

Strategic Integration of Environmental Sustainability and Corporate Social Responsibility: A Review and Roadmap for Viksit Bharat 2047

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Abstract

The Viksit Bharat 2047 initiative represents a comprehensive multi dimensional vision for India to achieve developed nation status by the centenary of its independence. This study provides an exhaustive academic examination of the strategic intersection between environmental sustainability, corporate social responsibility, and green innovation as the primary catalysts for this transition. Grounded in the legislative mandate of Section 135 of the Companies Act 2013 and the strategic goals of the National Action Plan on Climate Change, the report analyzes how Indian corporations are shifting from a compliance-oriented philanthropic model to a strategic investment paradigm. Drawing on a synthesis of research from 2020 to 2026, the study explores the internal capability-building roles of green organizational culture and the external dynamics of the pollution haven and pollution halo hypotheses in the Indian manufacturing sector. Key findings indicate that while corporate social responsibility expenditure among BSE 500 companies has grown 18-fold since 2014, significant regional disparities and challenges related to greenwashing persist. The report details the roles of the National Green Hydrogen Mission and the National Education Policy 2020 in fostering a resilient green workforce. Ultimately, the study argues that measuring national success should shift from traditional economic metrics to integrated social and environmental outcome indicators, such as the Social Progress Index and the Comprehensive Environmental Performance Index.

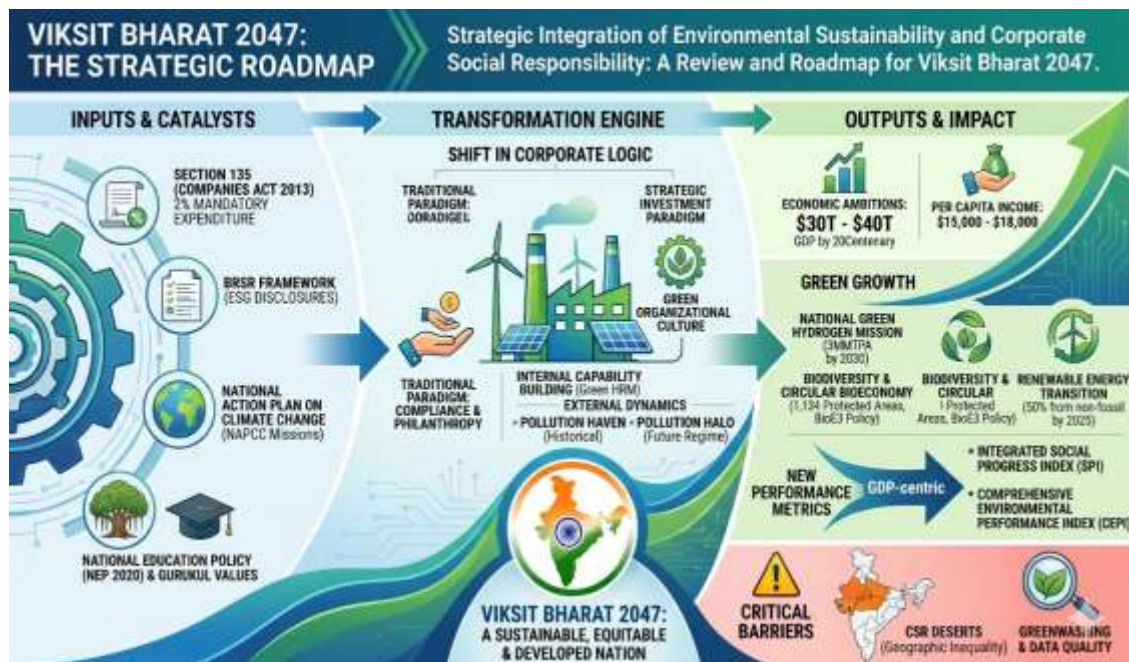
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Introduction: The Genesis and Imperatives of Viksit Bharat 2047

The vision of Viksit Bharat 2047 is not merely a quantitative economic target but a qualitative transformation of the Indian state into a global leader in sustainable development, governance, and social equity (Jham et al., 2025). As India celebrates its 100th year of independence in 2047, the Viksit Bharat initiative aims to propel the nation into the ranks of developed nations through a robust commitment to innovation, entrepreneurship, and ecological preservation (Kapoor et al., 2026). This roadmap is anchored in four foundational pillars including youth, the poor, women, and farmers, reflecting a paradigm that integrates inclusive growth with high tech manufacturing and digital governance (ClearTax, 2026).

