



CORPORATE SOCIAL RESPONSIBILITY PRACTICES AND THEIR IMPACT ON ENVIRONMENTAL SUSTAINABILITY IN EMERGING ECONOMIES

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Abstract

This study explores the role of Corporate Social Responsibility (CSR) in promoting environmental sustainability within the urban context of Mumbai, a key industrial and economic hub in India. Focusing on five major corporates—Godrej & Boyce, Tata Power, Hindustan Unilever Limited, Reliance Industries, and Mahindra & Mahindra—the research investigates the nature, scope, and impact of their CSR initiatives aimed at addressing environmental challenges. Using a qualitative approach based entirely on secondary data, the study examines how these initiatives align with both national sustainability policies and global frameworks such as the United Nations Sustainable Development Goals (SDGs). The findings reveal that these companies have strategically implemented environmental projects, including mangrove conservation, renewable energy promotion, afforestation, waste management, and water conservation, which have not only improved ecological conditions but also enhanced community welfare. The analysis also underscores the growing trend of integrating CSR with business strategy to create long-term, measurable outcomes. Despite existing challenges in scalability and standardization, the study concludes that CSR is a powerful mechanism for achieving environmental goals in emerging economies. It provides valuable insights for policymakers, business leaders, and researchers aiming to leverage private sector engagement for sustainable urban development.

Keywords: Corporate Social Responsibility, Environmental Sustainability, Mumbai, Sustainable Development Goals, Urban Ecology

Introduction

In recent years, the concept of Corporate Social Responsibility (CSR) has transcended its philanthropic roots to emerge as a strategic tool for promoting sustainable development, particularly in emerging economies. CSR today encompasses a wide array of socially and environmentally responsible practices that align with business objectives while addressing the concerns of stakeholders. Environmental sustainability, in particular, has become a core dimension of CSR as businesses are increasingly expected to minimize their

ecological footprint and contribute to long-term environmental well-being (Porter & Kramer, 2011). In a densely populated and industrially vibrant city like Mumbai, the significance of CSR-driven environmental initiatives becomes even more pronounced, given the city's mounting environmental challenges, including air and water pollution, waste management, and climate change resilience.

Mumbai is home to numerous corporates that are actively engaging in environmental sustainability through their CSR initiatives. Companies such as Godrej & Boyce, Tata Power, and Hindustan Unilever Limited (HUL) have implemented significant projects aimed at environmental conservation and climate action. For instance, Godrej & Boyce's *Mangrove Conservation Project* in Vikhroli, Mumbai, is one of the largest privately managed mangrove areas in the country. This initiative, which spans over 1,750 acres, not only protects biodiversity but also contributes to carbon sequestration and flood mitigation (Godrej & Boyce, 2023). Tata Power has implemented various programs in the Mumbai region under its 'Act for Mahseer' campaign and waste-to-energy initiatives that aim to preserve freshwater biodiversity and promote renewable energy adoption (Tata Power, 2022). Likewise, Hindustan Unilever's Project Prabhat has focused on sustainable water resource management and solid waste segregation in urban slum communities, directly contributing to improved sanitation and reduced waterborne diseases (Hindustan Unilever, 2021).

This paper aims to explore how CSR practices undertaken by corporations in Mumbai contribute to environmental sustainability. By examining real-world case studies and assessing their outcomes, the study seeks to identify patterns, best practices, and challenges in aligning corporate actions with environmental goals in the context of a rapidly urbanizing emerging economy.

