

An Analysis of ESG Report on Graphite. Trends And Insights from Financial Years (Fys) 2021-22 To 2023-24.

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Abstract—Environmental, Social, and Governance (ESG) reporting has emerged as a critical framework for assessing corporate sustainability, ethical conduct, and long-term value creation beyond conventional financial performance. In India, the evolution of ESG disclosure—from the introduction of the Business Responsibility Report (BRR) by the Securities and Exchange Board of India (SEBI) in 2012 to the mandatory Business Responsibility and Sustainability Report (BRSR) in 2021 for the top 1,000 listed companies—has significantly enhanced corporate transparency and accountability. This study examines the ESG performance of Graphite India Limited (GIL), a leading manufacturer of graphite electrodes and carbon products. The research analyzes GIL’s ESG disclosures over three financial years to assess trends, identify emerging patterns, and evaluate improvements and challenges, with particular emphasis on environmental sustainability initiatives. The findings reveal a clear progression in GIL’s ESG performance, marked by strengthened environmental management systems, significant improvements in energy efficiency, increased adoption of renewable energy, structured climate risk assessments aligned with global frameworks, and enhanced water and waste management practices. The study also highlights the company’s commitment to employee welfare and ethical governance, reinforcing its alignment with responsible business conduct.

Index Terms—ESG Reporting; Sustainability; Graphite India Limited; Environmental Management; Energy Efficiency; Corporate Governance

I. INTRODUCTION

An ESG report is a company's formal disclosure of its environmental, social, and governance activities and impacts. It goes beyond traditional financial reporting to offer stakeholders a comprehensive view of how the

company manages its interactions with the environment, its relationships with people, and its internal governance structures. Essentially, it illuminates a company's commitment to sustainability and ethical practices, covering areas like carbon emissions, labor standards, and board diversity, allowing investors, customers, and the public to assess its broader impact and long-term viability.

ESG reporting started gaining importance in the early 2010s as people became more aware of environmental and social issues in business. The Securities and Exchange Board of India (SEBI) introduced the Business Responsibility Report (BRR) in 2012, requiring the top 100 listed companies to share details about their sustainability efforts. As ESG became more important globally, SEBI replaced BRR with a more detailed framework called the Business Responsibility and Sustainability Report (BRSR) in 2021. From 2022-23, it became mandatory for the top 1,000 listed companies to submit BRSR reports. Many Indian companies are also following international ESG standards like the Global Reporting Initiative (GRI) and Sustainability Accounting Standards Board (SASB) to attract investors and build trust. With increasing government rules, investor interest, and global pressure, ESG reporting in India is becoming a key part of corporate planning and decision-making.

The significance of ESG reports lies in their capacity to deliver essential transparency and accountability about a company's environmental, social, and governance effects. Through disclosure of performance outside conventional financial data, the reports enable stakeholders to evaluate a company's sustainability and ethical orientation. This, in turn,

leads to enhanced risk management, appeals to responsible investors, enhances stakeholder confidence, and establishes a competitive edge for companies focusing on ESG factors. In addition, ESG reporting helps to propel sustainable development by incentivizing companies to align their practices with international goals and tackle imminent environmental and societal issues, culminating in a more responsible and equitable future.

Graphite India Limited (GIL) is a prominent producer of graphite electrodes and carbon products with the emphasis on sustainability and corporate responsibility. The company officially adopted Environmental, Social, and Governance (ESG) reporting through the launch of its first ESG report for the 2021-22 fiscal year, which is a major move toward disclosure and corporate accountability. Since then, GIL has also continued to release yearly ESG reports, which indicate its dedication to the preservation of the environment, social well-being, and ethical management. The company has made efforts towards decreasing its footprint on the environment, such as energy-saving strategies and the incorporation of renewable energy. It has also performed climate risk analyses to harmonize its financial and operational plans with long-term sustainability objectives. Moreover, GIL proactively fosters the well-being of employees, engagement with society, and responsible business practices. Global rating agencies like Sustainalytics and S&P Global evaluate the ESG performance of the company, indicating its commitment to international sustainability norms. Graphite India Limited strives to generate long-term value for stakeholders while ensuring a sustainable future through its ESG programs.

