissions or more fuel efficiency.

Another form of greenwashing is selective communication, in which businesses emphasize positive environmental initiatives while downplaying or omitting less environmentally friendly aspects of their operations. This selective approach provides a deceptive narrative that may misinform stakeholders about a shipping company's genuine environmental impact. Furthermore, the use of vague or ambiguous sustainability terminology without clear definitions or evidence of real actions adds to the illusion of eco-friendliness.

Marketing materials may highlight symbolic actions to convey a sense of dedication to sustainability, such as making insignificant modifications or token gestures. But these actions are more of a marketing ploy than a serious attempt towards true sustainability, and they frequently have little to no impact on the shipping company's overall environmental footprint.

While greenwashing may provide short-term benefits in terms of a positive public image, it also poses major long-term hazards to shipping companies. Trust erosion is a significant effect, as stakeholders, including consumers and regulators, may become wary and critical after discovering the misleading activities. If incorrect or misleading claims are discovered, they may be subject to regulatory scrutiny and legal action. In addition, if greenwashing becomes widespread, the shipping industry as a whole may struggle to achieve genuine sustainability goals, impeding larger efforts towards ethical and ecologically friendly operations.

Lastly, the shipping sector must prioritize authentic and transparent sustainability practices in order to establish long-term credibility and trust, as well as contribute to the industry's responsible and sustainable growth. Greenwashing, while appealing as a short-term marketing technique, carries significant risks and diminishes the industry's overall commitment to environmental stewardship.

Mediterranean Shipping Company (MSC) launched its "Green Horizon" program in 2021, touting initiatives like biofuel use, efficient vessels, slow steaming, and carbon offsetting to reduce its environmental impact. However, these claims were criticized as greenwashing by

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environmental groups. While MSC highlighted limited use of biofuels and more efficient ships, their overall fleet expansion led to increased total emissions. Slow steaming was primarily an economic decision, and their carbon offsetting projects' effectiveness was questioned. The lack of transparent emissions reporting made it difficult to verify their claims. In 2022, MSC faced backlash when it was revealed that their carbon emissions had actually increased despite the green initiatives. This case demonstrates how shipping companies can use selective disclosure and vague commitments to project an environmentally friendly image that doesn't align with their overall impact, highlighting the need for standardized, transparent reporting in the industry.

Greenwashing in Green Shipping

The shipbuilding business in the maritime sector has experienced a radical transformation towards incorporating green technologies. With increasing concerns over climate change and strict environmental rules in place, the allure of environmentally friendly ships has captivated the attention of the public as well as business strategists.

Vessels touted as environmentally friendly and technologically advanced have become the poster children of a movement promising to mitigate the industry's carbon footprint.

A superficial scan of the headlines reveals a sector that is constantly bombarded with boasts of ground-breaking inventions, ground-breaking designs, and cutting-edge technologies geared at cleaner maritime operations. The variety of green technology offered is broad and frequently stunning, ranging from solar panels and wind-assisted propulsion to cutting-edge hull coatings and emission-reducing exhaust systems. The marine sector must negotiate both the promise and the actuality of these advancements as it sets sail into the uncharted waters of sustainability.

These vessels may in fact incorporate sustainable design and operation components, but the overall narrative frequently ignores less glamorous but just as important factors. A comprehensive review of issues including production techniques, the environmental effects of raw material extraction, energy-intensive manufacturing procedures, and the ultimate disposition of these cutting-edge vessels.

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Emission Reduction Promises

One of the main claims for green shipbuilding is a projected reduction in environmental effect. Lower emissions and increased energy efficiency are frequently cited as significant indicators of progress towards a more sustainable maritime industry. These claims, however, conceal a complicated web of issues and factors that demand careful analysis. While vessels may indeed boast improved emissions profiles during their operational phases, it is essential to assess the environmental cost incurred during their construction and eventual decommissioning.

The environmental impact of building technologically modern ships frequently goes well beyond the shipyard, from the extraction of raw materials to the energy-intensive production processes. Due to the large mining operations and energy-intensive refining procedures needed to produce steel, a crucial component of shipbuilding, greenhouse gas emissions are greatly increased. Composite materials are lauded for being lightweight and fuel-efficient, but their production frequently involves complex processes that could have an adverse effect on the environment.