Review of Literature

The relationship between Corporate Social Responsibility (CSR) and environmental sustainability has been widely examined in global and regional contexts, highlighting the evolution of CSR from a philanthropic endeavor to a strategic and sustainability-driven framework. Carroll (1991) was among the first to articulate a multidimensional CSR model comprising economic, legal, ethical, and philanthropic responsibilities, laying the groundwork for future exploration of how CSR can be leveraged for environmental sustainability. Building upon this foundational model, scholars such as Elkington (1998) proposed the "Triple Bottom Line" approach, emphasizing that businesses must account for their environmental and social performance alongside financial gains. This framework was further explored by Porter and Kramer (2011), who argued that companies could enhance competitiveness by creating shared value, which includes investing in sustainable environmental practices that benefit both business and society. In the Indian context, CSR took on a more structured form with the introduction of the Companies Act, 2013, which mandated CSR expenditure for eligible companies, thereby institutionalizing CSR and encouraging firms to allocate resources to areas such as environmental sustainability (Ministry of Corporate Affairs, 2021). Scholars like Bansal and Song (2017) noted that in emerging economies, CSR is often driven more by external pressures such as regulatory requirements, public scrutiny, and stakeholder activism, than by intrinsic motivations. Several empirical studies support the claim that firms with well-integrated CSR programs tend to perform better in managing environmental risks. For example, Bhattacharyya and Rahman (2015) analyzed CSR reports of Indian companies and found a growing emphasis on renewable energy use, water conservation, and biodiversity protection as part of CSR mandates. Similarly, Kumar, Singh, and Sharma (2020) observed that firms in urban centers like Mumbai were increasingly investing in solid waste management, afforestation drives, and water resource management under their CSR obligations. The effectiveness of these initiatives, however, varies based on company size, leadership commitment, and alignment with core business strategy (Gupta & Sharma, 2016). Corporate case studies such as Tata Power's biodiversity conservation and Godrej & Boyce's mangrove protection efforts are frequently cited examples of how CSR is operationalized in urban India for environmental benefit (Godrej & Boyce, 2023; Tata Power, 2022). The role of CSR in achieving the United Nations Sustainable Development Goals (SDGs) has also been emphasized in literature, especially SDG 13 (Climate Action), SDG 14 (Life Below Water), and SDG 15 (Life on Land), where corporate initiatives have been shown to contribute significantly through afforestation, pollution reduction, and natural resource protection (UNDP, 2022). Moreover, scholars like Visser (2008) and Moon (2014) have highlighted that CSR in emerging economies often operates in contexts of weak regulatory enforcement, making voluntary action by firms even more critical for environmental stewardship. In this regard, stakeholder theory has been applied to explain how pressure from customers, investors, local communities, and non-governmental organizations can push companies to adopt environmentally responsible practices (Freeman, 1984; Donaldson & Preston, 1995). From a strategic standpoint, research by McWilliams and Siegel (2001) demonstrated that CSR, particularly environmental CSR, can yield long-term competitive advantages by enhancing a firm's reputation and securing consumer loyalty. However, critiques have also emerged, cautioning against greenwashing, where companies

exaggerate or misrepresent their environmental contributions without substantive outcomes (Delmas & Burbano, 2011). The literature further notes the need for rigorous impact assessments to ensure that CSR efforts result in tangible environmental benefits rather than serving as symbolic gestures (Arjaliès & Mundy, 2013). Despite the evident progress, gaps remain in measuring long-term environmental impacts and ensuring community participation in CSR design and implementation. Therefore, while the literature confirms that CSR can significantly contribute to environmental sustainability, especially in emerging markets like India, it also highlights the complexity of achieving measurable outcomes, the importance of strategic alignment, and the need for accountability mechanisms. These insights form the conceptual and empirical foundation for this study, which seeks to examine specific corporate initiatives in Mumbai and their broader environmental impact in the context of an emerging economy.

Objectives of the Study

- i. To examine the environmental sustainability initiatives undertaken by corporates in Mumbai under their CSR practices.
- ii. To evaluate the impact of CSR-driven environmental programs on local ecosystems and communities.
- iii. To analyze the alignment of corporate CSR strategies with national and global environmental sustainability goals.

