

Environmental Social Governance Development Level Assessment of Indian Organisations for Developing the Excellence Framework

Prabakar S^{(1)(*)}, Suresh B⁽²⁾, Subhagar S⁽³⁾

^{(*)(1)}Research Scholar, Department of Chemical Engineering, Annamalai University, Annamalainagar-608002

⁽²⁾Professor, Department of Chemical Engineering, Annamalai University, Annamalainagar-608002

⁽³⁾Associate Professor, Department of Chemical Engineering, Annamalai University, Annamalainagar-608002

Abstract:

The integration of ESG into corporate strategy is emerging and delivering results. This paper delivers a comprehensive review of the development level of ESG across Indian organisations, set against a changing regulatory framework and evolving global standards. The study leverages the inputs of 114 EHS/ESG professionals from varied sectors who responded to a survey of 39 well-researched questions. It looks at the interaction between regulatory imperatives, resource commitments, governance mechanisms, and performance. Descriptive statistics are used to profile the pattern of adoption, while the influence of SEBI's BRSR mandate on ESG implementation is tested using one-way ANOVA and chi-square inference tests. The results show that while the mandate has indeed accelerated the pace of ESG adoption, the mandate status does not have a significant effect on perceived ESG performance (ANOVA: $F = 0.0019$, $p = 0.9652$) and resource allocation ($\chi^2 = 1.82$, $p = 0.1774$). Instead, voluntary drivers related to independent assurance, life-cycle assessments, and supply-chain audits emerge as stronger predictors of maturity. The key trends are environmental certifications, strong safety, and global reporting guidelines. Nevertheless, significant gaps exist in leadership diversity and aligning incentives. This study makes clear imperatives of the need to shift from compliance to inclusive ESG governance for the Indian organisation and provides valuable insights to policymakers, investors, and corporate executives on strategies to develop the ESG framework.

Keywords: ESG, SEBI BRSR, sustainability reporting, governance, diversity, India, ESG development level, maturity, resource allocation, assurance, EHS/ESG professionals

1. Introduction

ESG as Strategy, not certification

ESG factors have turned from voluntary CSR initiatives to a widely accepted global framework for businesses. There are three critical dimensions of ESG, including:

Environmental: Resource efficiency management, emissions management, waste management, and biodiversity impacts.

Social: Safety, fair labour practices, diversity and inclusion, well-being of employees, and community involvement.

Governance: Setting ethics, business conduct, transparency, anti-corruption measures, and executive remuneration in line with sustainability performance.

It has turned ESG into a core strategy and risk management in light of investor demand, regulation, and societal expectations. The forcing functions for the rise of ESG include investor demand for non-financial disclosures, regulatory mandates, and societal expectations for responsible corporate behaviour. Global frameworks such as the Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), and Task Force on Climate-related Financial Disclosures (TCFD) have standardised ESG reporting. In India, SEBI's BRSR for the top 1,000 listed entities focuses on interoperability with global frameworks, enabling accelerated adoption and decision-useful reporting [1].

Where India Stands vs. Developed Markets

Developed markets: Under the CSRD of the EU and ISSB globally, companies are increasingly assuring ESG data, setting science-based targets, and embedding climate governance into board and pay structures. Such a combination increases the usefulness of disclosure and reduces the danger of greenwashing, while turning capital-allocation decisions in the right direction [5].

India: India has witnessed rapid progress in ESG adoption, catalysed by the Securities and Exchange Board of India (SEBI) through the Business Responsibility and Sustainability Reporting (BRSR) framework, mandatory for the top 1,000 listed entities by market capitalisation [1]. Thus, it allows Indian firms to be prepared for both domestic and international disclosure requirements. Large corporations and subsidiaries of multinational companies in India have leading practices, while most mid-sized and smaller firms are still at a nascent stage of implementing ESG [3].

Challenges Faced by Indian Organisations

There are certain inherent obstacles for Indian corporates in embracing ESG:

Resource Constraints: Smaller companies have limited resource availability that prevents them from investing in ESG competencies.

Data and Reporting Gaps: The variability of the quality of data and the unaligned internal processes make it challenging for the company to adhere to the international standards of ESG.

Supply Chain Complexity: The disintegrated structure of the company's supply chain creates difficulties in the implementation of responsible purchasing and the tracking of the company's Scope 3 emissions, which are of prime importance in the reporting of ESG [2].

Cultural and Governance Barriers: The company has policies related to greater diversity and inclusion. However, the scarcity of women in the company's senior management levels manifests the company's internal struggle to translate policies and intentions into practical outcomes.

Limited Assurance and Verification: Though there is improvement in disclosure reporting, assured ESG reporting verification is not possible for all companies. It poses certain risks of greenwashing.

Regulatory Awareness and Capability Gaps: The company lacks understanding of the latest developments in evolving ESG regulations and the internationally demanded IRs. Hence, the company responds reactively instead of proactively.

Need for This Study

Though there has been good regulatory progress, comprehensive quantitative assessments of ESG maturity have remained scanty in India. By analysing patterns in resource allocation, governance practices, and performance outcomes and comparing these with global trends, the research identifies critical gaps and strategic priorities for advancing ESG integration beyond compliance from the Indian perspective as "ESG Excellence framework for Indian Organisations"[12].

2.0 Methodology

2.1 Study Design

2.2 Questionnaire Development: A cross-sectional survey was conducted targeting EHS/ESG professionals in Indian organisations. The survey was framed keeping in mind SEBI's BRSR and Core KPIs, including their recent mandates for disclosures regarding value chains and green credits [3].

2.2.1 Content Domains: Items were organised under the ESG pillars:

Environmental: GHG inventory boundaries, Scope 1–2 measurement practices (and where applicable, Scope 3); energy and water intensity; waste and circularity programmes; environmental compliance management; internal assurance processes.

Social: Safety metrics; employee well-being, diversity, and inclusion; training; supply chain labour practices; community investment; data privacy.

Governance: Board oversight of ESG; anti-corruption controls; related party disclosures; ESG integration in strategy and risk; alignment with Companies Act requirements.

2.2.2. Item Sources and Mapping: Each item was mapped into BRSR/BRSR Core cells and into Companies Act themes where relevant to facilitate reporting coherence and later benchmarking.

2.2.3. Expert review and pilot test

Our tool has been subject to expert review with sustainability professionals and tested with a pilot test with a small sample population ($n \approx 20$), in which skip logic tests and wording attempts to get clarification and feasibility of information extraction in an Indian corporate setting.

2.3. Sampling and Recruitment

We employed purposive sampling and snowball sampling with the aim of accessing professionals from the field of EHS/ESG. We circulated invites through these channels: (1) professional networks, (2) industry associations, and (3) LinkedIn group invites. The requirements requested that the participant must have (1) a current designation with EHS/ESG responsibilities in India, and (2) awareness of ESG reporting or implementation.

2.4. Data Collection

The survey was administered online through a secured form. The survey participants were made aware of voluntary survey response, anonymity, and assured of confidentiality. No personal data was retained, except metadata of role/sectors for stratified analysis.

2.6. Data Analysis

The descriptive statistics will present the details of the respondent and the nature of the organisations. The domain scores (E, S, and G elements) will be normalised to enable comparison on a common score of 0-100. The inferential tests (including ANOVA on the different sectors and Chi Square on the categorical variable) will analyse the relationship between each compliance readiness and the respondent organisations' details. The key indicators (including the assurance status on the BRSR Core elements and the coverage of the value chain) will be compared to the phased expectations of the SEBI [13].

2.7. Ethical Considerations

According to research ethics, consent, anonymity, and safe data storage are employed in this research. Publishing organisational identities is not planned in this study. This tool does not investigate ownership or commercial information. It concentrates on practices relevant to policies supported in public regulatory frameworks.

3.0 Results and Discussion

3.1 Deep Analysis of survey responses (# 1 - # 39)

Q1. Years of experience of the respondent in the EHS/ESG domain

Dominance of Mid-to-Senior: The most prominent is the category of 11-20 years, which stands at 36. This means that the main respondents are professionals who were probably already in the workforce when ESG became the mainstream responsibility of the business.

Competitive 'Fresh Blood' Entry (0-5 Years) : Notably, the 0 to 5 years category is the second largest, with 28 respondents, beating both the mid-career category (6 to 10 years) and the veteran category (20 years and above). The presence of a large number in the "0-5 years" bracket indicates a recent spurt in recruitment for ESG professionals. It's a classic indicator of an industry in a growth phase, probably due to new requirements for regulatory reporting, which requires.

