

From Strategy to Action: Integrating ESG for Lasting Impact



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Message



Deepak Sood

Secretary General, ASSOCHAM

Foreword Message

ESG has emerged as the new essential pillars for businesses striving to maintain shareholders' value while ensuring the value for the communities and surroundings they operate. ESG now has become a business imperative in pursuit of sustainable growth, trust, and more enduring long-term resilience.

Incorporation of environmental concerns means there are responsible organizations that assume responsibility for the impact of their existence on the face of the earth, including some practices that remove risks from climatic catastrophes and optimize use of resources. Socially, the companies are called upon to ensure inclusiveness and respect the rights of humans while producing quality and supporting communities at which they operate. Adherence to good governance ensures accountability and transparency with ethical decisions at all levels.

It is no longer just about compliance or corporate reputation but about creating lasting value by incorporating the integrated ESG into the core of business operations. Organizations that really integrate these principles are better placed to manage risks, attract investment, and win the confidence of consumers, employees, and partners. Companies that embrace ESG mitigate risk but also seize opportunities for innovation in many ways, furthering efficiency in their operations, and building trust with stakeholders.

However, in the implementation of ESG, there are some challenges. Measuring and reporting form developing standardized metrics for ESG performance, which is really a challenge as it prevents the making of comparisons and benchmarking; cultural shifts since companies are instilling the ESG mindset across all levels, from management to employees, to bring about real change and collaboration through internal and external dialogue with complex global issues requires collaboration among businesses, governments, and civil society.

This conclave aims to endorse process of ESG integration with strategies, case studies, and practical tools in taking meaningful action. The embedding of ESG within organizational DNA would not only drive progress in operations but further contribute to a sustainable and equitable global economy.

In this background, the ASSOCHAM & CareEdge have jointly prepared a comprehensive and detailed report on integration of ESG. We hope this report, along with the discussions during the summit, will help the regulators, market participants, government departments and research scholars to strengthen and deepening the integration of ESG .

I thank the Knowledge Partner for their valuable contribution and convey my best wishes for the success of the Conclave.

Executive Summary

The ESG landscape in India is continuously evolving, with companies taking significant strides not only to remain compliant with regulatory requirements but also to turn ESG into a strategic business opportunity. As businesses are shifting from mere compliance to leveraging ESG for competitive advantage, they are enhancing both operational efficiency and market positioning. Additionally, growing customer demand for transparency, increasing peer pressure, and shifting consumer preferences for sustainable products are pushing companies to integrate ESG deeper into their core strategies. This shift is building trust, fostering a more resilient brand image, and driving long-term growth.

Structured ESG reporting is becoming increasingly essential for Indian companies, improving transparency and driving long-term growth. The adoption of global best practices enhances operational efficiency and investor confidence, supporting future business strategies and resilience.

Decarbonization plays a vital role in India's journey to meet its Nationally Determined Commitments (NDC). The growing adoption of Science-Based Targets (SBTi) by Indian companies signals a positive shift towards Net-Zero. This progress strengthens India's contribution to global climate efforts. Further, it is also important for companies to take up steps to continue to decarbonise and sustain Net-Zero.

Adaptation financing remains a critical yet underfunded area. While government and Development Financial Institutions (DFIs) have driven efforts, a significant gap in financial commitments persists. Private sector involvement is crucial to scale up adaptation measures and bridge this financing shortfall, ensuring India can adequately prepare for climate impacts and foster economic stability.

Technological advancements, including AI, data analytics, and blockchain, are improving ESG reporting processes. These innovations increase data accuracy, efficiency, and transparency, enabling businesses to meet regulatory compliance while gaining deeper insights into their sustainability performance. Adopting these technologies will help companies to adapt the evolving ESG requirements and strengthen real-time stakeholder communication.

Evolution of ESG: From Compliance to Competitive Advantage

As global businesses grapple with an increasingly complex and dynamic regulatory environment, they are confronted with both challenges and opportunities that are reshaping their operational and strategic approaches. The pressure to align with new ESG mandates is not just about compliance; it's a fundamental shift in how companies must think and operate.

Embracing this moment of change, companies can transform ESG challenges into opportunities for growth and differentiation. The ability to adapt and innovate in response to evolving regulations will not only enable them to meet their sustainability goals but also to lead in creating long-term value and resilience in an increasingly conscious marketplace.