Research Methodology

This study adopts a descriptive research design based entirely on secondary data to examine the impact of Corporate Social Responsibility (CSR) practices on environmental sustainability in emerging economies, with a specific focus on companies operating in Mumbai. The data for this research has been sourced from official CSR reports of companies such as Godrej & Boyce, Tata Power, and Hindustan Unilever; government publications including the Ministry of Corporate Affairs CSR Portal; industry white papers; and sustainability-related databases from organizations such as the UNDP and KPMG. Peer-reviewed journal articles, case studies, and reports from NGOs and think tanks have also been consulted to provide academic and contextual grounding. The key variables explored include the nature of CSR initiatives (e.g., afforestation, waste management, water conservation), the geographic focus (Mumbai Metropolitan Region), and reported environmental outcomes (e.g., area covered under conservation, carbon footprint reduction, waste processed). These variables are analyzed qualitatively to identify trends, patterns, and strategic alignments with environmental goals. The study does not involve primary data collection or statistical testing but relies on content analysis and comparative evaluation of documented outcomes. This methodology enables a comprehensive understanding of how corporates in Mumbai contribute to environmental sustainability through CSR, within the constraints of publicly available information.

Research Findings

CSR Initiatives for Environmental Sustainability by Leading Corporates in Mumbai

Environmental sustainability has emerged as a critical component of Corporate Social Responsibility (CSR) for leading firms in Mumbai. As one of India's largest urban and industrial centers, Mumbai faces mounting ecological pressures from rapid urbanization, air and water pollution, and waste accumulation. Recognizing these challenges, several corporates headquartered or operating in Mumbai have undertaken focused environmental CSR projects in line with the provisions of the Companies Act, 2013 and global environmental goals. This section presents an in-depth analysis of environmental CSR initiatives undertaken by five major corporates—Godrej & Boyce, Tata Power, Hindustan Unilever Limited (HUL), Reliance Industries Limited (RIL), and Mahindra & Mahindra (M&M). These companies have not only complied with statutory requirements but have also positioned environmental sustainability as a core strategic objective of their CSR agendas. Their efforts span across mangrove conservation, waste management, biodiversity protection, water stewardship, renewable energy promotion, and sustainable agriculture practices. The following analysis presents an overview of these companies' initiatives and offers a comparative understanding of their focus areas and environmental impact.

Godrej & Boyce, a flagship company of the Godrej Group, has been a pioneer in embedding sustainability into its business ethos. One of its most notable CSR contributions is the Mangrove Conservation Project in Vikhroli, Mumbai, which is the largest privately owned mangrove cover in India, spanning approximately 1,750 acres. The initiative not only conserves biodiversity but also acts as a natural carbon sink, supporting climate resilience in the coastal city. In collaboration with NGOs and research institutions, the project monitors the ecological health of the mangroves, documents species diversity, and conducts awareness drives for local communities and schools. According to the company's 2022–23 sustainability report, over

200 species of flora and fauna have been documented in the region, and the initiative contributes to the sequestration of more than 6,000 metric tons of CO₂ equivalent annually.

Tata Power has taken a leading role in integrating biodiversity preservation with its CSR portfolio. The company’s Act for Mahseer campaign is focused on conserving the endangered Mahseer fish species in the freshwater ecosystems of Maharashtra. In addition, Tata Power’s Clean Energy and Renewable Projects have emphasized the transition toward solar microgrids and community-based waste-to-energy systems in low-income areas of Mumbai. Through its 'Club Enerji' initiative, the company has engaged over 600 schools across Mumbai, educating students about energy conservation and climate change. Their projects have resulted in 2.1 million units of electricity savings and 1,680 metric tons of CO₂ reduction annually, according to their 2023 CSR report. Tata Power also undertakes tree plantation drives, waste segregation awareness, and battery recycling projects, reflecting a comprehensive environmental approach.

Hindustan Unilever Limited (HUL), another Mumbai-based corporate giant, has focused its environmental CSR on water stewardship, plastic waste management, and sustainable packaging. Under its Project Prabhat, HUL has undertaken extensive work in the slum areas of Mumbai to promote water conservation and sanitation. By 2023, the company had facilitated water recharge of over 20 billion liters nationally, with a significant portion achieved through local watershed projects in Maharashtra. Moreover, under its “Sustainable Living Plan,” HUL has committed to making 100% of its plastic packaging reusable, recyclable, or compostable by 2025. In Mumbai, the company has installed decentralized material recovery facilities (MRFs) and partnered with local municipal corporations to collect and process over 30,000 tons of plastic waste. These efforts not only help in reducing urban plastic pollution but also generate employment for informal waste pickers.