Sector Stability and Retention (6-10 Years): There is a quite experienced group of professionals, which indicates that EHS/ESG is an established career and retains its talent well. They are also the next generation of leaders born and raised.

Strategic Governance (20+ Years): More than 20% are the veterans reveal that ESG issues are managed by experienced seniors. This indicates that ESG remains a concern of the boardroom, led by experienced knowledge in that field.

Q2. Is ESG mandated by SEBI for your Organisation?

High Compliance Alignment: The largest proportion comes from organisations that have ESG mandatory in SEBI, as it is done in their organisations, with assigned resources. This means that the portability of the SEBI charter is a strong motivator.

Proactive "Non-Mandated" Leaders: A substantial portion (40) has assigned resources to ESG, even though they are not required by SEBI. This is an indication of high voluntary

adoption of the ESG framework by the selected companies. These organisations are likely responding to the global push by investors or taking a visionary approach to future-proof their business.

The "Resource Gap" Risk: A small group of respondents (6) finds that ESG is mandated for their category, but they have no assigned resources. Such companies are most likely to have business risks or receive low scores on BRSR reporting.

Strategic Preparedness: Just 10 of the participants belong to the category of "No Mandate and No Resources". Without the direct legal mandate to participate, almost 91% of the total sample have started allocating resources or are responding to the mandate. This attests to the fact that industry sentiment has changed [2].

Q3. Does the Organisation have the resources assigned to ESG?

High Organisational Commitment: 98 respondents strongly feel that resource allocation by their organisations to ESG has been done. This clearly shows that nearly 86% of this community has dedicated resources to implement it.

Operational Readiness: The value of 98 indicates that few organisations are still involved in policy development but have rather invested in staff or infrastructure to manage ESG initiatives.

Resource Gap: 16 responses indicate that resources are not assigned in their organisations for ESG implementation.

Maturity in the Industry: The clear evidence from the high ratio of 98 to 16 shows that the industry is quite mature. The high ratio is probably because investors and regulatory reports have been pushing for this.

Capacity for Compliance: With 98 entities already resourced, the industry seems well-equipped to deal with complex reporting systems (such as SEBI's BRSR), since they possess the human / financial capital required to monitor and report ESG disclosures.

Q4. What percentage of your energy comes from renewable sources?

Dominant Early-Stage Adoption (0-25%): 44 respondents satisfy the criteria that 0-25% of their energy comes from renewable sources. This group represents organisations that are at the early stages of their sustainability journey.

Advanced Leaders (76-100%): 30 participants who have accomplished very high levels of renewable energy integration. This indicates that 26% of the organisations have managed to separate their business from fossil fuels.

The "Middle Gap" (51-75%): This is the smallest of the four categories, with 12 individuals falling into this range. This indicates that organisations can quickly progress through this stage.

Progressing Organisations (26-50%): This category comprises 28 organisations that have progressed from basic adoption to likely scale-up activities for renewable energy procurement or on-site generation [2] [3].

Overall Industry Breakdown: The statistics portray a polarised industry. This indicates a growing gap between firms that totally embrace the green energy and firms that have yet to start this process.

Q5. Can you disclose your Scope 1, 2, and 3 greenhouse gas emissions?

Primarily Focusing on Internal Operations (Scope 1 & 2 Emissions): This group has the largest number, with 54 respondents analysing Scope 1 and Scope 2 emissions. This shows that most companies have moved to a level of development where they focus on their direct footprint. [9].

Mature Reporting on Scope 1, 2, & 3 Emissions: 38 respondents are monitoring all three scopes, including Scope 3, which focuses on value chain emissions. This group represents the highest level of ESG reporting maturity.

Foundational Tracking (Scope 1 Only): A smaller number of 12 respondents is tracking only Scope 1 emissions. These organisations would likely be at a much earlier stage of carbon accounting, purely focusing on direct emissions of owned or controlled sources.

Transparency Gap: 10 respondents do not track GHG emissions at all. This points out an important issue that must be improved, given that these organisations may pose challenging aspects to overcome for future regulations on climate risks.

Q6. What is your strategy for reducing water consumption?

Holistic Water Management (All of the above): 88 respondents report that their organisations practice holistic water management practices by practising water conservation through water-saving devices, water reuse/recycling, or conducting awareness campaigns. [10].

Technological and Operational Focus (Recycling & Efficiency): A smaller group is working on specific technological interventions, and 16 of the respondents ranked "Water recycling and reuse" while 6 ranked "Implementing water-efficient technologies."

Behavioural Interventions: "Water conservation awareness programs" are relied upon by only 4 responders.

High Integration Level: 88 out of the total 114 companies (approx. 77%) chose the answer "All of the above", which points towards the highly mature level of water stewardship practices. This implies that the water management process is getting woven into the overall operations.

Q7. Do you have a waste reduction and recycling program in place? What are the key performance indicators (KPIs)?

KPI-Driven Waste Management: With a total of 84 participants, the largest group not only practices waste management to reduce waste but also follows certain KPIs, such as the waste diversion rate. This reveals that around 74% of organisations have progressed from setting up qualitative targets to quantitative targets to assess the success of the circular economy strategies [3]

Operational Programs Possible Lack of Metrics: The 12 respondents who have a program in place, yet do not measure their KPIs, imply that there could be a lack of underlying data infrastructure support in terms of measuring.

Embracing Adoption: 12 participants are in the middle of adopting a program. Awareness and the transition phase for approximately 11% of the participants have led to the increased recognition of the demand for improved resource management.

The Lack of Formalisation: With 6 respondents indicating a lack of a formal waste reduction initiative, without a structure in place.

Q8. Are your products designed for durability and longevity?

Commitment to Quality (Maximum Durability): The largest group, 76, claimed that all their products are made for maximum durability. 67% of the organisations, making long-lasting products, is a heart-of-design philosophy, which is integral to reduced environmental impacts.

Partial Integration: 16 claimed that their companies design a partial strategy in which the sustainability feature is confined to niche product lines or high-end product ranges.

Secondary Priority: For 12 respondents, durability is not a primary design consideration. This, too, might be industry-specific, such as fast-moving consumer goods or one-time usage items, or a business model seeks to minimise initial cost rather than maintain a product for longer periods.

Service-Based Longevity: A group of 10 respondents places emphasis on "extended warranties" as a promoter of longevity. This is a move toward a service-based model in which the organisation bears responsibility for the functional life of the product, rather than through manufacturing quality.

Design for Sustainability Maturity: That 76 out of 114 organisations are at the "maximum durability" stage would show good alignment with circular economy principles, where extending the life of a product is seen as a principal way to mitigate waste.

Q9. What materials do you use for packaging, and are they recyclable/compostable?

Standardised Hybrid Approach: These are the largest groups, using both virgin and recycled materials as packaging. 47% of the organisations are in a 'transition phase'. While they have integrated sustainable materials, they still depend on virgin resources, either due to cost, supply chain availability, or the structural requirements of the packaging.

High Circularity Leaders: 36 respondents say they use mainly recycled and recyclable materials. This group is very committed to the circular economy, with a guarantee of minimal packaging footprint through sustainable sourcing and end-of-life recoverability.

Niche Innovation Compostable: 16 respondents have moved to compostable packaging. This is a niche that most probably comes from industries where "zero-waste" or organic disposal is an end-of-life route for the consumer.

Environmental Risk Group: Only 8 of the respondents rely primarily upon virgin plastics. The small number indicates the trend to move away from non-recycled plastics.

There is recyclability versus sourcing. A total of 90 organisations that primarily recycled are engaging in recycled content. This means that the use of recycled materials for packaging is now mainstream; however, attaining 100% is still an uphill task.

Q10. Do you conduct life cycle assessments of your products or services?

High Level of Maturity (Full Coverage): 40 respondents (35%) perform LCAs for all their products/services and have a highly integrated approach towards sustainability.

Sequential Implementation: 32 respondents perform LCAs for their selected products.

Forward-Looking Intent: A substantial number of 26 respondents are at the planning stage. This reflects an obvious intent to adopt in the coming years, given the recognition that LCA data is quickly becoming an essential prerequisite for sophisticated ESG reporting and "green" product designation.

Awareness/Resource Barrier: 16 do not perform any LCA. LCA requires a great deal of information. This group may likely comprise smaller organisations and/or service organisations.

Developing Capability: Together, 72 organisations engaged in LCA activity, indicating that lifecycle thinking is shifting from a "best practice" concept towards a "standard operating procedure".

Q11. What certifications do you have related to environmental management (e.g., ISO 14001)?