Modern shipbuilding facilities require a lot of energy, some of which may come from non-renewable or fossil fuel-based energy sources, which paradoxically increases emissions that tarnish the green image. The environmental impact of these vessels, from inception to retirement, demands rigorous evaluation to ensure that the pursuit of greener pastures does not inadvertently tread upon the principles of genuine environmental stewardship.

Fuel Efficiency Claims

The idea that green ships perform better than their conventional equivalents in terms of fuel consumption and carbon reduction is at the heart of the efficiency question. This idea is based on the combination of cutting-edge propulsion technologies, hull designs that are optimised, and renewable energy sources like solar and wind power. Although these components have potential, putting them into practice can be difficult.

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The real efficiency improvements from green ships depend on an array of elements, such as the kind of cargo, routes, operational conditions, and vessel design. Marketing materials frequently give idealised efficiency metrics that necessitate the complete realisation of particular operational conditions. Under unfavourable circumstances or with different operating profiles, the efficiency benefits could be negated or completely eliminated.

Adopting green technologies to enhance operational efficiency could require making compromises in other areas. For example, vessels that are fuel-efficient may sacrifice speed, which could have an impact on delivery dates and competitiveness. For shipowners and operators, finding the delicate balance between operational effectiveness and other business imperatives becomes crucial. Vessels relying on renewable energy sources such as wind or solar power may find them hampered in regions with unpredictable or unfavourable climatic conditions. The feasibility of adopting green technologies becomes contingent on geographical factors that can significantly affect their operational effectiveness.

It is crucial to distinguish between theory and practice in the pursuit of efficiency. A measured assessment of the actual performance of green ships in diverse operational contexts is necessary since real-world realities frequently deviate from idealised scenarios. For example, using low-sulphur fuels is a standard practice to comply with emissions regulations, but producing and transporting these fuels has its own environmental implications. While being refined and transported, low-sulphur fuels can cause significant energy consumption and emissions.

Furthermore, the effectiveness of compliance mechanisms in achieving genuine emissions reductions depends on operational factors. The installation of scrubbers, while effective in reducing sulphur emissions, requires the continuous disposal of washwater—a process that raises concerns about water quality and marine ecosystems.

Greenwashing and SDG Goals

International trade relies substantially on shipping, and as globalisation accelerates, the future of marine transport seems secure. Shipping is the most energy-efficient method of moving products, but because of its enormous volume, it is one of the world's biggest producers of

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Green House Gases (GHG). Shipping sector has only received little attention from the international community, to the fact that emissions from shipping are not attributed to specific countries or organisations. Despite the fact that emissions from air and land transport outweigh those from the shipping sector, which depends on fossil fuels for energy, the business nevertheless releases a significant quantity of GHG into the atmosphere. The main GHG that ships release is CO₂. Global vessels emissions are increasing in trend, especially important are those in the case of nitrogen and sulphur gases. Due to the increasing requirement for maritime transportation, the amount of CO₂ emissions from ships has grown. Climate change brought on by these gases impacts almost every element of human requirements. One of the oldest and most vital sectors of international commerce and business is the marine sector. As a result, no one accepts responsibility for shipping emissions, and the business has successfully lobbied out from all international climate change agreements. Until recently, there was no defined strategy for lowering GHG emissions from shipping.

According to the Intergovernmental Panel on Climate Change, the financial industry is crucial to tackling the global climate problem and promoting sustainable development. As a result, corporate organisations are being compelled to include environmental, social, and governance (ESG) considerations into all aspects of their financial decision-making. These elements aid in making a company's ESG activities quantitative and hence more readily measured. This lays forth the standards by which investors judge whether a business is worthwhile to invest.

Greenwashing's Threat to Specific SDGs

The maritime sector plays a pivotal role in the global economy and directly affects several SDGs, including SDG 14, which focuses on the conservation and sustainable use of oceans, seas, and marine resources. Greenwashing in this context endangers progress towards SDG 14 by creating a false sense of environmental responsibility. It distracts from the pressing need to reduce the environmental footprint of shipping operations, minimize ocean pollution, and protect marine ecosystems. Furthermore, it compromises other SDGs, such as SDG 13 (climate action) and SDG 9 (industry, innovation, and infrastructure), as it hinders the adoption of cleaner technologies and sustainable practices that are critical for addressing climate change and promoting responsible industrial growth. Reaching the lofty target of zero

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emissions by 2050 is significantly hampered by greenwashing in the maritime trade sector. Deceptive marketing strategies have the potential to undercut sincere efforts and obstruct the industry's transition towards sustainable and environmentally friendly practices. Businesses that engage in "greenwashing" may overstate how committed they are to environmental causes, giving the impression that they are sustainable.