The economic objectives are ambitious, with projections aiming for a gross domestic product of between 30 trillion USD and 40 trillion USD and a per capita income of between 15,000 USD and 18,000 USD (Viksit India, 2026). However, the strategic imperative is to achieve this expansion without compromising the nation's environmental integrity. The commitment to achieving net zero carbon emissions by 2070 and the promotion of green growth across all industrial sectors are central to this endeavor (DDP Initiative, 2025). This necessitates a fundamental shift in the corporate logic governing the Indian market.

The legal catalyst for this shift was the introduction of Section 135 of the Companies Act 2013, which mandated that qualifying companies spend at least 2 percent of their average net profits on corporate social responsibility (NITI Aayog, 2025). This mandate transformed India from a voluntary philanthropic regime to a legislated model of social investment, effectively placing the responsibility of national development on the corporate sector (Ubale et al., 2025). As the global discourse evolves toward environmental, social, and governance principles, the Indian framework is undergoing a secondary transition—moving from simple expenditure-based reporting to a disclosure-oriented and performance-based Business Responsibility and Sustainability Reporting framework (Maheshwari et al., 2026).

Literature Review: Synthesizing the Theoretical Landscape 2020 to 2026

The concept of the Triple Bottom Line which involves balancing profit, people, and planet has undergone a significant metamorphosis in the context of India's rapid industrialization. Traditional neoclassical views, which once argued that social and environmental expenditures were agency costs that diverted resources from shareholder wealth, are increasingly replaced by Stakeholder Theory (MDPI, 2025).

This theory posits that long-term firm value is maximized by addressing the interests of employees, communities, and ecosystems, thereby fostering trust and reducing operational risks. Empirical evidence from emerging economies suggests that sustainability reporting acts as a powerful moderator of the relationship between social performance and market valuation (Abdeljawad et al., 2026). Firms with robust reporting frameworks are better positioned to leverage their sustainability initiatives to gain a competitive advantage. In the Indian context, the narrative has shifted from corporate giving to strategic environmental, social, and governance outcomes, in which environmental stewardship is integrated into the organization's core risk management and transparency systems (CSR Times, 2026). Internal transformation of a firm into a sustainable entity is driven by its green organizational culture. This is defined as a set of values, beliefs, and behavioral norms that align decision making with environmental principles (Liu et al., 2026). Within the Indian manufacturing sector, research from 2024 to 2026 highlights the critical role of green human resource management in institutionalizing this culture (Gazi et al., 2024). By integrating environmental goals into recruitment, training, performance appraisal, and reward systems, organizations foster green organizational citizenship behavior which is a state where employees voluntarily engage in discretionary eco friendly actions (Ansari et al., 2025). Studies on major public sector steel units in India demonstrate that employees who perceive strong organizational support for environmental values are significantly more likely to contribute to firm level sustainability metrics, such as reduced energy intensity and waste minimization (Steel Authority of India, 2025). This creates a capability building framework where human capital becomes the driver of green innovation (MDPI, 2026).