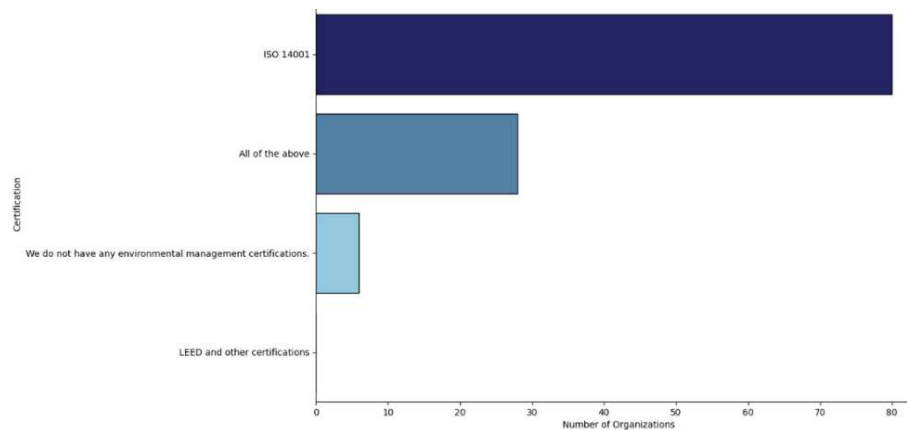


Figure 1: Certification Landscape

Per Figure 1, Standardisation Leader (ISO 14001): 80 hold the ISO 14001 certification. ISO 14001 is the "gold standard", which utilises the management of their environmental responsibilities in a systematic way.

All the above: 28 chose "All of the above," indicating they hold a suite of certifications, most likely including ISO 14001 and ISO 50001. This would be a group of the most "certified," and their business operations are within highly regulated industries or global.

Wide Adoption: Cumulatively, 108 out of 114 entities (or nearly 95%) possess at least one major environmental certification. That indicates that an accredited EMS has ceased to be a strategic differentiator and is now a basic threshold level for operations.

Minorities/ Laggards: Only 6 respondents report having no environmental management certification. This tiny group could include ultra-small businesses, recent startups, or businesses from industries where perceived environmental impact has not yet justified the cost of certification.

Market Credibility: The high concentration of responses evidence ISO 14001 with 80 respondents, indicating that organisations give high regard to certificates, allowing international recognition and contributing to trade and trust by stakeholder.

Q12. How do you manage and mitigate the risk of spills and environmental accidents?

Comprehensive Risk Management: An overwhelming majority of 98 respondents opted for "All of the above," which means spill management is considered as an integrated process that considers regular inspection, maintenance, as well as effective emergency training for spill response.

Preventative Focus: 12 respondents focus on Regular inspections and maintenance.

Reactive Readiness: Just 4 people mentioned "Emergency response plans and training" first. Though critical, the relatively low answer prevalence (compared to the "All of the above" category) indicates that the firms probably want to bundle response readiness with preventive maintenance.

High Operational Safety: The presence of 86% in the sample who use a holistic approach (All of the above) indicates a high industry standard for operational safety towards the management of spills.

Q13. What initiatives do you have to protect biodiversity in your supply chain?

Preference for Sustainable Sourcing: 62 respondents prefer "Sustainable sourcing practices." This shows that in approximately 54% of the organisations, biodiversity conservation is directly incorporated in the acquisition process [2].

The biodiversity "Action Gap": 28 respondents indicate they do not have any initiatives on biodiversity. This tends to indicate that biodiversity, as an emerging ESG issue, could be viewed as non-urgent by at least 25% of the respondents sampled.

Active Environmental Intervention: "18 out of the sample have been involved in habitat restoration projects." These entities not only procure nature-positive elements but also engage in active interventions to restore nature positively.

Collaborative Conservation: 6 respondents engage with "Conservation partnerships. A few organisations are content to let other NGOs do the work when it comes to biodiversity.

Strategic Opportunity: More than half of the participants engage with a focus on sourcing, and a quarter of the participants have not planned yet, but the trend shifts toward supply chain accountability, and on-the-ground restoration is an area that is still niche.

Q14. Do you invest in research and development to find new sustainable materials or methods?

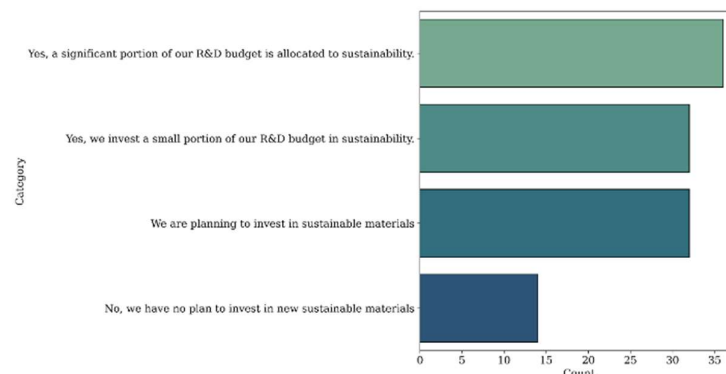


Figure 2: Investments towards finding new sustainable materials

Based on data about R&D investment, here are the outcomes as per Figure 2, Gradual Transition: The fact that equal numbers of "small portion" investors (32) and "planning" organisations (32) reflect that a vast number of firms are pilot-testing before contributing higher percentage levels of R&D investments toward sustainable transformation.

Significant Strategic Investment: This is the largest category, with 36 respondents, allocating a significant amount of their R&D expenditure on sustainable strategies. Nearly

32% of the organisations are innovating to meet long-term environmental objectives by considering sustainability as an advantage.

Widespread Participation: When taking together the organisations that invest in a “significant portion” (36) and those that invest in a “small portion” (32), it is seen that no less than 68 organisations (around 60%) out of the total are already actively investing in sustainable R&D. It proves that performing R&D on green technology and materials is practiced by the majority.

Future Pipeline for Innovation: 32 respondents are actively planning a financial investment in sustainable materials. This indicates a substantial innovation appearing over the horizon, as the companies transition from the planning to the active phase.

The Innovation Laggards: Just 14 (~12%) do not have plans for investment in sustainable materials, who may trail the market due to increasing consumer demands for sustainable commodities and government regulations regarding material consumption.

Q 15. Have there been any large-scale, recent issues or violations from your organisation? (E.g. environmental)

High Rate of Reported Self-Compliance: 104 out of 114 report zero issues or violations. Of those, 74 claim it is because they are an “ethical organisations while 30 have just stated they have not encountered any issues recently [15].

Incidence Rate of Minor Incidents: 6 admit for “minor issues or violations” not considered major in nature. There is still a handful (5%) dealing with the minor bumps in the operational road.

Critical Risk Zone: Just 4 people confessed to “substantial issues or violations recently.” It is the smallest portion (~3.5%), reflecting that serious errors, such as violations related to the environment, seldom happen, most probably because of the tough certifications like ISO 14001 already identified.

Q16. Do you monitor and manage energy consumption in your production processes?

KPI-Driven Energy Management: 96 participants suggest that their organisations are working on it by managing KPIs related to energy reduction [11].

Refining Strategy: 10 respondents also monitor their usage of energy, and they are refining their current KPIs. This shows that there is pressure to increase the accuracy of data or meet further reduced targets for 9% of the organisations.

Widespread Operational Control: Together, 106 out of 114 organisations (93%) are dealing with the energy aspect in their production lines. This indicates that energy efficiency has been considered a best practice in the EHS/ESG arena.

Bridging the Gap: Only a handful of organisations, or 6, are not currently tracking energy at all; additionally, 2 are planning to track energy. These 8 organisations, or approximately 7%, will be considered the outliers that are missing out on potential savings and reductions.

Resource Efficiency Focus: The focus on KPIs indicates energy management might be closely embedded with financial performance or broader reporting needs (tracking of Scope 2 emissions).

Q17. What measures are taken to promote energy efficiency and waste reduction?

Systems-wide Application: 82 chose "All of the above", mean that most organisations do not use a one-point tactic but are investing simultaneously in energy-efficient machinery, waste segregation, and employee training.

Targeted Energy efficient infrastructure: 16 focuses principally on "Investing in energy-efficient equipment and technology", which means 14% of the group, capital expenditure on modern technology acts as the preferred driver for sustainability.

Operational Focus: 10 respondents identify "Waste segregation and recycling programs". That is a sign of focusing on the circular economy and immediate material handling in the specific facility.