The Evolution of ESG in India

Over the past three decades, India has evolved from mere policies to address climate change to bringing accountability and reporting by having direct oversight from regulators. As world around ESG continues to evolve it is expected these policies and regulations will continue to get strengthened and robust.



Figure 1: Key Environmental Regulatory Milestones in India

Currently, Indian companies are progressively incorporating ESG principles into their business strategies. The focus has moved from merely meeting compliance requirements to proactively managing ESG factors as crucial elements of risk management and value creation.

Some advantages of ESG reporting are mentioned in Figure 2.



Figure 2: Advantages of ESG Reporting

Nonetheless, there remains significant variation in ESG maturity among different sectors and companies, with larger corporations often at the forefront and smaller businesses trailing.

Shaping future Resilience and Opportunities:

As businesses shift from mere ESG compliance to leveraging it for competitive advantage, the strategic benefits become evident. ESG-compliant supply chains enhance resilience, offering cost savings and reduced disruptions during global crises. Advanced ESG practices also minimize legal risks and enable swift adaptation to regulatory changes, avoiding costly operational adjustments. Embracing ESG principles not only protects against potential issues but also positions companies to capitalize on sustainability-driven opportunities.

Beyond compliance, a robust ESG commitment can transform the business landscape. Leading in ESG enhances operational efficiency and market positioning while contributing to systemic improvements. This approach fosters a resilient, equitable global economy with sustainable resource use, reduced environmental impact, and stronger social frameworks. Integrating ESG into core strategies drives positive societal changes, improves quality of life, and builds a sustainable future. Embracing ESG as both a strategic investment and a commitment to societal progress ensures growth while contributing to broader, positive global transformations.

Decarbonisation and Net-Zero

Decarbonisation is a Must

Climate change has dramatically intensified its physical and economic impacts, imposing severe consequences on global economies and communities. In India, the urgency of addressing climate change has become more and more evident every year, with the increasing incidents of natural disasters. Nearly 85% of the country's districts have been exposed to extreme climate events such as floods, droughts, and heatwaves.¹ While India's per capita emissions is significantly lower than the top 10 emitting countries in the world, it still bears the critical responsibility to reduce emissions, being the third-largest global emitter of greenhouse gases, after China and USA², in order to contribute to the global climate goals.

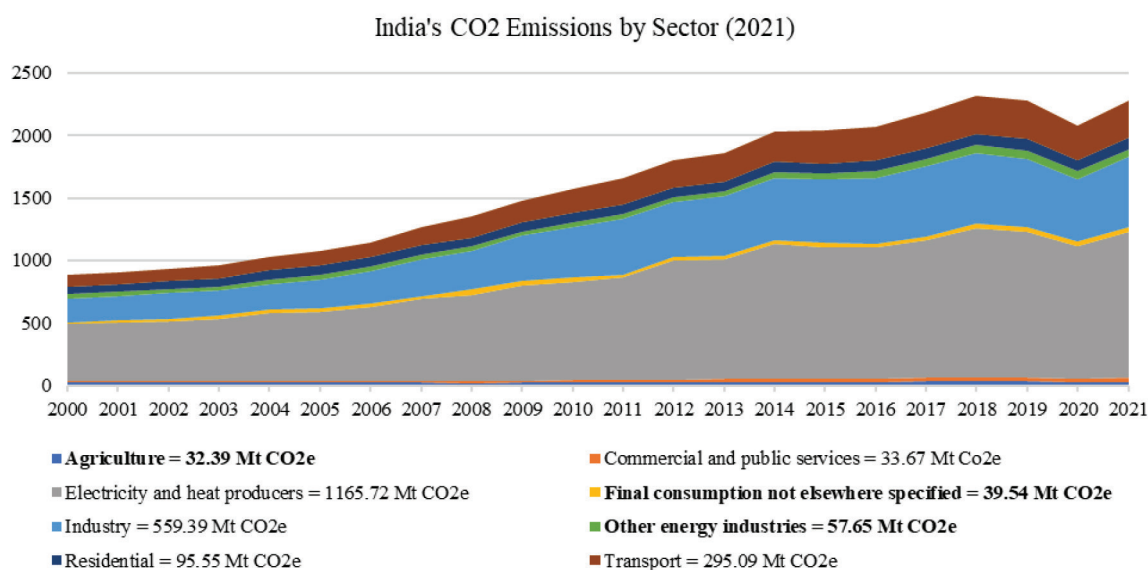


Figure 3: India's CO2 Emissions by Sector, 2021
(Source: IEA)

In order to achieve India's Nationally Determined Contributions (NDCs), of reaching Net-Zero emissions target by 2070, decarbonization emerges as a crucial imperative, particularly given that 51.2% of the country's emissions stem from the electricity and heat production sectors, while industrial activities account for 24.5% as per IEA³ (as shown in Figure 3).