Reliance Industries Limited (RIL), headquartered in Mumbai, has undertaken a range of environmental sustainability initiatives through its Reliance Foundation. One of its key CSR programs is “Mission Green Mumbai,” which focuses on urban afforestation, biodiversity corridors, and rainwater harvesting. The company has supported the planting of more than 500,000 native trees in Mumbai Metropolitan Region (MMR) as part of its commitment to enhancing green cover and urban carbon sinks. RIL also collaborates with the municipal authorities and local NGOs to install rainwater harvesting systems in schools, housing societies, and slum areas. Furthermore, RIL’s energy CSR wing is investing in solar-powered community infrastructure, which includes solar streetlights and off-grid solar panels for localities not connected to reliable electricity. These initiatives are documented in RIL’s 2022–23 CSR report and align with multiple Sustainable Development Goals (SDGs), including climate action and life on land.

Mahindra & Mahindra (M&M), a diversified conglomerate headquartered in Mumbai, has emphasized sustainable mobility and afforestation as pillars of its CSR. The company’s flagship initiative, “Project Hariyali,” has led to the plantation of 18 million trees across India, with a substantial number in the Mumbai region. In partnership with municipal bodies and citizen volunteers, M&M has developed green corridors in industrial zones and contributed to urban cooling through tree canopy expansion. The firm has also promoted electric mobility awareness campaigns under its CSR wing, particularly in Mumbai schools and colleges, to prepare the next generation for sustainable transportation solutions. According to M&M’s 2023 ESG disclosure, its environmental CSR initiatives resulted in an estimated reduction of 45,000 tons of CO₂ emissions and significant improvements in air quality in project zones.

The table below presents a comparative overview of the environmental CSR focus areas and impact metrics for the five selected companies:

Table 1: Overview of Environmental CSR Initiatives by Selected Companies in Mumbai

Company Name	Key Environmental Initiative	Geographic Focus	Major Outcomes (2022–23)
Godrej & Boyce	Mangrove Conservation	Vikhroli, Mumbai	1,750 acres preserved; 6,000+ MT CO ₂ sequestered annually; 200+ species documented
Tata Power	Mahseer Conservation, Clean Energy	Mumbai & Maharashtra	2.1 million kWh saved; 1,680 MT CO ₂ reduced; 600+ schools reached
HUL	Water Conservation, Plastic Recycling	Mumbai Urban Slums	20 billion liters water recharged; 30,000+ tons plastic waste processed
Reliance Industries	Urban Afforestation, Rainwater Harvesting	MMR Region	500,000+ trees planted; rainwater systems in 100+ public buildings
Mahindra & Mahindra	Project Hariyali, EV Awareness	Mumbai & suburbs	18 million trees (India-wide); 45,000 MT CO ₂ avoided; air quality improvement

The comparative data illustrates the diverse approaches adopted by corporates in addressing environmental sustainability. While some like Godrej focus on ecosystem preservation, others like Tata Power integrate community engagement with clean energy, and companies like HUL emphasize circular economy principles through plastic waste management. This diversity not only reflects the unique business models and sectoral positioning of these firms but also demonstrates the potential of CSR to address a wide spectrum of environmental issues within a metropolitan context.

In addition to the scope and scale of initiatives, the alignment of CSR spending with environmental outcomes also reflects the maturity of these programs. The following table presents the estimated CSR expenditure allocated to environmental initiatives by these firms during FY 2022–23 and the corresponding primary environmental benefits achieved.