Behavioural Change: Smaller group of 6 responses, "Employee awareness and training programs", means there are very few organisations relying on awareness without accompanying technical or operational change.

Standardised Best Practices: With over 70% responding that incorporating technology, operations, and people is the industry-accepted standard for attaining efficiency goals [11].

Q18. Does your organisation mitigate environmental impact beyond carbon footprint reduction?

Comprehensive Environmental Stewardship: The largest group, 68 respondents, pursue all listed environmental goals ("All of the above"). That would mean roughly 60% of the organisations treat sustainability as an interconnected system, addressing waste, water, and biodiversity alongside carbon [9].

Focus on Circularity: 20 responses focus on "Waste reduction and circular economy initiatives". This underlines a substantial segment of the industry focusing on material lifecycle management with the aim to reduce reliance on landfills and lowering costs.

Water Security Priority: 16 respondents identify "Water conservation and stewardship" as being the key area of activity. This would indicate that water scarcity or local water-related risks represent more immediate, or at least more critical concerns than other factors.

Ecosystem and Biodiversity Focus: 10 respondents focus primarily on "Biodiversity and habitat protection". This remains the smallest dedicated category and confirms previous trends that direct nature-positive actions are often the most difficult to implement.

Mainstreamed Practice would be the Usual Course of Events. "All of the above" category is over triple the size of any other single category, would suggest that mature ESG programs are moving beyond standalone environmental projects to integrated management systems.

Q19. Do you have a diversity and inclusion policy? What are the goals and outcomes?

High Accountability (74 Respondents): About 65% of companies have an advanced diversity and inclusion framework where they are even monitoring their progress in achieving set goals on diversity and inclusion [6].

Foundational Adoption (20 Respondents): Close to 18% have the policy in place and have not progressed yet to the point of establishing measurable goals

Emerging interest (10) - Approximately 9% are busy trying to ensure that their thoughts about diversity are formalised, probably due to the increased need to focus on ESG reporting.

Remaining Laggards (10 Respondents): 9% of the sample group has yet to establish an actual policy. The relative percentage of "No" or "Developing" seems higher for Diversity and Inclusion.

Q20. What percentage of management positions are held by women and minorities?

Significant under-representation (74 Respondents): Firstly, the 65% of organisations showed that less than 10% of their management-level workers were women and minorities indicate the serious "leadership gap". Despite having policies for Diversity and Inclusion (D&I), this has yet to be implemented at higher organisational levels.

Low Diversity (20 Respondents): Approximately 18% of companies have been found to range in the 10%-20% category. Although above the lowest level of diversity, it is still representative of a more homogenous leadership group.

Moderate to High: Less than 17.5% claims have more than 20% diversity in their managerial ranks. The 'More than 30%' group is the leading segment in the industry, with the tip of the scale at 9%.

The sharp fall of 74 organisations in the "Less than 10%" category is in line with the overall industry trend, where the overall diversity is visible on the entry levels but trails off significantly on the managerial levels because of the intervention of barriers to promotion.

Q21. Do you conduct regular employee surveys to gauge job satisfaction and address concerns?

Actionable Annual Feedback: 84 respondents (~74%) run annual surveys and, more importantly, act upon them. This is a mark of high organisational maturity where employee feedback forms a part of management decisions

Passive Monitoring: 18 respondents (16%) survey their staff periodically but action is not always taken. This would imply there is a gap, where data are collected but not used.

Future Readiness: 6 respondents. A small group is currently in the planning phase to implement these surveys, reflecting a shift toward more transparent internal communication.

No Formal Feedback Loop: 6 respondents do not have any survey mechanism in place whatsoever, which may lead to unidentified risks with employee retention or culture

Q22. What is your approach to employee training and development?

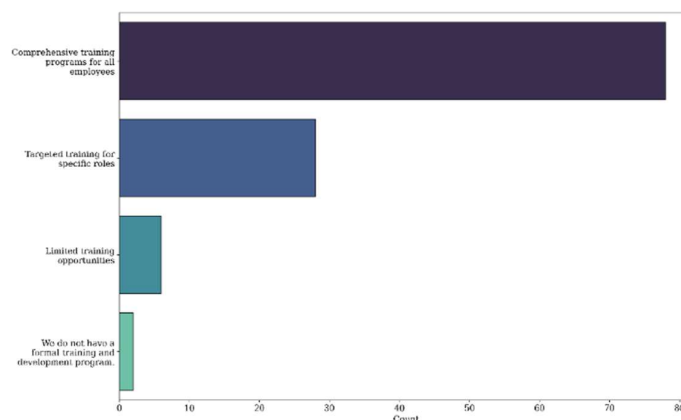


Figure 3. Approach to employee training

Refer to Figure 3, Universal Upskilling: Roughly 68% are providing training for every individual in the business. This indicates a significant investment in human capital.

Specialized 25% are centred around special training for specific functions. This tends to be more budget-friendly and technical, making sure that the specialised knowledge stays abreast.

Developmental Gaps: There are 8 organisations with either limited training programs in place (6) or no formal program in place (2). Such organisations could be struggling in retaining employees in the company and adjust to new industry norms.

Q23. Do you have a code of conduct or Policies that address human rights and labour standards?

Dynamic Governance (104 respondents): 91% of establishments have a code of conduct that is regularly updated and is in tune with the ever-changing global labour practices.

Static Policies (6 respondents): Only a few have a policy, but acknowledge the fact that this has not been updated, which possibly introduces a risk in case there are changes in the legal frameworks.

Emerging Frameworks (4 respondents): Only four companies are still in the Emerging Frameworks development stage, indicating that having a code of conduct has become nearly universal in this group.

Q24. Do you have a process for addressing grievances and complaints from employees?

Confidentiality & Rigour (94 respondents): About 82% of the participants follow a formal and confidentiality-laden process. Confidentiality is recognised as a significant measure of trust and psychological security at work.

Basic Mechanisms (12 respondents): In some organisations, the procedure was in place but did not define the degree of confidentiality or formalities.

Gap in Protection (8 respondents): The 8 respondents collectively represent organisations still in process or without a process altogether, which has serious implications in social governance.

Q25. Do you support community development initiatives? Can you provide examples?

High Impact (78 respondents): Over 68% of the companies make a huge contribution to their communities both financially and through volunteers. This indicates that the companies are converting from passive to active community engagement.

Moderate Involvement (26 respondents): Approx. 23% with limited engagement, perhaps only for local projects.

Strategic Opportunity (10 respondents): These are organisations that are either investigating opportunities or lack a current community program.

Q26. Do you have ethical sourcing policy to ensure fair labour practices in the supply chain?

Audited Accountability (82 respondents): Almost 72% of the sample practices ethical sourcing, primarily through auditing. Organisations are showing accountability for labour practices even outside their own structures [2].

Trust without Verification (14 respondents): Such groups have policies even without auditing, generating what is referred to as a "compliance gap" within the supply chain.

Developmental Stage (18 respondents): A prominent category either has policies or does not, which indicates a future development area to counter risks within the supply chain.

Q27. How do you ensure the health and safety of your workers? What is your safety record?

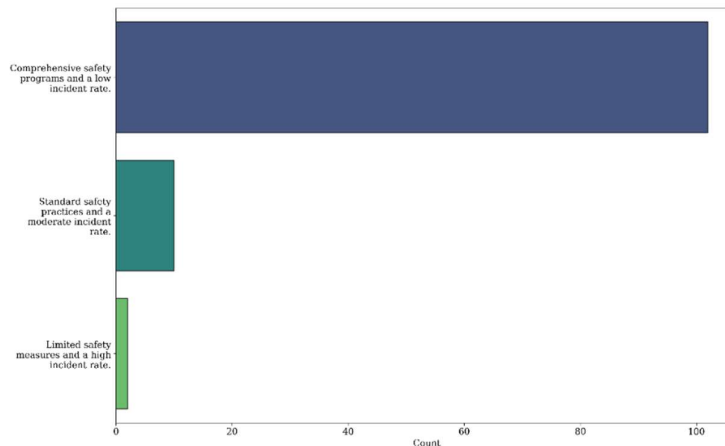


Figure 4. Ensuring health and safety of workers

Refer to Figure 4, there are three categories as follows. State-of-the-art safety class (102): Almost 90% of organisations have enterprise-wide safety programs with a low incident rate, which confirms that operational safety is a fundamental point [10].

Moderate Risk-10 respondents run a standard set of practices with a moderate incident rate, indicating ample scope for improvement in mitigation.

High-Risk Laggards (2 respondents): A very small minority reports a high incident rate, which represents a critical area for immediate safety intervention.