¹ Managing Monsoons in a Warming Climate. IPE Global. 2024. Link

² Global GHG Emissions.WRI. 2023. Link

³ IEA India Emissions. 2021. Link

Addressing these key sectors through effective decarbonization strategies is essential not only to mitigate the environmental risks associated with climate change but also to ensuring the long-term sustainability of India's economic and industrial growth. Failure to act will threaten the stability and future competitiveness of industries within the global landscape.

The implementation of decarbonization strategies, such as scaling climate technologies and building new capabilities, may involve high upfront costs, but it offers significant opportunities as stakeholders and customers increasingly demand low-carbon solutions and businesses. According to a McKinsey's report, companies that fail to decarbonize could risk losing up to 20% of their economic profit by 2030⁴, based on factors such as stranded assets, rising cost of capital, and diminishing market share.

Pathways to Achieve Net-Zero

To meet India's ambitious goal of Net-Zero by 2070, organisations must recognize the pressing need to decarbonize. As the global and domestic push for emission reductions intensifies, the path to Net-Zero is becoming a business imperative. India can tackle approximately 90% of its current emissions by concentrating on three key areas: electricity grid decarbonization (accounting for about 51.2% of emissions), industrial decarbonization (around 24.5%), and transport decarbonization (roughly 12.9%)⁵.

Achieving Net-Zero for companies requires a multi-faceted approach that includes optimising use of resources, replacing high-emission sources, and offsetting hard-to-abate emissions. While renewable energy and energy efficiency technologies are available, emerging solutions like battery storage, green hydrogen, and carbon capture need further development. Companies may also innovate in product design, operational processes and supply chain management. A well-structured actionable

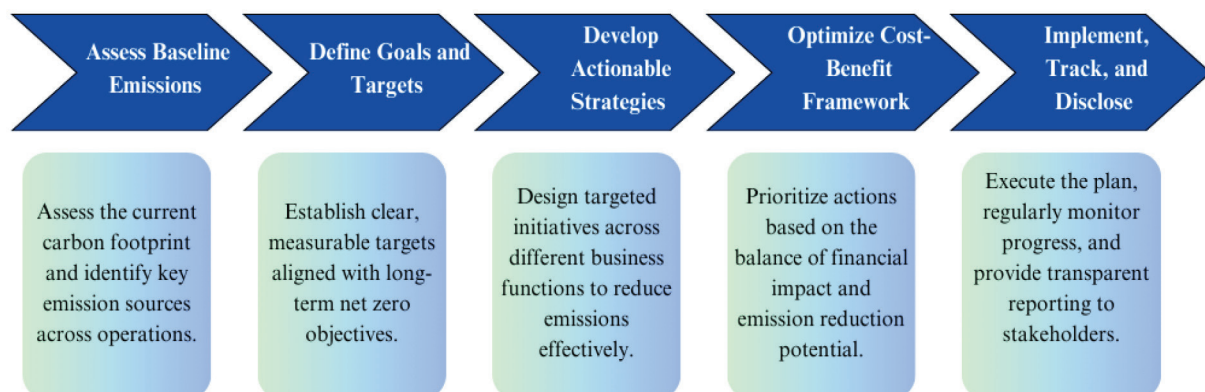


Figure 4: Action Plan for achieving Net-Zero

⁴ Decarbonize and Create Value: How Incumbents Can Tackle the Steep Challenge. McKinsey Sustainability. 2023. [Link](#)

⁵ IEA. 2021. [Link](#)

plan (as outlined below in Figure 4) is essential for navigating this transition effectively while maintaining economic viability and stakeholder confidence.

In order to achieve Net Zero, companies around the world have started taking active steps towards publishing their Net-Zero targets and getting them approved by Science Based Target Initiative (SBTi), which increases their credibility and accountability. Around 9,489 companies worldwide have committed to Net-Zero out of which 6086 companies have got their targets approved by SBTi, as of September 2024. This includes 375 Indian companies, with 191 having their Net-Zero targets approved by SBTi as shown in Figure 5.