II. LITERATURE REVIEW

Radzi, H. (2023) highlights the growing importance of ESG (Environmental, Social, and Governance) in investment decisions, as ESG-compliant companies attract investors due to lower risks, better governance, and sustainability. While ESG integration enhances reputation and financial stability, studies show mixed effects on firm performance, suggesting an indirect relationship. The stakeholder theory emphasizes considering all stakeholders, not just shareholders, for long-term value creation. Strong ESG practices lead to stable growth and better stakeholder relationships, but

further research is needed to fully understand their long-term impact on businesses.

Gupta, R., & Motwani, A. (2022) highlights the evolution of corporate reporting from traditional financial reporting to sustainability and ESG reporting, driven by increasing stakeholder demands for transparency. ESG reporting, which assesses a company's environmental, social, and governance impact, has gained prominence due to regulatory requirements and investor interest. The paper examines ESG reporting trends in India, revealing that while large firms have started adopting sustainability disclosures, many still struggle with inadequate regulations for environmental and social aspects. The introduction of the Business Responsibility and Sustainability Report (BRSR) is expected to improve ESG transparency. However, concerns remain regarding data authenticity, the regulation of ESG rating providers, and the potential for greenwashing. Third-party assurance is seen as a way to enhance credibility, ensuring that ESG reporting effectively supports sustainable business practices.

Efthymiou, L., Kulshrestha, A., & Kulshrestha, S. (2023) looks at Environmental, Social, and Governance (ESG) from the perspective of the UN's Sustainable Development Goals and as a framework for corporate social responsibility. It describes the three pillars of ESG—protecting the environment, social responsibility to stakeholders, and good governance—and points to the increasing effort to connect ESG with strategic sustainability. While recognizing advancements, the review points out gaps in long-term strategic integration and the absence of direct linkages between ESG and financial models. It brings in socially responsible investment (SRI) as a key element for integrating ethical and environmental objectives into financial strategies. The review also examines the interconnectedness of technology and sustainability, and more specifically the Indian services sector, where it finds that while potential benefits are presented by technology, they can also represent challenges in terms of resource usage. Overall, the review emphasizes the desire for standardized ESG measures and a better grasp of how ESG practices may be effectively adopted across different business environments.

Patel, V., & Aditya, K. (2024) highlights the growing importance of Environmental, Social, and Governance (ESG) criteria in evaluating corporate performance, particularly in the Indian metal industry. Given the industry's economic significance and environmental impact, there is increasing scrutiny on its adherence to ESG principles. The study examines how ESG scores influence financial performance, specifically Return on Assets (ROA) and Return on Equity (ROE). Findings indicate a positive relationship, suggesting that companies with strong ESG practices tend to achieve higher profitability and shareholder returns.

Agbakwuru, V., Onyenahazi, O. B., Antwi, B. O., & Oyewale, K. (2024) highlights the growing significance of Environmental, Social, and Governance (ESG) reporting, proving its strong link to improved corporate financial performance. With mounting regulatory pressures and stakeholder expectations for transparency, strong ESG practices are revealed to deliver concrete financial returns, such as cost savings from environmental efficiencies, productivity and brand equity gains from social programs, and lower financial risk through good governance. Though challenges such as greenwashing and data inconsistencies continue, mainly for smaller companies, new trends such as integrated reporting and technological innovation are creating a path to global standardization of ESG metrics. Lastly, the review insists that ESG reporting is not only a compliance burden but a strategic imperative that promotes sustainable business practices and supports long-term value creation.

OBJECTIVES

This study has the following objectives-

1. To evaluate the environmental, social, and governance (ESG) performance of graphite companies from FY 2021-22 to FY 2023-24.
2. To identify key trends in ESG reporting related to graphite, highlighting improvements or areas of concern.

III. RESEARCH METHODOLOGY

Research Design: This study adopts a descriptive research design, which is suitable for analyzing and interpreting existing information to identify patterns, trends, and insights. The focus is on examining the Environmental, Social, and Governance (ESG)

performance of graphite companies, particularly through the lens of ESG disclosures over a defined period. Descriptive research allows for an in-depth understanding of how ESG practices have evolved and been communicated by these firms.

Approach: A qualitative research approach is employed in this study. This method facilitates a detailed examination of narrative data contained in ESG reports, enabling the researcher to interpret and understand the strategic orientation, initiatives, and compliance efforts of the company with respect to ESG frameworks. Qualitative analysis is appropriate for drawing insights from textual content and contextual factors within the ESG documentation.