Q28. Are you involved in any partnerships or collaborations to improve sustainability in your industry?

Active Collaboration: Almost half of the sample (47%) are currently collaborating on several partnerships. They understand they cannot address sustainability issues on their own [7].

Selective Involvement: Approximately 25% with selective involvement in several partnerships, engaging in selective areas.

Isolated Operations (32 in total): This refers to the fact that there are 18 organisations without any partnerships, and only 14 are in the process of exploring them. These companies may not be reaping the benefits of industry knowledge and best practices.

Q29. What are the wages, benefits, and working conditions like for your employees and supply chain workers?

Industry Leaders (54): 47% in this industry treat their employees well by offering excellent wages and benefits above the industry standard.

Fair Standards (40): 40 respondents are maintained by 35% to the required benefits

Basic Compliance (20): 18% of respondents have only Basic Compliance. These are compliant organisations that may face issues in fulfilling the “S” criterion of ESG Reporting.

Q30. What kind of health and safety programs do you have in place?

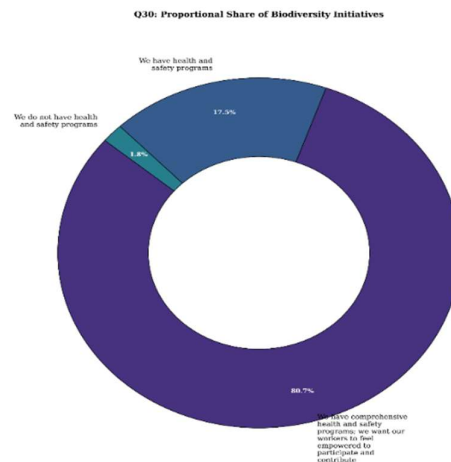


Figure 5. Health and safety programs

Refer to Figure 5, Empowered Workforce (92 respondents): 80% relate to an empowered workforce where employees are encouraged to take part and contribute towards safety activities. This triggers a shift from a 'culture of rule-following' to a 'culture of culture-building.'

Standard Programs (20 respondents): 18% have programs in place but do not explicitly mention the empowerment or participatory role.

Total Absence (2 respondents): 2 organisations do not have health and safety programs.

Q31. How do you ensure you provide a safe working environment for your employees?

Refer to Figure 6, Collaborative Safety Culture (68): This group (~60%) exhibits a participative approach, as evidenced by the statement, "We work with employees on creating a safe environment." Safety is treated as everyone's responsibility, one of these bottom-up processes that often works better than top-down dictates.

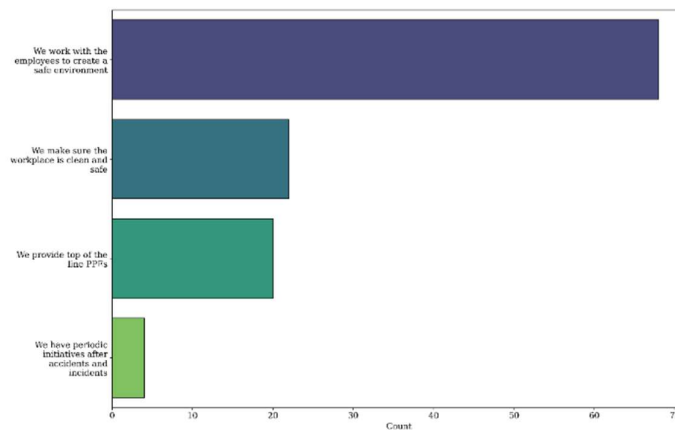


Figure 6. Methods to ensure a safe working

Environmental Maintenance: 22. With almost 19% respondents, it focuses on the physical state of the workplace, making sure that it is clean and safe. This will be a fundamental preventive measure to avoid slips, trips, and hygiene-related risks.

Protective Gear (20): About 18% would focus on technical protection, providing the finest quality of PPEs - Personal Protective Equipment. This demonstrates their commitment to providing superior-quality physical protection for workers in various roles that may be hazardous.

Reactive Improvement: 4 respondents rely on periodic initiatives after accidents or incidents. There is significant room to shift toward the proactive strategies seen in the other categories.

Q32. Does your organisation promote equal opportunities for all employees?

Strong Agreement: 96 respondents in total; ~84% of the organisations confirm that equal opportunities are actively promoted.

48 respondents commented that this was driven by wanting to be inclusive, and therefore the application of equal opportunity was directly linked to their D&I values. 48 respondents gave the straightforward "Yes," means equal opportunity was already an assumed floor for their respective operations.

In Transition: Currently in the process of building equal opportunities, 10 respondents: About 9% of organisations currently move into the implementation of creating equal opportunities.

Opportunity Gap: A small minority (~3%) responded "No," which is an area for potential legal and social governance risk.

Q33. How is executive compensation tied to ESG performance?

About 37% of organisations have executive compensation directly tied to ESG metrics. This would be a strong indicator within governance because it aligns with the financial success of leadership.

26% haven't yet connected pay to ESG performance; it is a siloed operational objective.

Minor or Qualitative Link (40 in total): 20 respondents (17.5%) link a minor part of the compensation to ESG. ESG Performance is considered qualitatively by 20 respondents (17.5%).

Q34. How do you manage and mitigate risks related to bribery and corruption?

Established Ethical Governance: About~81% of firms have established anti-corruption policies and training, which means that ethics and values are a key part of their corporate governance structure.

Foundation-Level Measures: Around 12% make minimal anti-corruption efforts, means limited in their scope, like actual training and auditing conducted in the top group.

Assessing Risks: Only 4 respondents are currently at the stage of assessing risks.

High-Risk Gap (2 respondents): Just 2 firms indicated that they had not measured anything specific. This is a serious concern, particularly if an organisation operates within several countries.

Q35. How do you engage with shareholders on ESG issues?

Approximately 58% of firms engage in a dialogue or interact with their shareholders concerning ESG. There is evidence of transparency and recognition that ESG considerations are important to investors.

16 of the participants are only now interfacing with their shareholders on these issues. 16 people do not actively participate. This implies that 28% of the sample, the correlation between investor relations and sustainability remains yet to be determined.

Approximately 11% show very limited engagement and presumably only provide the required information without engaging and interacting or might be without the shareholders.

Q36. What sustainability reporting frameworks do you use (e.g., GRI, SASB, TCFD, SBTI)?

Standardised Disclosures: 35% report using GRI (Global Reporting Initiative) and SASB (Sustainability Accounting Standards Board) for comprehensive ESG issues and industry-specific financial sustainability issues. 10 respondents (9%) specifically use TCFD and SBTI, indicating that they focus on reporting climate risks and reducing carbon emissions based on science [5] [6] [8].

Alternative Frameworks: 37% of the population adheres to some alternative framework of sustainability report compilation. This includes local regulations, perhaps (such as India's BRSR), or industry-focused standards.

Reporting Gap (20 respondents): Approximately 17.5% of firms do not make use of any sustainability report frameworks. For such firms, ESG data is mostly or completely internal/unstructured. They might be from non-SEBI-mandated forms.

Q37. Are your ESG disclosures independently verified?

High Level of Assurance: More than 56% of firms subject their ESG disclosure to independent verification by a third-party auditor, which is a high level of maturity in corporate governance [6]

Internal Review Process: Internal reviews are used by approximately 28% of organisations to review processes. Internal reviews offer limited objectivity when considering external assessments.

Verification Gap (10 respondents): About 9% of the group is not currently verifying their ESG reporting on an ongoing basis. A lack of verification can give rise to concerns of "greenwashing" and may be an issue in the coming days.

Considering Future Assurance (6 respondents): A few respondents are looking into the implementation of Independent Verification, probably about the demands for data transparency and audit trails.

Q38. Have you received any awards or recognition for your sustainability efforts?

Highly Decorated: 42% of the organisations are recipients of more than one award. These organisations lead in their industry, and their performance in the ESG metrics is recognised by external authorities.

Moderate Recognition: 30% have received some awards. These groups have sufficiently progressed to warrant more formal acknowledgement.

No Formal Recognition: 21% of the participants have yet to receive awards. Either they are beginning their journey in relation to ESG matters, and/or have not taken part in award schemes.

Awaiting Results (2 respondents): Very few establishments have made applications for awards, pointing to a recent shift in their strategy of seeking recognition for their sustainability efforts.