SBTi Companies Taking Action. 2024. Link

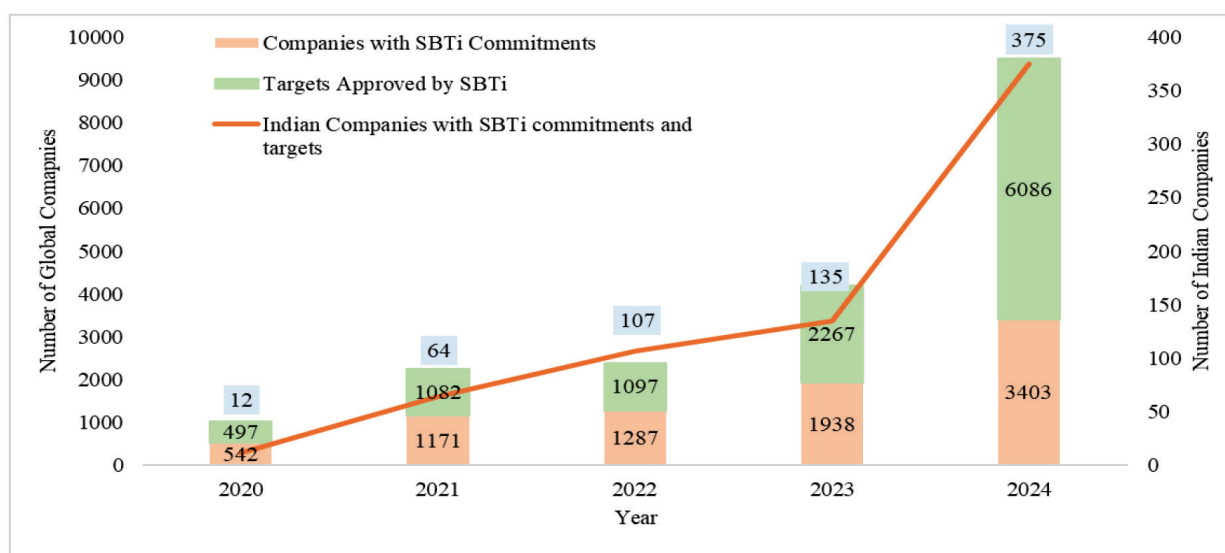


Figure 5: Companies with Net-Zero Approved Targets and Commitments, 2024 YTD⁶ (Source: SBTi)

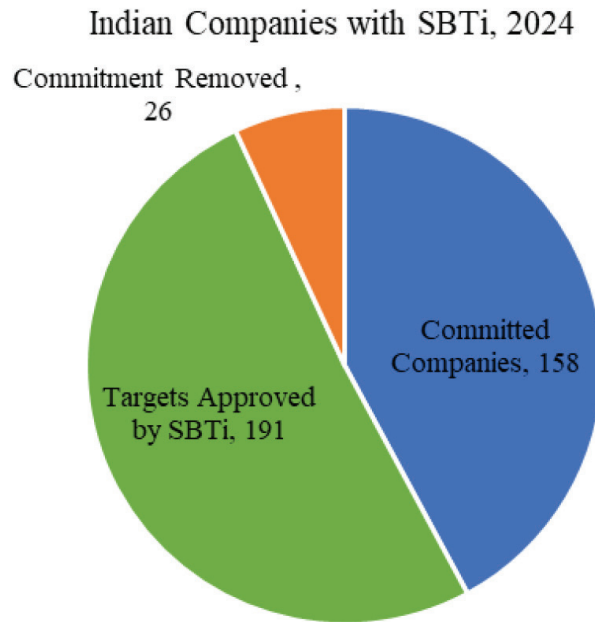
Further, government policies also play a crucial role for enabling corporate decarbonisation, with a focus on stability, financial incentives, and expanding participation. Investment in R&D, cross-sector collaboration, and setting clear emission reduction targets are essential for driving effective decarbonization and ensuring successful implementation.

Sustaining Net-Zero: Monitoring & Future Steps

For India to meet its Net-Zero targets by 2070, it is crucial that companies not just merely set Net-Zero goals but also sustain these commitments over the long term. However, sustaining Net-Zero is proving to be a significant challenge for many businesses. Figure 6 below shows count of Indian companies with commitments and targets approved by SBTi.