This obstacle is especially significant in light of the International Maritime Organization's (IMO) goal to cut global shipping-related greenhouse gas emissions by at least 50% by the year 2050 as compared to 2008 levels. Greenwashing has the potential to undermine trust among investors, customers, and regulators by drawing focus and funds away from real solutions.

Green Consumerism and Its Impact

The snowballing effect of extending the green lifestyle, as well as the promotion of Sustainable Development Goals (SDGs) with the purpose of overcoming environmental issues, contribute to the development of companies' mission, strategy, and policy considering the green trends. At the same time, the global market's open borders encourage a high degree of competition, which aids in the creation of products of superior quality. The shift in emphasis from excessive consumerism to a green or eco-friendly lifestyle causes a change in consumer behaviour in the maritime industry. The demand for green goods and services offered by green businesses therefore rises. Environmental challenges and the implementation of the Sustainable Development Goals (SDGs) influence consumer and stakeholder behaviour. As a result, investors and customers prefer to deal with ethical green businesses rather than unethical ones, and stakeholders attempt to invest in green businesses and initiatives. In this situation, the businesses should swiftly modify their strategy to reflect the new tendency of shifting from excessive spending to green consumption. The regularity with which greenwashing is used as an unethical marketing tactic to highlight the company's environmental accomplishments rise as a result of this process.

Greenwashing in maritime trade is a cunning and insidious practice that threatens to undermine the attainment of Sustainable Development Goals (SDGs), which are global objectives designed to address pressing social, economic, and environmental challenges. In the maritime industry, greenwashing takes the form of deceitful marketing tactics, where

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companies portray themselves as environmentally responsible and sustainable, all while obscuring or misrepresenting their true impacts on the environment.

CASE STUDY :-In 2013, Maersk Line introduced its Triple-E class ships, touted as paragons of eco-friendliness in global shipping. These massive vessels, whose names stood for economy of scale, energy-efficient, and environmentally improved, were marketed as revolutionary. Maersk's press release ambitiously claimed they would operate on carbon-neutral e-methanol or sustainable bio-methanol "as soon as possible," though details were scarce. The company's marketing efforts emphasized the ships' enormous size and numerous eco-friendly features. However, the reality proved more complex. Critics pointed out that while individual Triple-E ships might be more efficient, the shipping industry's overall growth meant only modest net reductions in emissions. Moreover, the actual fuel efficiency and emissions reductions achieved by these ships in real-world conditions often fell short of the bold marketing claims. The short-term environmental impact was concerning, potentially increasing emissions, water pollution, cancer and asthma rates, and toxic algae blooms. This case highlighted the challenges of achieving meaningful environmental progress in the shipping industry, where substantial improvements depend not just on individual companies but on collective efforts and international regulations.

Technological Advancements and Greenwashing

Technological developments will play a major role in reducing the environmental impact of the maritime sector and reaching the challenging decarbonization targets set for 2050. Above all, it is imperative that renewable energy sources take the place of traditional fossil fuels. But this shift necessitates careful planning that considers these new fuels' whole lifecycle. It's important to remember that, depending on how their manufacturing is carried out, some fuels that are marketed as "green" may end up doing more harm to the environment over time. Fuels generated by water electrolysis using renewable energy are currently seen by many experts and stakeholders as the most sustainable solutions. Examples of these fuels are e-hydrogen and e-ammonia.

Technological improvements present obstacles as well as opportunities in the dynamic landscape of maritime trade, most notably the possibility of greenwashing. Blockchain

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technology emerges as a resolute protector against dishonest business activities, creating an unchangeable record of environmental practices that guarantees authenticity and transparency. The installation of Internet of Things (IoT) sensors aboard ships provides precise, real-time data on pollutants and fuel consumption, bolstering environmental reporting accuracy and exposing attempts at disinformation. Enhanced by AI and machine learning algorithms, satellite monitoring takes on the role of a watchful ombudsman, spotting irregularities and contradictions in published data and serving as a barrier against possible greenwashing schemes.

Environmental impact assessment software is a specialist tool that can be used to fully handle the problem of greenwashing. This software provides a comprehensive view of sustainability initiatives by taking into account a number of variables, such as fuel use, emissions, and waste management. Simultaneously, strong cybersecurity and data encryption act as a safe haven, preventing manipulation and tampering with data. Through immersive and interactive experiences, augmented reality (AR) applications increase transparency by giving stakeholders a firsthand understanding of a company's sustainability objectives. Additionally, mobile applications give users access to real-time environmental data, opening up a channel for greater responsibility and openness.