Data Collection: - The study is based on secondary data collected from publicly available ESG reports of Graphite India Limited (GIL) for the financial years 2021–22 to 2023–24. These reports were accessed directly from the company's official portal. The secondary data approach ensures that authentic and officially disclosed information is analyzed, enhancing the reliability of the findings.

Data Analysis and Findings: Graphite India Limited (GIL) is a pioneer in the Indian carbon and graphite industry and a globally recognized manufacturer of graphite electrodes primarily used in steel production. In addition to its core product, the company has diversified into specialty carbon and graphite products, impervious graphite equipment, glass-reinforced plastic (GRP) pipes, and renewable energy initiatives. The analysis of GIL's sustainability practices reveals a strong and progressively evolving commitment to environmental responsibility, supported by robust governance mechanisms, innovation, and substantial investments in green technologies.

IV. ENVIRONMENTAL MANAGEMENT SYSTEM

GIL has implemented a comprehensive Environmental Management System (EMS) aligned with ISO 14001:2015 standards, supported by an Integrated Management System (IMS). The company conducts regular internal and external audits to ensure compliance, monitor performance, and drive continuous improvement. These systems have enabled measurable outcomes, such as enhanced resource

efficiency and the achievement of zero liquid discharge at key facilities. Some of them are discussed thoroughly below.

i. Energy Efficiency and Renewable Energy- The company has achieved a significant reduction in overall energy intensity, demonstrating improved operational efficiency. GIL has actively reduced its reliance on high-carbon fossil fuels while substantially increasing the use of renewable energy sources. Strategic initiatives, such as long-term power purchase agreements (PPAs) for renewable energy, have strengthened its transition towards cleaner energy and reduced its carbon footprint.

ii Climate Change and Greenhouse Gas Emissions- GIL's climate strategy aligns with the Paris Agreement and India's net-zero emission targets. The company has achieved independently verified reductions in Scope 1 and Scope 2 greenhouse gas (GHG) emissions, reflecting effective emission management. Furthermore, GIL has initiated Scope 3 GHG accounting, extending climate responsibility across its value chain. Climate-related disclosures are made in accordance with global frameworks such as CDP and the Task Force on Climate-related Financial Disclosures (TCFD), enhancing transparency and accountability.

iii. Water Conservation- Water stewardship is a key focus area for GIL. The company has implemented initiatives to optimize natural resource consumption, including rainwater harvesting, recycling, and reuse systems. Notably, GIL has achieved zero liquid discharge (ZLD) at its largest manufacturing facility, demonstrating excellence in water conservation and wastewater management.

iv. Solid Waste Management and Circular Economy- GIL has established systematic practices for the accurate measurement and management of solid waste generated across its operations. These efforts have resulted in a substantial reduction in waste generation and improved segregation, reuse, and recycling. The company also embraces circular economy principles, aiming to minimize the life-cycle environmental impact of its products through responsible material use, process optimization, and sustainable product design.

v. Biodiversity Conservation- The company actively undertakes biodiversity conservation initiatives, recognizing their environmental and social value. A notable example is GIL's mangrove plantation project in the Sundarbans, a UNESCO World Heritage Site. This initiative contributes to ecosystem restoration, climate resilience, and community well-being, reinforcing the company's commitment to nature-positive actions.

vi. Air Quality Management- Although not detailed uniformly across all reporting periods, GIL's continuous reduction in emissions and pollution control measures reflect a sustained focus on air quality management. The company employs pollution control equipment such as electrostatic precipitators and dust collectors, contributing to improved ambient air quality and compliance with environmental standards. Innovation and Green Investments

vii. Innovation plays a central role in GIL's sustainability strategy. The company consistently leverages technology to enhance resource conservation and reduce dependence on natural resources. A significant portion of capital expenditure—approximately 37.5% allocated to environmental and social improvements—underscores GIL's commitment to eco-friendly processes, energy efficiency, and long-term sustainability.

V. TREND ANALYSIS OF ENVIRONMENTAL SUSTAINABILITY

Practices at Graphite India Limited (GIL)- This is analysed on the following subheads

1. TRENDS IN ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)

The analysis of Graphite India Limited's Environmental Management System over the three-year period reveals a clear progression from foundational commitments to advanced, outcome-oriented environmental governance.