⁶ SBTi Monitoring Report. SBTi. 2023 Link

Figure 6: Indian Companies with Commitments and Approved SBTi targets, 2024⁷
(Source: SBTi)



To address climate challenges, companies must develop climate risk management framework, ensuring strategic planning and risk management.

Beyond achieving Net-Zero, companies should focus on:

- **Enhancing Carbon Capture and Storage:** Implementing cutting-edge technologies to capture and permanently store more carbon than is emitted, driving a net positive environmental impact.
- **Scaling Renewable Energy Adoption:** Expanding the use of renewable energy sources beyond operational needs to contribute to grid decarbonization.
- **Driving Systemic Change:** Influencing industry-wide standards and practices to foster broader sustainability efforts.

These efforts will not only assist in achieving Net-Zero targets but also set new benchmarks for environmental leadership and contribute to a greener future.

⁷ SBTi Companies Taking Action. 2024 Link

Bridging the Adaptation Financing Gap

In human systems, the process of adjustment to actual or expected climate and its effects in order to moderate harm or exploit beneficial opportunities is normally termed as Adaptation. In natural systems, this process of adjustment to actual climate and its effects, and human interventions that may facilitate adjustment to expected climate is called Climate Adaptation. Adaptation is supposed to reduce risks and enhance resilience of natural and man-made systems towards adverse impacts of climate change.

How climate change will affect us?

India is exceptionally vulnerable to the adverse consequences of climate change. The Germanwatch Global Climate Risk Index 2021 ranked the country 7th-most affected by weather-related losses and climate risks.⁸ The adverse impacts of climate change on the economy and livelihoods are evident, and the country's already substantial adaptation investment needs will grow over time as the effects of climate change worsen (MoEFCC 2022).

India's Nationally Determined Contribution (NDC), submitted in 2015, reiterated the need for better climate change adaptation by enhancing investments in development programmes in areas vulnerable to climate change, particularly agriculture, water resources, Himalayan region, coastal regions, health, and disaster management.

Figure 7 provides an analysis of transition and physical climate risks, derived from the Global Change Assessment Model (GCAM), an Integrated Assessment Model (IAM)⁹. The top left outlines key risks from the low-carbon transition, such as mitigation costs, carbon taxes, price fluctuations, stranded assets, and sectoral carbon intensity changes, quantified through economic models. The right-hand side demonstrates the impact on agriculture, energy, industry, households, and finance.

Lower part of the Figure 7 examines physical hazards like heat waves, floods, droughts, and crop heat stress, and how these climate-related disasters influence the same sectors. Overall, the figure underscores the interconnected nature of transition and physical risks, highlighting the challenges for industries in both adapting to low-carbon transitions and managing the growing impacts of climate-related events.

8 Global Climate Risk Index 2021. Germanwatch. Link

9 Near-Term Transition and Longer-Term Physical Climate Risks of Greenhouse Gas Emissions Pathways. Nature - Climate Change. 2021. Link

Scenario analysis		Sectoral implications				
What risks are associated with a low-carbon transition?	What IAM outputs reflect impacts deriving from these risks?	Agriculture	Energy supply	Business and industry	Households	Finance
Economy-wide mitigation cost leading to GDP losses	Policy, abatement or system cost changes, GDP losses	Reduced demand	Reduced demand	Reduced demand	Employment losses	Impact on risk and return across assets
Higher carbon taxation	Carbon price (commonly the 'shadow' price)	Potentially higher cost of, for example, meat	Higher operating cost for fossil energy suppliers	Higher operating cost for fossil-reliant business	Higher goods and service prices	Greater business and household credit default risk
Energy price changes	Electricity and other fuel price changes	Higher energy input costs	Higher energy input costs	Higher energy input costs	Higher energy bills	Greater business and household credit default risk
Food price changes	Food price changes (in models covering agriculture sector)	Changes to sales and revenue		Changes to input costs, for example, food retailers	Higher food prices	Greater business and household credit default risk
Stranded assets	Stranded assets (most commonly in power sector)		Sunk costs of premature asset closure	Asset loss, for example, carbon-intensive industries		Asset investment write-offs
Sectoral carbon intensity changes	Sectoral carbon intensity (for example, ratio of sectoral emissions and energy)	Higher cost to reduce intensity faster	Higher cost to reduce intensity faster	Higher cost to reduce intensity faster		Lower carbon-intensive asset values
What hazards are associated with global warming?	What impact model outputs reflect impacts deriving from these hazards?	Agriculture	Energy supply	Business and industry	Households	Finance
Heat waves	Loss of work hours	Lower output	Lower output	Lower output	Health impacts and lost income	Lower asset values across sectors
Floods	Asset damages	Lower output	Asset damage and replacement costs	Asset damage and replacement costs	Household damage /higher insurance costs	Business and household asset devaluation
Droughts	Loss of crops, lower agricultural productivity	Lower output	Lost output, for example, from hydro power	Lost production for firms reliant on water input	Health and water supply impacts/ costs	Lower asset values from lost production
Crop heat stress and durations	Loss of crops, lower agricultural productivity	Lower output	Loss of bioenergy resource	Higher food input costs	Higher food prices	Lower agricultural sector asset values