Q 39. Share your rating of ESG implementation and performance for your organisation (Rating 1-5 and 5 is the Highest)

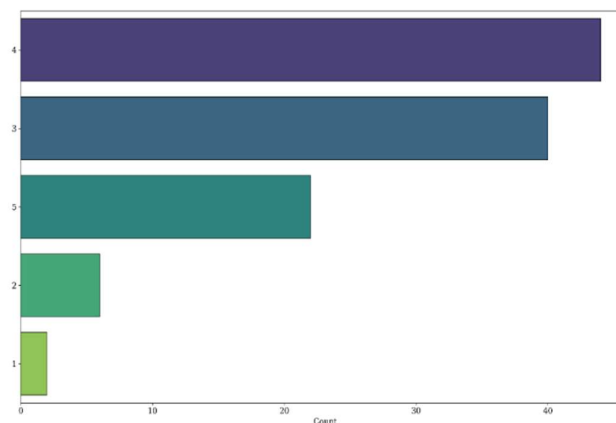


Figure 7. Rating of ESG implementation

This question can therefore be considered a summary of ESG maturity perceptions among all organisations surveyed [13].

Refer to Figure 7, Advanced Progress: The modal response to this question is 4, 39% of respondents perceiving that they have an effective ESG framework in place. This category of organisations probably has many of the discussed policies, certifications, and practices in place.

Intermediate / Developing: About 35% said they were a 3. They probably have the basic components (such as security measures, basic policies, and other essential dynamics) but may be addressing the more complex aspects, for example, supply chain audit procedures and the correlation between the compensation of executives and ESG indicators.

Industry Leaders: Almost 19% of the respondents rated their performance as highest (Rating 5). They are probably the ones who answered, "Significant portions" of their CEOs' compensation are tied to ESG issues, D&I leadership, as well as "Multiple prestigious awards."

Early Stage / Laggards: 6 participants classified themselves as a 2. Two were identified as a 1. This subset (~7%) recognises the existence of serious gaps with their sustainability process, probably related to the few who selected the response option "No formal policies" in previous questions.

3.2. Gaps and Strategies:

3.2.1 Executive Interpretation: The State of ESG Maturity

Analysis of the data indicates that the industry as a whole is in the "Transition of Intent." While the critical elements (such as safety and formative policies) are present in nearly all cases, it is about integrating ESG considerations into financial and decision-making structuring that they are separating themselves [14].

The "Three-Tier" Performance Split

The Leaders (~20%): Their organisations are characterized with third-party verified information, direct linkage between executive compensations and ESG aspects, and receive award notices of prestige. The Pragmatists (~65%): This is the majority population and strong on policies (for D&I, Ethics, Health & Safety), do participate in regular surveys. The Laggards (~15%): This is a reactive population that is legally compliant either after an accident or barely [16].

3.2.2 Major Inferences (Gaps and Strategies)

3.2.2.1 The 'Leadership Diversity' Paradox

Enormous gap between policy and representation. While 65% of the firms have an equality policy with measurable outcomes, 65% also maintain that less than 10% of their management level is occupied by women and minorities. The strategy of Policies exist, but the "pipeline" is blocked. A shift in language for organisations is required, from "Diversity Policies" to "Equity Actions" (such as mentoring and blind hiring), to repair the broken rung for the managerial class.

3.2.2.2 The Shift from Compliance to Culture

From being a "Checklist" to "Culture" - safety has been transformed. With 80% of the respondents concentrating on empowering employees on safety rather than distributing PPE alone, it's evident that organisations understand that human behaviour is the best safety barrier. Strategy: Such a culture of "empowerment" needs to extend to many ESG themes, namely, whistleblowing and ethical reporting, where trust-building takes centre stage.

3.2.2.3. The Verification "Gold Standard"

The usefulness of disclosure is only as good as its verification. 56% of the companies employ auditors for their disclosure; "Internal Review" is not adequate for shareholders. Regarding the current state of the 28% who only review within their own organisations, the transition to independent verification as the next step to prevent "Green-washing" is the logical course of action.

3.2.2.4 Cultural Anchor of Safety

"Safety-First" is thus the template that other ESG targets follow. If organisations have the capacity to empower workers to engage in "Carbon Reduction" or "Inclusion" campaigns as they did in "Safety," they will also attain similar results.

3.2.2.5 Employee-Centric Safety Strategy

Safety has changed from "Compliance" to "Co-creation." Collaboration: 60% of respondents make sure not to "impose" safety rules but to collaborate with the employees to create such an environment.

Equipment Baseline: Only 18% claimed PPE as their chief safety driver. That is a sophisticated shift—where an organisation places much belief in the activity of human engagement, more than physical gear mechanically.

The workforce is viewed as a partner with active involvement in risk management rather than a liability in need of control. This creates a higher level of internal trust and lower incident rates.

3.2.2.6. Strategic Gap in Compensation

The Leading: 37% of companies are "Total ESG Adopters," which link substantial compensation to these objectives. The Lag: 26% still have no link. This will create a kind of "Performance Ceiling" that may see ESG goals being sidelined whenever these conflict with short-term financial targets. Inference: Until ESG metrics are tied to the C-Suite's wallet, sustainability will remain a "departmental initiative" rather than a "corporate DNA" in one-fourth of such companies.

3.3. Statistical analysis and validation

3.3.1 TREND ANALYSIS -Heat Map

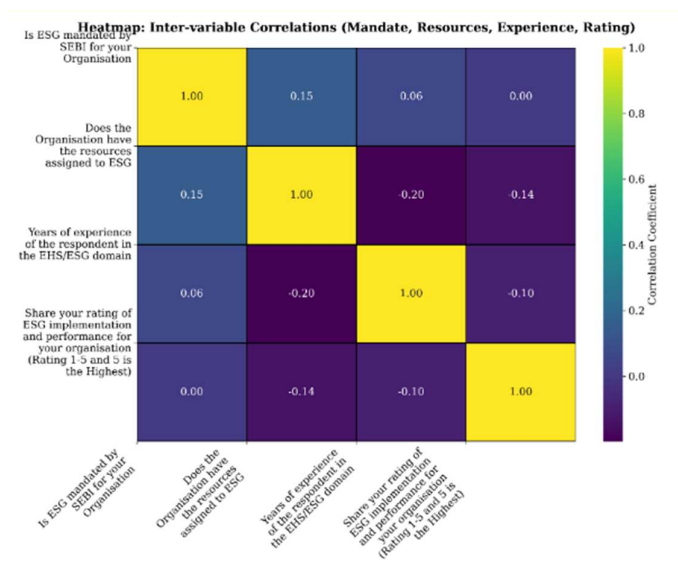


Figure 8. Rating of ESG implementation

The chart (Figure 8) shows the relationship between the SEBI ESG mandate and the allocation of resources towards ESG. They are categorised depending on whether there is a SEBI mandate on ESG, and the number of organisations that have and have not allocated resources towards ESG is shown.

Quantitative Distribution of Resource Allocation: Among organisations for which ESG is not mandated by SEBI, approximately 40 organisations report having assigned ESG resources, while around 10 organisations report not assigning ESG resources. This indicates that roughly 80% of non-mandated organisations have voluntarily allocated resources to ESG activities [16].

In contrast, among organisations for which ESG is mandated by SEBI, approximately 58 organisations report having assigned ESG resources, while around 6 organisations report not assigning ESG resources. This suggests that close to 90% of mandated organisations have allocated resources to ESG.

Comparative Quantitative Interpretation: Quantitatively, organisations subject to a SEBI ESG mandate show a higher absolute and proportional level of ESG resource allocation compared to organisations without such a mandate. The proportion of organisations assigning ESG resources increases by approximately 10 percentage points when ESG is mandated. However, the presence of organisations without ESG resources in both groups indicates that mandate compliance does not universally translate into operational resourcing [14].

Correlation Analysis (R Value): The statistical relationship between ESG mandate status and ESG resource allocation is weakly positive, with a correlation coefficient of approximately $R = 0.15$. This low R value indicates a very weak linear association between the two variables.

An R value of 0.15 suggests that SEBI's ESG mandate explains only a small fraction of the variation in ESG resource allocation across organisations. In practical terms, mandate status alone is insufficient to predict whether an organisation will allocate resources to ESG.

Analysis of Independent Variable Interactions and Correlation Trends

The connection spanning the SEBI mandate and resource allocation, an examination of the other organisational variables, like the level of renewable energy usage, management diversity, and the aggregate self-rated ESG score, shows the absence of significant statistical correlation. For example, the value of the correlation coefficient spanning the SEBI mandate and the overall ESG performance score approaches zero ($R = 0.04$), suggesting the result of regulatory force does not directly correlate with the increased perception of internal success. Likewise, the allocation level of ESG resources lacks a significant connection with the operational level, like the adoption of renewable energy ($R = 0.01$) or the level of management diversity ($R = 0.02$). This suggests that the variables function independently within the organisational framework; excellence in one does not directly contribute towards predetermination in the area of specialization like environmental shifts and social equity.