Table 2: Estimated CSR Spending on Environmental Initiatives and Key Environmental Benefits

Company Name	Estimated CSR Spend on Environment (INR Crore)	Primary Environmental Benefits
Godrej & Boyce	₹12 Crore	Carbon sequestration, coastal biodiversity preservation
Tata Power	₹15 Crore	Renewable energy adoption, biodiversity awareness
HUL	₹20 Crore	Water security, plastic pollution control, sanitation improvement
Reliance Industries	₹22 Crore	Urban green cover, water harvesting, air quality improvement
Mahindra & Mahindra	₹10 Crore	Afforestation, carbon offsetting, electric mobility promotion

This financial and environmental correlation underscores the effectiveness of targeted CSR spending in generating measurable ecological outcomes. For instance, HUL’s relatively higher spending is linked to a national-scale water recharge impact and significant plastic waste processing, whereas Tata Power demonstrates high impact per unit investment through its energy-saving and biodiversity campaigns. Moreover, all five companies illustrate a shift from transactional CSR to transformative CSR, where the focus is not just on compliance but also on creating long-term environmental value. These firms have invested in stakeholder engagement, third-party audits, and impact assessments to ensure transparency and scalability of their initiatives.

The CSR landscape in Mumbai reveals a promising and evolving commitment toward environmental sustainability. The selected companies showcase diverse but complementary approaches—ranging from nature-based solutions to technological innovations and behavioral interventions. While regulatory mandates serve as the initial trigger for CSR investments, it is the strategic vision and leadership of these corporates that sustain and scale these initiatives. Collectively, their environmental CSR projects not only contribute to urban ecological resilience but also offer replicable models for other emerging economies grappling with similar environmental challenges. This synergy between business responsibility and environmental stewardship marks a significant step toward inclusive and sustainable urban development.

Impact of Environmental CSR Projects on Local Ecosystems and Communities

Environmental CSR initiatives, while often rooted in corporate mandates or sustainability strategies, generate far-reaching consequences for local ecosystems and the communities living within or adjacent to them. In Mumbai, where rapid urbanization has led to a strain on natural resources, the role of corporates in reversing or mitigating environmental degradation has become vital. The CSR efforts of companies such as Godrej & Boyce, Tata Power, Hindustan Unilever Limited (HUL), Reliance Industries Limited (RIL), and Mahindra & Mahindra (M&M) have significantly impacted not only the environment but also the quality of life, health outcomes, and economic opportunities of local populations. This section assesses the tangible and intangible impacts of these CSR-driven environmental initiatives through a lens that captures ecological regeneration and community welfare.

Godrej & Boyce’s mangrove conservation project in Vikhroli has had a direct ecological benefit by protecting and restoring one of the last remaining mangrove stretches in Mumbai. The mangroves function as a critical buffer against flooding and coastal erosion, providing long-term protection for low-lying residential zones in the eastern suburbs. Biodiversity monitoring studies conducted by the Bombay Natural History Society (BNHS) in partnership with the company have revealed an increase in local fish

populations, migratory birds, and native plant species. More importantly, the project has offered educational and recreational benefits to the community. Nature trails, workshops for schoolchildren, and community clean-up drives have fostered a sense of environmental stewardship among residents. By involving local stakeholders in preservation activities, the initiative has enhanced ecological literacy and public participation.

Tata Power's environmental CSR initiatives, especially the *Act for Mahseer* campaign and clean energy education under the *Club Enerji* banner, have created a dual impact. Ecologically, these programs have helped conserve the endangered Mahseer fish by breeding and reintroducing the species into freshwater habitats that were earlier deteriorating due to pollution and encroachment. From a community perspective, Tata Power has trained local fishermen and farmers near water bodies on sustainable practices that help preserve aquatic ecosystems. The *Club Enerji* initiative has cultivated energy-conscious behaviors among students and their families. Schools participating in the program have reported reductions in electricity usage, and the initiative has gained traction as a model for energy education that bridges scientific knowledge and real-world application. By embedding environmental learning in educational institutions, the company contributes to long-term behavioral shifts in urban sustainability practices.