Figure 7: Sectoral and Financial implications of transition and physical risks¹⁰
(Source: Nature)

Landscape of climate financing in India

In FY2019 /FY2020¹¹, tracked green finance was approx. INR 309,000 Cr. (or approx. ~USD 44 billion) per annum, approximately 25% of India's annual need.

Domestic sources continue to account for the majority of green finance in India, with 83% in FY2020. Of these domestic sources, the private sector contributed about 59%, approx.. INR 156.9 thousand crores (USD 22 billion). Public sector flows were evenly distributed between Government Budgetary spends (Central and State) and PSUs at approximately 54% and 46% respectively.

For adaptation financing sectors, the total amount of green finance was approx. INR 37,000 Cr. (or approx. USD 5 billion) per annum over FY2019/FY2020 as shown in Figure 8. The major source of Adaptation funding was domestic (94%), and it was fully funded by Central and State government Budgets.

¹⁰ Near-term transition and longer-term physical climate risks of greenhouse gas emissions pathways. Nature Climate Change. 2021. Link

¹¹ The Landscape of Green Finance in India. Climate Policy Initiative (CPI). 2022 Link

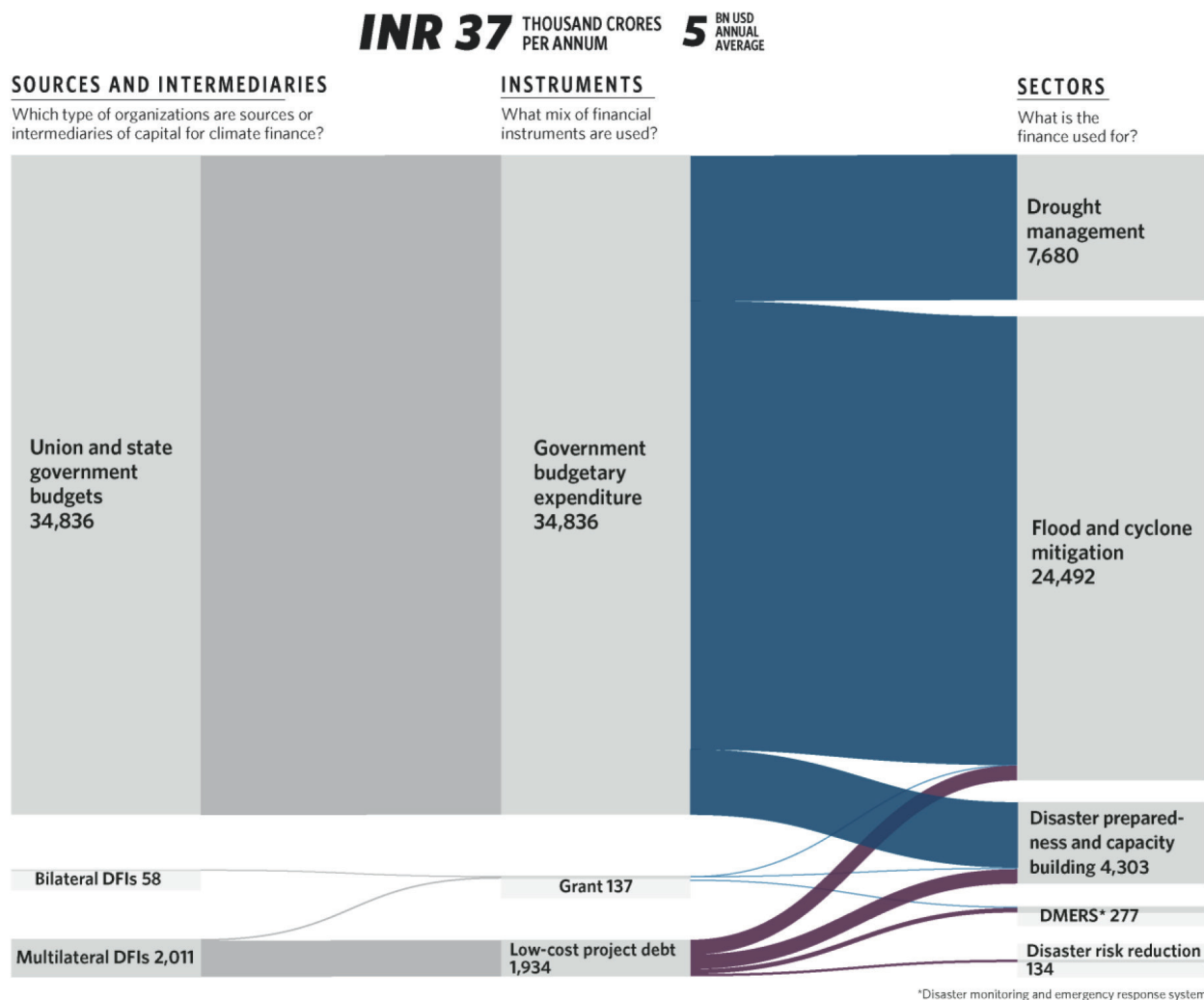


Figure 8: Adaptation Funding Sources and Usages (FY2019/FY2020)¹²
(Source: CPI)

In India, adaptation is mainly a concern at a subnational level, with states playing a significant role in funding adaptation efforts. This is due to the fact that state governments make up over 60% of total government spending, compared to the worldwide average of around 30%. Additionally, they are in charge of spending in various essential sectors for adaptation such as agriculture, water, health, and urban development. Table 1 provides a list of Adaptation mechanisms in India.

¹² Landscape of Green Finance in India. CPI. 2022. Link

Table 1: Different Adaptation Mechanisms Adopted in India

1. NATIONAL ADAPTATION FUND FOR CLIMATE CHANGE (NAFCC) Establishment: Launched in 2015, the NAFCC supports climate adaptation projects by providing financial assistance to state governments and institutions. Focus Areas: The fund targets sectors such as agriculture, water resources, and disaster management.	2. STATE ACTION PLANS ON CLIMATE CHANGE (SAPCCS) Development and Implementation: Each Indian state has created its own SAPCC, aligned with the NAPCC, outlining state-specific adaptation strategies, leading to localized financing and projects. Integration: SAPCCs incorporate climate adaptation into state development plans.