In addition, the development of remote inspection technologies—such as drones with sophisticated sensors and cameras—improves inspection accuracy and acts as a strong disincentive to attempts to fabricate an environmental story. With its ability to create a virtual image of real assets, digital twin technology becomes a useful tool for monitoring and simulating maritime operations. This supports the industry's dedication to authenticity by enabling proactive improvement of procedures to reduce environmental effects. By combining these technical developments, the maritime commerce sector strengthens its resistance against greenwashing and moves closer to a day when sustainability and genuineness will be what characterize success.

International Conventions and Other Statutory Regulations

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The marine sector is subject to an intricate web of global agreements and guidelines designed to mitigate ecological footprints and foster sustainability. The International Convention for the Prevention of Pollution from Ships (MARPOL) is a leading international treaty with six annexes that address different forms of maritime pollution. These include toxic chemicals and oil, dangerous packaging, waste, sewage, and air pollution. In addition to MARPOL, the Ballast Water Management Convention also aims to stop the spread of aquatic invasive species. Ship energy efficiency is promoted by the Ship Energy Efficiency Management Plan (SEEMP) and the Energy Efficiency Design Index (EEDI), whereas ship sulphur oxide emissions are drastically reduced by the IMO 2020 Global Sulphur Cap.

These global initiatives are further strengthened by regional and national rules. Strict regulations, such as the Ship Recycling Regulation and the Monitoring, Reporting and Verification (MRV) Regulation for CO₂ emissions, have been put in place by the European Union. Certain European maritime areas are protected by regional accords such as OSPAR, HELCOM, and the Barcelona Convention. While China's Domestic Emission Control Areas impose stronger emission regulations in its coastal waters, the United States governs water pollution on a national basis under the Clean Water Act. The combined goals of these complex policies are to enhance air quality, minimize pollution, and safeguard marine ecosystems. As businesses work to fulfil these requirements while preserving operational effectiveness and financial viability, they also pose compliance and potential greenwashing difficulties for the shipping sector.

MARPOL Annex VI provides a prime opportunity for greenwashing in the marine industry due to its complex and multifaceted nature. Companies might exploit the regulation's various components to create a façade of environmental responsibility. For instance, a shipping company could claim broad compliance with MARPOL Annex VI while only meeting certain aspects of the regulation. They might focus on the more visible or easily achievable requirements, such as using low-sulphur fuel in some ships, while neglecting other crucial elements like nitrogen oxide emissions control or energy efficiency measures. This selective compliance allows them to market themselves as "eco-friendly" or "green" without fully adhering to the spirit of the regulation. Additionally, companies might use vague language in their marketing materials, stating they are "working towards full MARPOL

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Annex VI compliance" without providing concrete timelines or progress metrics. This ambiguity can mislead stakeholders into believing the company is more environmentally responsible than it actually is. Some firms might even go so far as to falsify documentation or manipulate emissions data to appear compliant during inspections, while continuing business as usual when not under scrutiny. This type of greenwashing not only deceives consumers and investors but also undermines the regulation's intended environmental benefits and creates unfair competition within the industry.

The IMO 2020 Global Sulphur Cap represents a significant effort to reduce harmful emissions from shipping, but it also creates opportunities for greenwashing. Companies might exploit the regulation's complexity and global nature to present a misleading image of compliance. For instance, a shipping firm could claim to use "low-sulphur fuel" across its entire fleet, implying full adherence to the 0.50% m/m limit. However, in reality, they might only use compliant fuel in heavily monitored areas or on a select few vessels, while continuing to use high-sulphur fuel elsewhere. This selective compliance allows them to project an eco-friendly image while minimizing costs. Some companies might also use vague language in their communications, stating they're "committed to low-sulphur operations" without specifying the extent of their actual compliance. Others might conflate compliance in Emission Control Areas (which have an even stricter 0.10% m/m limit) with global compliance, further muddying the waters. This type of greenwashing not only misleads stakeholders but also creates unfair competition and undermines the regulation's environmental goals. To combat this, careful scrutiny of fuel usage data, third-party verifications, and transparent reporting across a company's entire operations are crucial.