Quantitative Inference

Although organisations with a SEBI ESG mandate are **more likely** to allocate ESG resources, the magnitude of this relationship is limited. The weak correlation indicates that other factors—such as organisational strategy, leadership commitment, stakeholder pressure, and reputational considerations—likely play a more significant role in determining ESG investment decisions.

This quantitative finding is consistent with earlier correlation heatmap results, which also showed only weak associations between ESG mandate and resource allocation.

Key Quantitative result

The figure demonstrates that while ESG resource allocation is more prevalent among SEBI-mandated organisations, the relationship is weak in strength, as reflected by a low correlation coefficient ($R \approx 0.15$), indicating that regulatory mandate alone does not strongly drive ESG resourcing decisions.

3.3.2. Box plot analysis of ESG performance ratings and dedicated ESG resources and their relationships

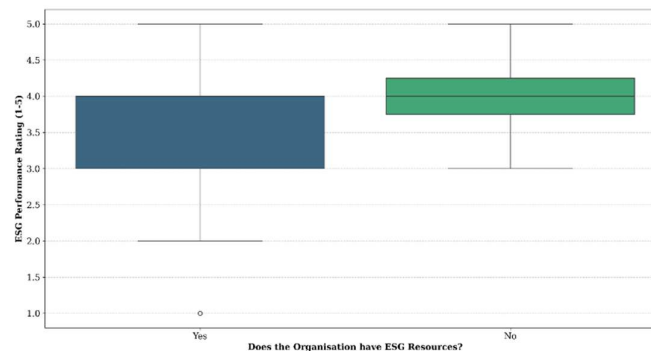


Figure 9. Rating of ESG implementation

Overview of Figure 9: The box plot (Figure 9) reveals the differences in ESG performance rating scores from 1 to 5 between organisations that allocate ESG resources and those that do not allocate ESG resources. The graph above summarises the central value, dispersion, and variance of the ESG performance rating.

Median ESG Performance Rating: For companies with ESG resources available, their median ESG performance score is around 3.5. This suggests a moderately high degree of ESG implementation and performance perception. In organisations lacking ESG resources, the median ESG performance rating is relatively higher at about 4.0. It is perceived that organisations lacking specific ESG resourcing tend to rate their ESG performance more favourably.

Variance and Interquartile Range (IQR): Organisations with ESG resources tend to have a wider interquartile range, in the range of about 3.0 to 4.0, hence an IQR of about 1.0. The total range is between 1.0 and 5.0. This shows that there is a large degree of variability in ESG performance. On the other hand, in organisations that do not possess ESG resources, there is a smaller range in between the IQR values, which is from 3.8 to 4.3, with an IQR value of approximately 0.5. The total range includes values from 3.0 to 5.0.

Standard Deviation (Approximate Interpretation): From the data on the spread of values, standard deviation of ESG performance rating is greater within organisations that possess ESG resources. A greater spread with an indicator of a lower outlier may suggest standard deviation of around 0.9-1.0. In cases where a company lacks resources dedicated to ESG, a tighter grouping of ratings would be inferred to represent a lower standard deviation of approximately 0.5-0.6.

Presence of Outliers: A distinct low-value outlier at about 1.0 is observed in the presence of ESG resources for organisations. That is, at least one organisation has very low ESG performance despite the presence of ESG resources, adding to the variance in the data, causing the median to be lowered. There are no low-end outliers for organisations that lack ESG resources.

Quantitative Inferences: Quantitatively, organisations without ESG resources have a median ESG performance rating that is about 0.5 points higher than the median from organisations with ESG resources. These quantitative differences suggest that organisations that have ESG resources are showing more heterogeneous ESG outcomes, whereas organisations lacking ESG resources report more homogeneous high levels of ESG performance ratings [13].

Key Quantitative Result : The box plot helps to identify that organisations having ESG resources are characterised by a lower median ESG performance (~ 3.5), larger variance (IQR ~ 1.0), and larger standard deviation (~ 1.0), while for organisations without ESG resources, the median value is larger (~ 4.0), variance is small (IQR ~ 0.5), and standard deviation is also small (~ 0.6).

3.3.4 One-Way ANOVA analysis of ESG Performance Rating vs. SEBI ESG Mandate

Test Description: In Figure 10, A one-way Analysis of Variance (ANOVA) was conducted to examine whether ESG performance ratings (1–5 scale) differ significantly between organisations for which ESG is mandated by SEBI and those for which it is not mandated.

Source of Variation	Sum of Squares (SS)	df	Mean Square (MS)	F	p-value
Between Groups	0.0016	1	0.0016	0.0019	0.9652
Within Groups	92.6300	112	0.8271		
Total	92.6316	113			

Table 1. ANOVA of Self-Reported ESG Performance Ratings by SEBI Mandate Status

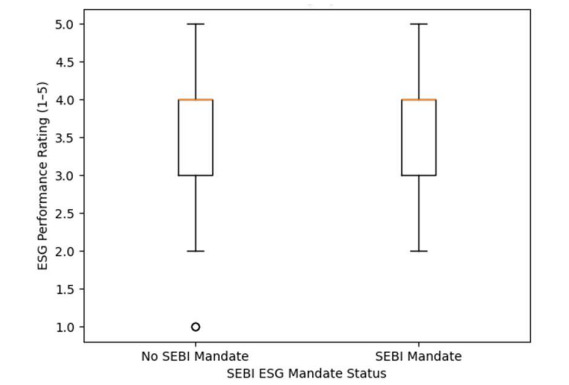


Figure 10. Rating of ESG implementation

Interpretation: The result from the ANOVA test shows that there is no statistical significance in ESG ratings between organisations with and without a SEBI ESG mandate in place. The very low value and large p-value of the F-statistic imply that both have equal means for their ESG ratings.

Inference: Refer to Table 1. This finding indicates that enforcement mandate is not a factor in ESG implementation/performance assessments. There are no differences in ESG performance between organisations mandated by SEBI to follow ESG and non-mandated organisations and thus support the contention that ESG performance is not dependent on enforcement mandates.

3.3.5. Chi-Square Test of Independence for SEBI ESG Mandate vs. ESG Resource Allocation

Test Description: A chi-square test of independence was conducted to examine the association between SEBI ESG mandate status and whether organisations have resources assigned to ESG.

Test Statistic	Value
Chi-square χ^2	1.82
Degrees of Freedom (df)	1
p-value	0.1774

Table 2. Chi-Square Test of Independence: SEBI ESG Mandate Status vs. ESG Resource Allocation

Interpretation: On the contrary, the result obtained from the Chi-square test shows no statistically significant relationship between SEBI's ESG mandate and the allocation of resources to ESG at the 5% significance level. This observation is not statistically robust to reject the null hypothesis of no significant relationship between the variables.

Inference: Refer to Table 2. It is clear from this result that although ESG resource allocation practice is more commonly observed in organisations under the SEBI mandate, this relationship is not statistically significant. It can be understood that ESG resource commitment practices are influenced by voluntary factors within organisations, rather than solely by mandate.

4.0 Conclusion

The survey of 114 EHS/ESG professionals in Indian companies brings out that ESG integration has progressed from its initial phase and has robust baseline levels such as certification, occupational health and safety standards, and ESG reporting frameworks. However, it is endeavoured to emphasise that a compliance-focused approach is not enough to attain ESG maturity at all levels.

Strengths: High prevalence of ISO 14001 certifications ($\approx 95\%$), strong safety culture ($\approx 90\%$ low incident rates), and broad use of international frameworks (GRI, SASB, TCFD).

Gaps: Lack of diversity of leaders (65% of companies state $<10\%$), inadequate linking of executive compensation packages with ESG performance indicators (approximate 37%), and inconsistent independent verification processes.

Forces of Maturity: Those companies that invest in the capabilities of life-cycle assessments, supply chain audits, and third-party validation have shown better ESG performance.

Drawing from the analysis, the five-pillar ESG framework is recommended to accelerate maturity and align with global best practices:

Governance & Accountability: Form ESG committees within the boards to oversee specific areas of ESG. Align the executive remuneration associated with the specific ESG KPIs, which may include CO₂ emissions reduction, LCA, Circular economy, and diversity. Establish whistleblower/hotlines to strengthen governance.