2021–22: During this period, GIL focused on establishing strong foundational principles for environmental management. The company emphasized adherence to ISO 14001 certification, implementation of internal audits, and integration of

environmental considerations into core business decision-making processes. The approach was largely strategic and policy-driven, highlighting alignment with global sustainability goals and optimization of natural resource consumption. These initiatives reflected broad commitments aimed at building a structured environmental management framework.

2022–23: In 2022–23, GIL demonstrated consistency by reiterating and reinforcing its core environmental commitments. The company continued to emphasize embedding environmental considerations into operations, aligning with national and global sustainability objectives, optimizing resource utilization, and promoting conservation practices. While the approach remained largely similar to the previous year, this period indicated stability and institutionalization of environmental management practices across the organization.

2023–24: The 2023–24 period marked a significant shift from general commitments to measurable environmental performance and advanced implementation. GIL reported specific and verifiable environmental achievements, including the attainment of zero liquid discharge at key facilities, independently verified reductions in Scope 1 and Scope 2 greenhouse gas emissions, and the initiation of Scope 3 emissions accounting. The company also reported increased adoption of renewable energy and the implementation of targeted biodiversity initiatives such as mangrove plantation projects. This year reflects a mature EMS characterized by data-driven decision-making, transparency, and tangible outcomes.

2. TRENDS IN ENERGY EFFICIENCY AND RENEWABLE ENERGY

The trend analysis of energy management at GIL indicates a gradual evolution from strategic intent to performance-based results supported by quantitative data.

2021–22: In 2021–22, GIL articulated a foundational energy strategy focusing on both demand-side and supply-side energy management. The company outlined various initiatives and planned investments aimed at improving energy efficiency and promoting the use of cleaner energy sources. This phase primarily

described intent, planning, and the identification of key focus areas rather than measurable outcomes.

2022–23: During 2022–23, GIL continued to emphasize its dual focus on energy demand and supply management. A notable development during this period was the initiation of formal energy performance tracking systems, signalling a transition towards data-driven energy management. This step was critical in enabling the company to measure progress, evaluate efficiency improvements, and establish performance benchmarks.

2023–24: The 2023–24 period demonstrated a significant shift towards reporting concrete achievements and quantifiable results. GIL disclosed detailed examples of energy efficiency improvements at specific manufacturing units, including Ambad, POWMEX, and Durgapur plants. These initiatives resulted in measurable reductions such as a 60% reduction in diesel consumption, a 22% reduction in electricity usage at the Ambad facility, and an overall 56% reduction in energy intensity. Additionally, the company highlighted specific renewable energy projects, including the Satpur renewable energy power purchase agreement and lower-carbon energy sourcing at Durgapur. These outcomes provide strong evidence of the successful execution of strategies outlined in earlier years.

3. TRENDS IN CLIMATE CHANGE AND GREENHOUSE GAS (GHG) EMISSIONS

The analysis of GIL’s climate change and GHG management practices reveals a gradual transition from conceptual understanding to structured and framework-based implementation.

2021–22 and 2022–23: During these years, GIL acknowledged climate change as a complex and material risk to its operations and value chain. The company emphasized its commitment to studying climate-related impacts and conducting location-specific risk assessments. The disclosures primarily focused on intent, methodology, and the process of analyzing risks and opportunities rather than reporting outcomes. These years reflect the preparatory phase of climate governance.

2023–24: In 2023–24, GIL demonstrated a significant advancement by conducting a full-fledged climate risk and opportunity assessment aligned with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. Importantly, the company noted that such assessments had been conducted in earlier years and were repeated during the current year, indicating an ongoing and systematic approach rather than a one-time exercise. This reflects deeper integration of global climate frameworks into corporate strategy and decision-making.

4. TRENDS IN WATER CONSERVATION

GIL's approach to water management shows a clear evolution from strategic intent to measurable and facility-level performance.

2021–22: The company articulated its commitment to minimizing its water footprint through awareness programs and the adoption of water conservation techniques such as rainwater harvesting, recycling, and reuse. This phase primarily established policy intent and organizational awareness.

2022–23: In this period, GIL reported tangible success in reducing water consumption, attributing improvements to technical interventions combined with sustained employee awareness initiatives. This marked the transition from intent-driven strategies to initial performance outcomes.