Solutions to Overcome Greenwashing in Marine Industry

Greenwashing in the marine industry refers to the practice of making false claims regarding environmental sustainability, which highlights the necessity for a multipronged strategy to address this problem. Stakeholders can advocate for unambiguous sustainability standards and industry-wide rules by starting transparency and certification programs. The accuracy

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and dependability of environmental claims are guaranteed by independent audits and verification by other organizations. Consumers, investors, and stakeholders are the focus of education and awareness campaigns that aim to differentiate between sincere and deceptive sustainability initiatives. In order to create and implement sustainable practices, cooperation and collaborations between industrial participants, environmental organizations, and regulatory bodies are essential. Deceptive activities are discouraged by strong regulatory frameworks that are enforced effectively. Monitoring environmental performance in real time is made possible by utilizing technology and data. Businesses are held accountable for

truthful sustainability claims by means of legislative accountability frameworks and public reporting obligations. Participation of stakeholders, encompassing environmental involvement of stakeholders, such as neighbourhood associations and environmental organizations, guarantees inclusive decision-making procedures. A dedication to environmental stewardship is fostered by rewarding sincere sustainability efforts and promoting ongoing progress. In order to address global environmental concerns in the maritime trade industry and assist global sustainability initiatives, international collaboration is stressed as a final strategy. When taken as a whole, these actions seek to lessen the practice of "greenwashing," encourage sincerity in sustainability initiatives, and improve the environment.

To counteract greenwashing in the shipping industry, a variety of innovative methods might be employed. Blockchain technology can allow transparent and tamper-proof recording of environmental data, whilst green bonds linked to specific environmental improvements can incentivize real development. Comprehensive life-cycle assessments of ships and procedures can provide a more complete view of environmental effect. Strengthening whistleblower protections can encourage the disclosure of fraudulent claims.

A standardized environmental rating system for ships and companies, coupled with media literacy programs, can help consumers make informed choices. Collaborative industry platforms can facilitate sharing of best practices, while stricter eco-labelling regulations can prevent misleading claims. Implementing effective carbon pricing mechanisms and mandating supply chain transparency can drive real emissions reductions. AI-powered monitoring can enable real-time tracking of environmental performance. Finally, developing stringent sustainable finance criteria can ensure green funding is allocated to truly sustainable

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initiatives. These multi-faceted approaches aim to create a more accountable and genuinely sustainable shipping industry by addressing greenwashing from various angles.

Conclusion

The maritime industry stands at a critical juncture, facing the dual challenges of meeting growing global trade demands and addressing urgent environmental concerns. As this analysis has shown, greenwashing poses a significant threat to genuine sustainability efforts in the sector. By presenting a misleading image of environmental responsibility, companies engaging in greenwashing not only deceive stakeholders but also undermine the industry's collective progress towards crucial sustainability goals.

The prevalence of greenwashing in areas such as emissions reduction claims, fuel efficiency promises, and compliance with international regulations highlights the need for rigorous scrutiny and transparency. The gap between marketed sustainability initiatives and actual environmental impact often stems from selective disclosure, vague commitments, and a focus on symbolic actions rather than substantive changes. This discrepancy not only erodes trust but also hinders the adoption of truly effective sustainable practices.

However, the maritime industry is not without hope. Technological advancements offer powerful tools to combat greenwashing and promote authentic sustainability. From blockchain for transparent record-keeping to AI-powered monitoring systems and comprehensive environmental impact assessment software, these innovations can play a crucial role in verifying environmental claims and holding companies accountable. Strengthening the regulations, ensuring robust enforcement, and closing loopholes that allow for selective compliance are critical steps towards creating a truly sustainable maritime sector. To overcome the challenge of greenwashing, a multi-faceted approach is necessary. This includes enhancing transparency through standardized reporting and independent audits, educating stakeholders to discern genuine sustainability efforts, fostering collaboration between industry participants and environmental organizations, and implementing stricter accountability measures. Incentivizing authentic sustainability initiatives and promoting continuous improvement are also crucial elements in this strategy.

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In conclusion, while greenwashing presents a significant obstacle to sustainable development in the maritime industry, it is not insurmountable. By leveraging technological innovations, strengthening regulatory frameworks, and fostering a culture of transparency and genuine commitment to sustainability, the industry can navigate towards a future where environmental responsibility is not just a marketing tool, but a fundamental aspect of operations. This transition is essential not only for the long-term viability of the maritime sector but also for its crucial role in achieving global sustainability goals and mitigating the impacts of climate change.



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