A critical theoretical debate shaping India's 2047 roadmap is the pollution-haven versus pollution-halo hypothesis. The pollution haven hypothesis argues that multinational corporations relocate pollution intensive production to developing countries with weaker environmental regulations to reduce costs (Holtbrügge et al., 2025). Longitudinal analysis of the Indian manufacturing, transportation, and chemical sectors provides evidence of this effect, suggesting that historical foreign direct investment inflows have often correlated with increased SCO_2 emissions (Chakraborty et al., 2013). Conversely, the pollution halo hypothesis suggests that foreign direct investment can act as a conduit for clean technology transfer and superior management standards, thereby improving the host country's environmental welfare (Nguyen et al., 2021). Findings suggest that the direction of this relationship in India is increasingly dependent on the stringency of domestic regulations. As the Indian government implements stricter non market based policies and technology support programs, the country is transitioning toward a pollution halo regime where foreign investment drives, rather than degrades, environmental performance (Satoğlu et al., 2024).

Policy Analysis: Strategic Frameworks for a Green Transition

India's mandatory corporate social responsibility regime stands out in the G20 for its legislative precision. While countries like Brazil and China are moving toward mandatory sustainability disclosures, India's requirement for a specific 2 percent expenditure is unique (NITI Aayog, 2025). The Indian regulatory ecosystem has evolved from the voluntary guidelines of 2009 to the Business Responsibility and Sustainability Report in 2021. This shift mirrors the European Union's Corporate Sustainability Reporting Directive but remains distinct in its entity model focus, where Section 166(2) of the Companies Act compels directors to balance corporate purpose with the community and environmental interests (Ubale et al., 2025).

Feature	India (Section 135)	European Union (CSRD)	Brazil (CVM Res. 193)	China (2024 Guidelines)
Mandate Type	Mandatory Expenditure (2%)	Mandatory Disclosure	Mandatory starting 2026	Mandatory (Select Listed)
Reporting Standard	BRSR (SEBI)	ESRS Standards	IFRS (S1 and S2)	Standardized Guidelines
Focus	Corporate Obligation	Double Materiality	Investor Risk	Standardized Disclosure
Assurance	Phased (Top 1000 by 2027)	Third-party mandatory	Voluntary in 2024-25	Integrated Guidelines

The National Action Plan on Climate Change serves as India's overarching climate strategy, implemented through core national missions (Nimbusias, 2026). These missions are designed to integrate climate resilience into the country's development planning. The National Solar Mission has driven India's installed solar capacity from a mere 17 MW in 2010 to over 70 GW by 2023. The National Mission for Enhanced Energy Efficiency implements the Perform, Achieve and Trade scheme, which has resulted in energy savings of over 8.67 million tonnes of oil equivalent and avoided 31 million tonnes of SCO_2 emissions (Bureau of Energy Efficiency, 2025). The National Water Mission aims for a 20 percent improvement in water use efficiency through micro irrigation, which has already expanded to over 13 million hectares. The National Mission for a Green India targets the afforestation of 5 million hectares to enhance carbon sinks and biodiversity conservation (Ministry of Environment, 2025).

The National Green Hydrogen Mission is a pivotal policy intervention designed to make India a global hub for the production and export of green hydrogen (MNRE, 2026). The mission aims to achieve a production capacity of at least 5 million metric tonnes per annum by 2030 (NITI Aayog, 2025).

This table tracks the financial allocation versus actual utilization and physical progress of India's green hydrogen goals.

Table 2: National Green Hydrogen Mission Implementation Data (2024–2026)			
Financial Year	Fund Allocation (Rs. Crores)	Utilization (Rs. Crores)	Commissioned Capacity (TPA)
2023–24	100	0.11	-
2024–25	300	46.26	-
2025–26	300 (Revised Est.)	203.75 (as of March 19)	8,000

As of February 2026, approximately 8,000 tonnes per annum of capacity has been commissioned, with the discovered cost of green hydrogen through competitive bidding reaching between 387 and 397 rupees per kg (Press Information Bureau, 2026). This mission aligns with the broader goal of Aatmanirbhar Bharat by reducing fossil fuel imports and substitution of grey hydrogen in the petrochemical and fertilizer sectors (MNRE, 2026).