HUL's Project Prabhat and plastic waste management campaigns have had a pronounced effect on the urban informal economy, particularly in slum regions. Through partnerships with local NGOs and civic bodies, HUL has created material recovery facilities (MRFs) that employ local waste pickers and offer them safer, more organized, and dignified working conditions. The company also provides training in waste segregation and hygiene practices, helping to reduce landfill pressure and improve community sanitation. Simultaneously, water conservation projects have enhanced the availability and quality of drinking water in water-scarce zones. Health indicators such as incidence of waterborne diseases have shown measurable improvement in neighborhoods benefitting from watershed recharge initiatives. Women in these communities, who traditionally bear the burden of water collection and household sanitation, report better well-being and more time for income-generating activities as a result of improved infrastructure.

Reliance Industries' urban afforestation efforts under *Mission Green Mumbai* and its rainwater harvesting systems have created microclimate improvements and addressed water stress in dense urban areas. In neighborhoods around planting zones, ambient temperature has decreased by up to 2°C during peak summer months, according to a joint survey by the Reliance Foundation and MCGM. The installation of rainwater harvesting systems in schools and government buildings has helped stabilize groundwater levels and reduce dependency on external water supply. Community members in these areas now have more reliable access to clean water, especially during monsoon and summer periods. Additionally, the creation of green corridors and eco-parks has improved recreational space access in congested neighborhoods, enhancing the psychological and physical health of residents.

Mahindra & Mahindra's *Project Hariyali* and its electric mobility awareness campaigns have had a broad-based impact, particularly in peri-urban areas of Mumbai. By reforesting degraded land and promoting native species, the project has revitalized biodiversity while also creating employment for local laborers involved in planting, watering, and monitoring trees. Satellite imagery from 2022–23 indicates increased green cover and improved soil quality in several plantation zones. On the mobility front, M&M's CSR efforts to promote electric vehicles (EVs) in educational institutions and community centers have led to greater public interest in clean transportation. Their awareness drives have included EV demo rides, educational films, and carbon footprint calculators, which have empowered citizens to understand their role in reducing urban emissions. Indirectly, these initiatives contribute to a shift in urban commuting behavior, reducing vehicular pollution and health risks associated with poor air quality.

Collectively, these five companies' environmental CSR initiatives demonstrate a transformative capacity to affect not just nature but also socio-economic well-being. These projects are not isolated interventions but interlinked programs that create feedback loops—improving air and water quality leads to better health; conservation efforts create educational opportunities and tourism potential; and infrastructure improvements like rainwater harvesting enhance urban resilience. An important feature of these initiatives is their participatory nature. Unlike traditional CSR models that operate in top-down fashion, these programs increasingly involve community members in planning, execution, and monitoring, which strengthens local ownership and sustainability.

However, despite these successes, challenges remain. In some cases, the environmental outcomes are not measured systematically, limiting the ability to scale or replicate effective models. There is also a need for closer coordination between corporations, municipal authorities, and academic institutions to ensure data transparency, continuity, and long-term monitoring. Nevertheless, these initiatives provide compelling evidence that well-designed, community-integrated environmental CSR programs can yield substantial benefits for both nature and people in complex urban ecosystems like Mumbai.

Strategic Alignment of Corporate CSR with National and Global Sustainability Goals

In the era of global sustainability commitments and climate action, Corporate Social Responsibility (CSR) has become a powerful mechanism through which private enterprises contribute to environmental stewardship. The integration of CSR strategies with national frameworks like India's Companies Act, 2013 and international agendas such as the United Nations Sustainable Development Goals (SDGs) reflects a significant shift from isolated social philanthropy to systemic environmental governance. In Mumbai, where developmental pressures coexist with fragile ecological systems, corporates like Godrej & Boyce, Tata Power, Hindustan Unilever Limited (HUL), Reliance Industries Limited (RIL), and Mahindra & Mahindra (M&M) are demonstrating how business-led CSR initiatives can align with policy-level sustainability objectives. This section explores the degree to which these companies' CSR initiatives conform to and advance national and global environmental goals.