3. NATIONAL ADAPTATION PLAN (NAP) Objective: The NAP outlines long-term strategies for adapting to climate change and aims to enhance resilience across various sectors. Implementation: The plan promotes sectoral and regional adaptation strategies, integrating climate risks into policy and planning processes.	4. CLIMATE RESILIENT AGRICULTURE INITIATIVES Programs and Schemes: India has launched initiatives like PMKSY, NMSA, and PM-KUSUM to promote climate-resilient agriculture. Support Mechanisms: These programs fund technologies, infrastructure, and practices to enhance agricultural resilience. Climate Insurance: Schemes like PMF-BY and RWBCIS provide yield-based and weather-based crop insurance to safeguard farmers, including small landowners, against climate hazards.

5. GREEN BONDS, GREEN DEPOSITS & OTHER CLIMATE FINANCING INSTRUMENTS, Figure 9 Green Bonds: SEBI has issued guidelines for listing Green Debt and Municipal Debt Securities, while the Department of Economic Affairs introduced the Sovereign Green Bond framework to direct private investment into climate mitigation and adaptation projects, figure 9. Green Deposits: RBI's Green Deposit Framework, launched on April 29, 2023, allows banks and NBFCs to raise capital for nine 'Use of Proceeds' categories, including climate adaptation, sustainable water and waste management, and green buildings. Climate Financing Instruments: Most adaptation financing is government-backed through grants, with urban local bodies (ULBs) recently raising capital via Green Bonds. Please see Figure 10.	6. INTERNATIONAL CLIMATE FINANCE MECHANISMS Partnerships and Contributions: India actively participates in international climate finance mechanisms like the Green Climate Fund (GCF) and Global Environment Facility (GEF), mobilizing additional resources for adaptation efforts. Project Proposals: India has submitted multiple project proposals to these international funds, securing support for a range of adaptation initiatives.
7. DISASTER MANAGEMENT AND RESILIENCE BUILDING National Disaster Management Plan (NDMP): Updated in 2019, the NDMP includes strategies for climate adaptation and resilience building. Disaster Response Funding: The government provides financial support for disaster response and recovery, which indirectly supports adaptation efforts.	8. RESEARCH AND CAPACITY BUILDING Funding for Research: The government funds research institutions and projects that focus on climate adaptation technologies and strategies. Capacity Building Programs: Various programs aim to build the capacity of institutions and local communities to implement and manage adaptation projects effectively.