Thematic Analysis: Drivers of the Green Economy

The pace of India's energy transition is central to the Viksit Bharat 2047 timeline. By July 2025, India had already achieved 50.1 percent of its total electric power capacity from non fossil fuel sources, meeting its 2030 target five years early (DDP Initiative, 2025). However, the pace of incremental deployment remains a concern. While India added 30 GW of renewable capacity in FY 2025, the average additions since 2021 have been closer to 20 GW per year, highlighting the need for accelerated capital expenditure in state owned enterprises (IISD, 2026).

India's biotechnology industry is emerging as a catalyst for the circular economy, applying white biotechnology to minimize resource consumption and waste (Vandy et al., 2025). Valued at 150 billion USD in 2023, the sector is projected to reach 300 billion USD by 2030, driven by the BioE3 policy (Economy, Environment, and Employment). Successful projects in this space involve transforming agricultural and industrial waste into high value bioplastics, biofuels, and biofertilizers (Press Information Bureau, 2026).

Biodiversity conservation and ecosystem restoration are also critical drivers. The updated National Biodiversity Strategy and Action Plan 2024 to 2030 sets ambitious targets to restore 30 percent of degraded ecosystems (Ministry of Environment, 2025). The protected areas network expanded from 745 in 2014 to 1,134 in 2025. Tiger reserves now cover approximately 85,000 square kilometers, reflecting a significant investment in landscape level conservation. India now has 98 Ramsar sites as of January 2026, the highest in Asia, with cities like Indore and Udaipur accredited as Wetland Cities (Press Information Bureau, 2026).

Thematic Analysis: Barriers to Sustainability

The rise of environmental, social, and governance reporting has introduced the risk of greenwashing, where companies selectively report sustainability gains to mask underlying non compliance (Ubale et al., 2025). To combat this, SEBI introduced certification requirements for rating providers in 2023 to ensure standardized assessments. Furthermore, the lack of third party assurance for most medium sized firms' reporting remains a structural weakness (SEBI, 2025).

India lacks a consolidated, unified sustainability law. Instead, corporate sustainability is governed by a patchwork of statutes including the Environment Protection Act 1986, the Water Act 1974, and the Factories Act 1948 (Ubale et al., 2025). This fragmentation leads to inconsistent enforcement and a derivative action deficit, where it is procedurally difficult for stakeholders to hold board members accountable for environmental breaches.

Data from the BSE 500 companies reveals a profound geographic concentration of corporate social responsibility funding. This HQ Proximity Bias creates regions of extreme underfunding known as CSR deserts (RAYSolute, 2026).

Table 3: Geographic Distribution of CSR Expenditure (BSE 500 Analysis)		
Region or State	Share of CSR Funds (%)	Economic Characterization
Maharashtra	48%	Industrial Powerhouse
Top 3 States (MH, GJ, KA)	71%	High Development Hubs
Low-HDI States (Bihar, JH, UP)	22% (Combined)	CSR Deserts
North East & J&K	< 5%	Emerging Frontiers

This imbalance suggests that while the mandate is scaling, it is not yet achieving equitable national development. Only 22 percent of funds reach states with below average human development index scores, undermining the inclusive participation goal of Viksit Bharat (RAYSolute, 2026).

Educational Synergies: Building a Green Workforce

The National Education Policy 2020 is framed as a necessity for achieving Viksit Bharat 2047 by aligning Indian education with Sustainable Development Goal 4 (Sahoo et al., 2024). The policy emphasizes a multidisciplinary approach, removing the rigid distinctions between arts, sciences, and commerce to foster creative problem solving. Key innovations under the policy include the Academic Bank of Credit which facilitates student mobility and flexible learning pathways. Vocational integration is introduced in a phased manner starting from Grade VI, and teacher training mandates fifty hours of continuous professional development annually to keep educators abreast of new technologies and sustainability concepts (Bvicam, 2024).

The policy seeks to revive the foundational ideals of the ancient Gurukul system—mentorship, character building, and environmental awareness (Devi et al., 2025). This philosophical revival aims to ground students in Indian traditions while equipping them with global competencies. By embedding Gurukul values into the curriculum, India aspires to create a Vishwa Guru workforce that views sustainability as an ethical duty rather than just a legal requirement (Pandey et al., 2025).