At the national level, India's CSR legislation under Section 135 of the Companies Act, 2013 mandates that qualifying companies allocate at least 2% of their average net profits toward CSR activities. Schedule VII of the Act explicitly includes "ensuring environmental sustainability" as a priority area, which has pushed companies to formalize and document their environmental efforts. Godrej & Boyce's mangrove conservation project is a model initiative that reflects this alignment. It complements the National Biodiversity Action Plan (NBAP) by preserving native ecosystems, and supports India's Nationally Determined Contributions (NDCs) under the Paris Agreement by contributing to carbon sequestration and coastal protection. Furthermore, the company's use of technology for biodiversity mapping and ecological monitoring also mirrors the goals of the National Action Plan on Climate Change (NAPCC), particularly its missions on ecosystem restoration and sustainable habitat.

Tata Power's environmental CSR activities align closely with both the national and global goals on renewable energy, biodiversity conservation, and climate education. Its solar microgrid and battery recycling projects are in line with the Indian government's push for energy security and electrification under the Ujjwala and Saubhagya schemes. Globally, these efforts contribute directly to SDG 7 (Affordable and Clean Energy) and SDG 13 (Climate Action) by promoting clean technologies and reducing carbon emissions. Tata Power's *Club Enerji* initiative also supports SDG 4 (Quality Education) through its outreach to students and teachers on energy conservation, empowering them with the knowledge to adopt sustainable lifestyles. The campaign's long-term vision to make children "energy champions" reflects a strategy of nurturing climate-responsible citizens in line with the Education for Sustainable Development (ESD) framework endorsed by UNESCO.

Hindustan Unilever Limited's environmental CSR strategy is notably well-aligned with the Swachh Bharat Abhiyan, India's flagship mission for cleanliness and sanitation. The company's plastic waste recovery initiatives—especially those focused on decentralized waste collection in Mumbai slums—address municipal solid waste challenges while also strengthening circular economy models. This directly supports SDG 11 (Sustainable Cities and Communities) and SDG 12 (Responsible Consumption and Production). Furthermore, HUL's water recharge projects contribute to SDG 6 (Clean Water and Sanitation) and help meet India's national targets under the Jal Jeevan Mission, which seeks to provide safe and adequate drinking water to all rural households by 2024. The fact that these projects prioritize low-income areas underscores their strategic alignment with SDG 10 (Reduced Inequalities) as well.

Reliance Industries, through its *Mission Green Mumbai*, demonstrates strategic alignment with India's National Urban Forestry Programme and urban resilience goals. The initiative's urban afforestation and rainwater harvesting efforts support SDG 15 (Life on Land) by protecting urban biodiversity, and SDG 11 by enhancing climate resilience through green infrastructure. Its partnerships with local municipal bodies and public institutions show a cross-sectoral collaboration model that aligns with SDG 17 (Partnerships for the Goals). In addition, Reliance's solar energy investments at the community level fulfill SDG 7 targets and the government's larger agenda of transitioning to a low-carbon economy under India's Renewable Energy Roadmap 2030.

Mahindra & Mahindra's Project Hariyali is a standout example of how CSR can operationalize India's reforestation goals. The program complements government schemes like Green India Mission and National Afforestation Programme by increasing carbon sinks and rehabilitating degraded lands. The company's emphasis on native species and ecological corridors echoes the Aichi Biodiversity Targets of the Convention on Biological Diversity (CBD), to which India is a signatory. Furthermore, M&M's electric mobility campaigns support the national Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) policy and align globally with SDG 9 (Industry, Innovation and Infrastructure). By promoting cleaner transportation and reducing urban pollution, the company contributes to SDG 3 (Good Health and Well-being), especially in polluted urban centers like Mumbai.

One of the most significant trends emerging from the CSR reports of these companies is the deliberate alignment of impact indicators with the SDGs. Several of them now present their sustainability outcomes under specific SDG banners, highlighting the number of beneficiaries, carbon savings, water conservation achieved, and plastic recovered. This alignment ensures better comparability, enables third-party auditing, and enhances transparency for stakeholders including investors, government agencies, and civil society. The integration of Environmental, Social, and Governance (ESG) metrics in annual CSR disclosures further strengthens the accountability of these initiatives, making it easier to evaluate their contribution toward India's Vision 2030 and the UN Agenda 2030.