2023–24: The 2023–24 disclosures provided quantifiable and site-specific evidence of water conservation achievements. GIL reported significant reductions in water consumption at facilities such as Ambad and POWMEX Steel, supported by detailed descriptions of technical and operational interventions. The company also explicitly stated an overall reduction in total water consumption compared to the previous year, demonstrating effective execution and monitoring.

5. TRENDS IN SOLID WASTE MANAGEMENT

The trend analysis highlights a shift from strategic planning and data collection to measurable waste reduction outcomes.

2021–22 and 2022–23: - During these years, GIL emphasized its proactive approach to waste management, with a focus on reuse, recycling, and responsible disposal. The company initiated systematic tracking of non-hazardous waste with the intention of setting future reduction targets. These years represent the groundwork phase, characterized by policy formulation and data generation.

2023–24: In 2023–24, GIL reported significant and quantifiable improvements in waste management performance. The company achieved an overall reduction of over 30% in total waste generated and a 24% reduction in total waste disposed compared to the previous year. Additionally, detailed figures on waste recovered through recycling and reuse were disclosed, demonstrating tangible progress toward waste minimization.

6. TRENDS IN CIRCULAR ECONOMY PRACTICES

GIL's circular economy journey reflects a gradual move from aspirational goals to demonstrable outcomes.

2021–22 and 2023–24: In both years, GIL acknowledged that achieving a fully circular business model remains aspirational. However, the company highlighted ongoing implementation of a reuse-based model, including the reuse of scrap materials, recycling of products, and responsible waste disposal. The emphasis during these years was on intent and the nature of initiatives undertaken.

2022–23: The 2022–23 period stood out for its emphasis on demonstrable progress. GIL reported a reduction in total waste generated from 52,715.9 MT in FY 2021–22 to 46,924.8 MT in FY 2022–23, along with a corresponding decrease in waste disposed. Importantly, the company also disclosed an increase in waste recycled and reused, rising from 4,313.3 MT to 4,653.3 MT. This marked a clear shift from qualitative descriptions to quantitative evidence of circular practices.

7. TRENDS IN BIODIVERSITY MANAGEMENT:

The company's biodiversity initiatives show a progression from planning and general practices to high-impact conservation actions.

2021–22 and 2022–23: During these years, GIL highlighted its intention to develop a comprehensive Biodiversity Management Plan (BMP) aimed at identifying local species, habitats, and potential environmental disturbances. The company also reported general initiatives such as tree plantation drives and digitalization efforts, which contribute indirectly to biodiversity conservation.

2023–24: In 2023–24, GIL undertook a major, direct biodiversity intervention through the initiation of a large-scale mangrove plantation project in the Sundarbans. This initiative represents a significant escalation from planning to action, contributing to ecosystem restoration, coastal protection, carbon sequestration, and community benefits.

8. TRENDS IN AIR QUALITY MANAGEMENT

Air quality management at GIL reflects increasing rigor, transparency, and verification over time.

2021–22: The company emphasized regular monitoring of ambient and stack air quality and the deployment of pollution control systems such as dust collectors, incinerators, effluent treatment plants (ETP), sewage treatment plants (STP), road sweeping machines, foggers, and wind barriers. This established the company's commitment to monitoring and control.

2022–23: In 2022–23, GIL reported successful reductions in key air pollutants, including nitrogen oxides (NO_x) and particulate matter, compared to the previous year. The company also confirmed that emission levels remained well below regulatory standards, indicating the effectiveness of control measures.

2023–24: The 2023–24 disclosures provided independently authenticated numerical data showing further reductions in NO_x, particulate matter (PM), and hazardous air pollutants (HAPs) compared to FY

2022–23. This represents a transition from general performance statements to precise, verifiable air quality outcomes.

9. TRENDS IN INNOVATION FOR SUSTAINABILITY

Innovation has increasingly become a strategic enabler of GIL's environmental performance.

2021–22: GIL linked innovation to sustainability outcomes, highlighting benefits such as reduced specific energy consumption, conservation of resources, lower environmental pollution, and cost savings. The focus was primarily on outcomes rather than financial commitment.

2022–23: In 2022–23, GIL formalized its commitment to sustainable innovation by disclosing significant green investments. The company allocated 1.28% of R&D expenditure and 31.57% of capital expenditure toward technologies aimed at improving environmental and social performance. Examples included upgrades to dust collector systems, installation of energy-efficient compressors, and enhancements to effluent treatment facilities.