Research reveals that while environmental awareness has increased, consistent behavioral change remains mediated by socioeconomic context (Wetering et al., 2022). Environmental knowledge has a stronger influence on green consumption behavior in rural residents, whereas participation willingness is more significant for urban residents (Zhao et al., 2025). Youth led eco startups and digital campaigns via social media are more effective at influencing peer behavior than traditional awareness campaigns (Jose et al., 2026).

Strategic Roadmap: Redefining CSR as Strategic Investment

The Indian corporate social responsibility ecosystem has matured into a parallel stream of social investment, with cumulative expenditure crossing 2.3 lakh crore rupees in the last decade (CSR Times, 2026). A significant trend is the commitment gap analysis where spending is growing 4.4 times faster than corporate profits, indicating a deepening commitment beyond mere compliance (RAYSolute, 2026).

To address the execution gap, where only one third of organizations feel they use technology to its full potential, the strategic roadmap for 2047 advocates for IoT enabled monitoring (Relific, 2025). Real time verification using smartphones for geo tagging and location stamped photos provides

transparency in field projects (Relific, 2025). Impact dashboards replace traditional spreadsheets with live visualizations that allow managers to track metrics like survival rates of tree plantations or water flow in irrigation projects in real time. IoT based condition monitoring in sectors like power and logistics extends the lifecycle of equipment, reducing resource waste (AEologic, 2026).

Successful projects like Mahindra's Project Hariyali and ITC's Social and Farm Forestry demonstrate scalable impact through science backed reforestation and rural income diversification (Earth5R, 2025). ITC's model sequesters between 25 and 30 tonnes of carbon per hectare annually and has achieved significant groundwater recharge in drought prone belts (Earth5R, 2025). Community audits show a 20 to 25 percent reduction in farm input costs for households adopting these agroforestry models.

Discussion: Measuring Progress Beyond GDP

The central critique of the Viksit Bharat journey is the continued reliance on gross domestic product as the primary metric of success. While India's economic growth is high, its Social Progress Index score tells a more nuanced story (Kapoor et al., 2026).

Table 4: India's Social Progress Index (SPI) Performance (2021–2026)			
Indicator	Score (out of 100)	Global Rank (out of 171)	Observations
Overall SPI 2026	58.79	109	Slower growth vs 2011-22
Basic Human Needs	72.31	-	Driven by housing and medical care
Foundations of Wellbeing	54.72	125	Environmental quality constraint
Environmental Quality	38.56	Near Bottom	High PM2.5 and lead exposure

The environmental quality component remains the most significant hurdle for India. In 2025, cities like Delhi recorded annual average PM10 concentrations nearly three times the national standard (Kapoor et al., 2026). This prosperity pollution paradox suggests that economic gains are being offset by extreme groundwater depletion and land degradation (Garai et al., 2025). To achieve the 2047 vision, India must adopt the Comprehensive Environmental Performance Index at the state level which integrates indicators across climate, biodiversity, waste, and water (Latif et al., 2022).

Conclusion: Orchestrating the Path to 2047

The journey toward Viksit Bharat 2047 is a complex orchestration of legal mandates, technological advancements, and a fundamental shift in educational philosophy. The integration of environmental sustainability and corporate social responsibility is no longer a peripheral activity but the primary driver of national resilience. While the scaling of expenditure to 34,909 crore rupees annually signifies institutional maturity, the persistent CSR deserts and constraints of air quality highlight that the work remains unfinished (CSR Outlook, 2025). Green innovation, led by the National Green Hydrogen Mission and the transition to a circular bioeconomy, offers the technological pathway to decouple economic expansion from ecological degradation. This transition requires a workforce that is not only skilled in technology but also rooted in the ethical values of the Gurukul system. Success will ultimately be measured not by the speed of GDP growth, but by the ability to convert economic resources into measurable social progress and a clean environment for all citizens.

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