Despite these positive developments, challenges remain in terms of standardizing measurement tools, avoiding duplication of efforts, and ensuring that CSR investments reach the most vulnerable communities. Furthermore, while leading corporates show high levels of alignment and reporting, small and medium enterprises (SMEs), which form the bulk of Mumbai's business ecosystem, often lack the resources or technical capacity to integrate SDG-linked environmental CSR. Bridging this gap requires capacity-building partnerships, simplified frameworks, and government incentives to encourage meaningful CSR engagement across sectors. The CSR strategies of Mumbai's leading companies increasingly reflect a strategic vision that transcends compliance. These initiatives are rooted in global frameworks such as the SDGs and Paris Agreement, while also responding to national missions on climate resilience, water security, and waste management. By localizing these goals and integrating them into business operations, corporates are contributing to the transformation of Mumbai into a more livable, equitable, and environmentally secure city. Their efforts represent not just environmental interventions but also governance innovations, offering scalable models for other urban centers in emerging economies.

Discussion

The findings of this study highlight the growing strategic importance of Corporate Social Responsibility (CSR) in addressing environmental sustainability challenges within the urban context of Mumbai, an epicenter of industrial activity and ecological stress. The analysis of CSR initiatives by five leading corporates—Godrej & Boyce, Tata Power, Hindustan Unilever Limited (HUL), Reliance Industries Limited (RIL), and Mahindra & Mahindra (M&M)—reveals a clear shift from traditional philanthropic models to integrated, impact-driven approaches that align with both national mandates and global sustainability frameworks. These companies have demonstrated diverse models of environmental engagement, ranging from mangrove conservation and biodiversity preservation to renewable energy promotion and plastic waste management. Importantly, their CSR strategies not only yield ecological benefits such as improved air and water quality, carbon sequestration, and afforestation but also generate positive social externalities, including health improvements, educational outreach, and employment generation for marginalized communities. Moreover, the study indicates that alignment with Sustainable Development Goals (SDGs) and national programs such as the Swachh Bharat Abhiyan, Jal Jeevan Mission, and National Biodiversity Action Plan has elevated the effectiveness and accountability of these initiatives. The comparative analysis further underscores the role of sector-specific strengths in shaping CSR priorities—energy-focused companies prioritize clean power solutions, while FMCG firms invest heavily in circular economy practices. However, the discussion also acknowledges persisting challenges, such as uneven impact measurement standards, limited scalability among smaller firms, and the need for stronger cross-sectoral partnerships. Overall, the study affirms that CSR, when embedded in a company's core strategy and aligned with structured development goals, can be a powerful lever for sustainable urban transformation, especially in emerging economies like India where government capacity may be limited and public-private collaboration is critical for ecological resilience and inclusive development.

Conclusion

This study concludes that Corporate Social Responsibility (CSR) has emerged as a transformative tool for advancing environmental sustainability in urban centers like Mumbai. The analysis of five leading companies—Godrej & Boyce, Tata Power, Hindustan Unilever Limited, Reliance Industries, and Mahindra & Mahindra—demonstrates that well-planned and strategically implemented CSR initiatives can address critical ecological issues such as biodiversity loss, air and water pollution, waste management, and climate resilience. These corporates have effectively aligned their CSR activities with national policies and global frameworks such as the Sustainable Development Goals, thereby enhancing both accountability and long-term impact. Their projects not only contribute to environmental conservation but also create socio-economic benefits for local communities, particularly in underserved areas. However, the study also underscores the need for robust impact assessment mechanisms, standardized reporting, and greater participation from smaller enterprises to ensure inclusive and scalable sustainability outcomes. Overall, the

findings emphasize that CSR, when embedded into the core business strategy and supported by cross-sectoral collaboration, can serve as a vital instrument for sustainable urban development. It offers a replicable model for other emerging economies facing similar environmental and developmental challenges, reinforcing the idea that private sector responsibility is integral to the global sustainability agenda.

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