2023–24: The trend continued in 2023–24, with an increased 37.5% of capital expenditure dedicated to environmental and social impact improvements, despite a marginal reduction in R&D allocation. Investments during this year were highly targeted, focusing on dust collector system improvements, PNG start-ups, ETP enhancements, and automation initiatives to improve efficiency and reduce environmental impact.

VI. CONCLUSION

The data analysis and trend evaluation of Graphite India Limited (GIL) clearly indicate a progressive and structured evolution in its environmental sustainability performance. As a pioneer in the carbon and graphite industry, GIL has successfully integrated environmental responsibility into its core business strategy while expanding its product portfolio and global presence. The findings demonstrate that the company has moved beyond compliance-oriented practices to adopt a mature, data-driven, and outcome-focused environmental governance framework.

GIL's implementation of a robust Environmental Management System aligned with ISO 14001:2015, supported by integrated management practices and

regular audits, has provided a strong foundation for continuous improvement. Over the three-year period from 2021–22 to 2023–24, the company exhibits a clear transition from policy formulation and strategic intent to measurable environmental outcomes, such as zero liquid discharge, significant reductions in energy intensity, verified greenhouse gas emission reductions, and substantial improvements in water and waste management. The trend analysis highlights that energy efficiency and renewable energy adoption have emerged as major strengths, supported by quantified reductions in fuel and electricity consumption and a growing reliance on renewable power sources. Similarly, climate change management has evolved from conceptual risk assessments to structured, recurring evaluations aligned with globally recognized frameworks such as TCFD, reinforcing transparency and long-term resilience. Resource conservation efforts, particularly in water stewardship and solid waste management, demonstrate tangible improvements through facility-level interventions and circular economy practices.

Furthermore, GIL's biodiversity initiatives reflect a meaningful shift from planning to action, with large-scale projects such as mangrove plantations in the Sundarbans contributing to ecosystem restoration and social value creation. Air quality management has also strengthened over time, progressing toward independently verified reductions in key pollutants. Importantly, innovation and green investments have acted as critical enablers of this transformation, with a growing proportion of capital expenditure directed toward environmentally and socially impactful technologies. Overall, the findings suggest that Graphite India Limited has established itself as a responsible and forward-looking industrial organization, effectively balancing operational performance with environmental stewardship. The company's consistent movement toward measurable results, transparency, and alignment with global sustainability frameworks positions it well to address future environmental challenges and contributes positively to India's broader sustainability and climate goals.

VII. LIMITATIONS OF THE STUDY

The following are the limitations of this study

- i. **Limited ESG Scope:** The study primarily focuses on GIL's environmental performance, offering an incomplete picture of its overall ESG (Environmental, Social, and Governance) efforts due to limited detail on social and governance initiatives.
- ii. **Reliance on Self-Reported Data:** A limitation is the reliance on GIL's self-reported data, with independent verification for earlier years remaining unspecified.
- iii. **Absence of Benchmarking:** The study lacks comparative benchmarking against industry peers, making it difficult to assess GIL's relative performance.
- iv. **Missing Long-Term Targets:** The absence of explicitly stated specific long-term environmental targets from GIL hinders the assessment of its future ambitions and long-term trajectory.
- v. **Data Imbalance and Omissions:** There is an imbalance between qualitative and quantitative details for earlier periods, and the study does not include discussions on challenges faced, which limits a comprehensive understanding.

VIII. SCOPE FOR FURTHER STUDY

To enhance the depth and credibility of future assessments, I recommend:

1. **EXPANDING SCOPE TO ALL ESG PILLARS:** Integrate comprehensive data and analysis on GIL's social (e.g., employee well-being, community engagement) and governance (e.g., board structure, ethical practices) performance.
2. **SEEKING COMPREHENSIVE INDEPENDENT ASSURANCE:** Advocate for independent third-party verification of all key environmental data across all reporting years to bolster data reliability and stakeholder trust.

3. INCLUDING CHALLENGES AND RISK MANAGEMENT:

Incorporate discussions on environmental challenges encountered, lessons learned, and how GIL's climate risk studies directly influence business strategy, offering a more balanced and transparent narrative.

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