Assurance & Transparency: Transition from internal verification to third-party independent verification of ESG disclosures. Adopt any common reporting standard (GRI

for impact materiality; ISSB/SASB). Publish sustainability reports that are audited and have clear methodologies.

Environmental Stewardship: Aiming higher in renewable energy integration than first movers (targeting >50% share). Setting science-based targets on GHG emissions, including Scope 3. Embedding a circular economy strategy, covering waste management, product lifespan, and packaging design

Social Equity & Inclusion: Establish leadership objectives for improving diversity. Enhance supply chain due diligence for labour rights and biodiversity. Institutionalise employee engagement and workplace safety empowerment.

Data & Digital Infrastructure: Invest in ESG data systems that enable real-time monitoring and predictive analysis. Use ESG variables as inputs to risk management systems.

Strategic Imperatives: Indian companies need to think of ESG as a tool to be leveraged in a competitive environment rather than a compliance list. Incorporating ESG into their systems and processes boosts the confidence of investors with honest and transparent disclosures.

Essentially, achieving the maturity must be driven by a cultural change that includes the elements of governance incentives, technology enablement, and engagement with various stakeholders. Implementing the given ESG framework will not only help businesses meet the norms but will also enable them to secure a sustainable competitive advantage with the constantly increasing concern for ESGs in the global market.

Although this study gives valuable light on ESG maturity among Indian organisations, a few limitations must be considered:

Self-Reported and Cross-Sectional Nature: The findings are based on self-reported data collected at one particular point in time. This design may not be able to capture sector-specific nuances or longitudinal trends in ESG adoption and performance.

Random Participation and Sampling Bias: Because it is a survey, reliance is solely on voluntary participation from EHS/ESG professionals, which presents the potential for bias. Respondents might be those organisations that have greater awareness of ESG issues, which is a limiting factor in the generalisation of the results across all sectors.

Transparency Influenced by Organisational Culture: Responses reflect perhaps the degree of openness in organisational culture. In firms that treat ESG as a compliance exercise rather than as a strategic priority, professionals may underreport gaps or overstate achievements.

Interpretation and Understanding of Questions: Despite best efforts to design the questionnaire, differences in the interpretation of ESG may imply potential risks of having divergent responses. The maturity varies from each company, particularly in more advanced areas of Scope 3 accounting.

Limited Access to Sensitive Data: There are some governance indicators that could be sensitive in nature, like executive pay tied to ESG performance. Likely, the respondents would not have much exposure to this information. It could lead to responses that are not actual results but approximations.

Sectoral and Scale Diversity: The surveyed population includes a diverse mix of industries and company sizes. However, in the absence of stratified sampling, issues within a particular sector related to ESG (for instance, heavy industries vs. the service sector) may not be captured.

Several elements highlight the originality and importance of the study:

ESG in India: A Less-Researched Theme: Literature on ESG practices in emerging countries like India is limited when compared with more developed economies, where ESG frameworks, assurance processes, or linkages with governance have been well-researched. This research document is an important step that presents deeper evidence.

Emerging Trend, Evolving Mandates: India stands at a critical juncture with respect to the adoption of ESG concepts. Although SEBI's guidelines on Business Responsibility and Sustainability Reporting (BRSR) have made it obligatory to disclose information to the top 1,000 listed entities, detailed and proportional obligations have not yet been established at various organisational levels.

Limited Professional and Academic Depth: The ESG/EHS domain in India is at a relatively nascent stage to emerge as a field of speciality. Very few professionals pursue advanced research or doctoral studies in ESG, leading to a lack of scholarly work that connects theory with practice. This study bridges that gap by applying theoretical lenses—stakeholder theory, institutional theory, resource-based view, and agency theory—to real-world data.

The contribution of this research study pertains to the provision of original empirical insights and an ESG roadmap that applies to the Indian setting. In particular, this paper provides one of the first structure explorations with data insights on the maturity level of ESG adoption in the Indian business environment. Though mainstream studies on ESG have become prominent worldwide, very few studies have been conducted in India.

Acknowledgement

The authors are grateful to each EHS and ESG practitioner across Indian organisations for their contributions to the survey. Their inputs were greatly beneficial in helping to conclude the research.

We express our sincere gratitude to the Department of Chemical Engineering, Annamalai University and the Safety team of Ford Motor Company for their support in our study.

References:

- [1] SEBI: Business Responsibility & Sustainability Reporting (BRSR) (Circular No. SEBI/HO/CFD/CMD-2/P/CIR/2021/562, May 10, 2021). Official circular with format and guidance notes. SEBI Circular page · Annexure I – BRSR format (PDF) · Annexure II – Guidance Note (PDF)
- [2] SEBI: BRSR Core — Framework for assurance and ESG disclosures for value chain (Circular No. SEBI/HO/CFD/CFD-SEC-2/P/CIR/2023/122, July 12, 2023). Defines nine Core attributes/KPIs, assurance glide-path, and value chain coverage. SEBI Circular page · Circular text/PDF mirrors
- [3] BRSR Core KPIs / Cross-reference to BRSR Essential Indicators (ICSI explainer, Sept 2023). Practical mapping of KPIs to NGRBC principles and BRSR questions. ICSI – Chartered Secretary article (PDF)
- [4] Digital Personal Data Protection Act, 2023 — personal data protections relevant to ESG social metrics (e.g., employee/consumer privacy). Official India Code text (PDF) · PIB draft rules (Jan 5, 2025)
- [5] IFRS – ISSB Standards: IFRS S1 (General Requirements for Sustainability-related Financial Information) & IFRS S2 (Climate-related Disclosures), issued June 26, 2023; effective from Jan 1, 2024 (jurisdictional adoption applies). IFRS news release · IFRS S1 full text (PDF) · Deloitte Heads-Up · EY brief
- [6] TCFD Recommendations — now fully incorporated into IFRS S2. (Note via IFRS announcement that S2 “fully incorporates TCFD recommendations.”) IFRS news release
- [7] GRI Standards — global sustainability reporting framework (use alongside/regardless of ISSB; many Indian BRSR reporters cross-reference). (*GRI site updates are frequent; use BRSR Annexure II cross-reference guidance*) SEBI Guidance Note references GRI

- [8] SASB Standards (Value Reporting Foundation → IFRS Foundation, 2022) — industry-specific metrics; ISSB preserves SASB taxonomy/interoperability. Deloitte summary referencing SASB consolidation · IFRS news page also notes consolidation
- [9] GHG Protocol — Corporate Accounting and Reporting Standard (Scopes 1, 2, 3) for GHG measurement used globally and by BRSR Core. (*Referenced indirectly in ICSI BRSR Core mapping to P6 Q7*) ICSI KPI mapping
- [10] UN Sustainable Development Goals (SDGs) — baseline for mapping impacts/targets; often cross-referenced in ESRS and NGRBC annexures. (*UN official SDG site*)
- [11] CCTS sectoral targets & compliance — BEE draft procedural guidance; evolving GEI targets. BEE draft compliance procedure (Oct 2023) (PDF) · PIB climate progress / CCTS facts (Feb 3, 2025)
- [12] Sunil M. V. & Dey, D. (2025). “Mapping ESG Research in India: A Meta-Analytical Review of Trends, Themes, and Trajectories (2018–2024)”. *International Journal of Environmental Sciences*, 11(22s), 936–951. <https://doi.org/10.64252/bra5mq92>.
- [13] Devi, P., & Sapna. (2024). “Relationship of ESG scores with firm performance: A study of Indian listed companies”. *IMIB Journal of Innovation and Management*, 2(2), 243–255. <https://doi.org/10.1177/jinm.241242865>.
- [14] Deb, R., Behra, A., & Dusmanta, K. (2024). “ESG Score and Firm Performance: Evidence from Indian-Listed Firms”. *South Asian Journal of Management*, 30(4), 56–80. <https://doi.org/10.62206/sajm.30.4.2023.56-80>.
- [15] Gidage, M., & Bhide, S. (2025). “Corporate Reputation as a Catalyst: Unravelling the ESG–Firm Performance Link in India. *Corporate Reputation Review*”. Advance online publication. <https://doi.org/10.1057/s41299-025-00216-7>
- [16] Ajithakumari, A., Vijayappan Nair, B., Sreelekshmi G., Prasad, S., Sasidharan, A., & Jayachandran, A. (2025). “ESG–Firm Performance Nexus: Evidence from an Emerging Economy. *Business Strategy and the Environment*” 34(3), 3469–3496. <https://doi.org/10.1002/bse.4152>.