9. INFRASTRUCTURE DEVELOPMENT FOR CLIMATE ADAPTATION Resilient Infrastructure Projects: Investments in infrastructure projects that enhance resilience, such as flood management systems and drought-resistant water supply systems, have been a focus.	10. POLICY INTEGRATION AND MAINSTREAMING FOR CLIMATE ADAPTATION Policy Frameworks: The government integrates climate adaptation into broader policies, embedding climate considerations into economic and development planning, in order to close the adaptation financing gap. The challenge is to scale and effectively implement these strategies at all levels.
11. ATAL MISSION FOR REJUVENATION AND URBAN TRANSFORMATION 2.0 (AMRUT 2.0) Enhances climate adaptation by incorporating resilient infrastructure, including advanced stormwater management, flood-resistant water systems, and expanded green spaces. This strengthens urban resilience, mitigates climate impacts, and promotes sustainable development.	12. NAMAMI GANGE PROGRAMME Launched in June 2024, it supports climate adaptation by restoring river ecosystems, enhancing flood management, and improving water quality. These actions reduce vulnerability to climate impacts and promote sustainable water use and ecosystem health.

Figure 9 shows the Y-on-Y increase in the volume of issuance of GSS bonds in India.

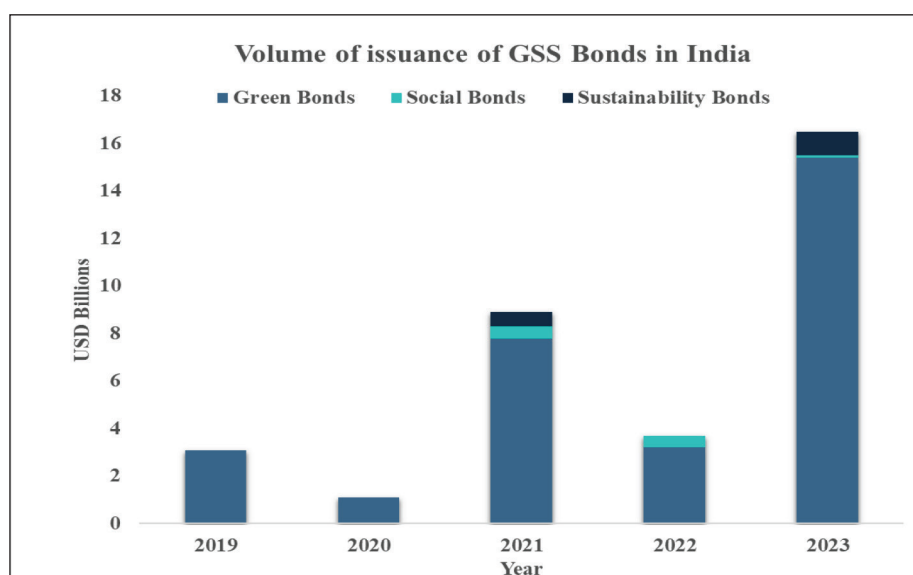


Figure 9: Y-o-Y increase in issuance of GSS bonds by Indian Entities¹³
(Source: CBI)

¹³ India incorporates green bonds into its climate finance strategy. World Bank, 2023. Link

The utilities sector is the largest issuer by volume, followed by corporates and the renewable sector, while local governments are the lowest issuers by volume, as shown in Figure 10.

As we are witnessing growing interest in green bond issuances by corporates, we are also observing an uptick in green finance issuances by Urban Local Bodies to fund various projects they are undertaking, timeline of which is shown in Figure 11, as per SEBI.

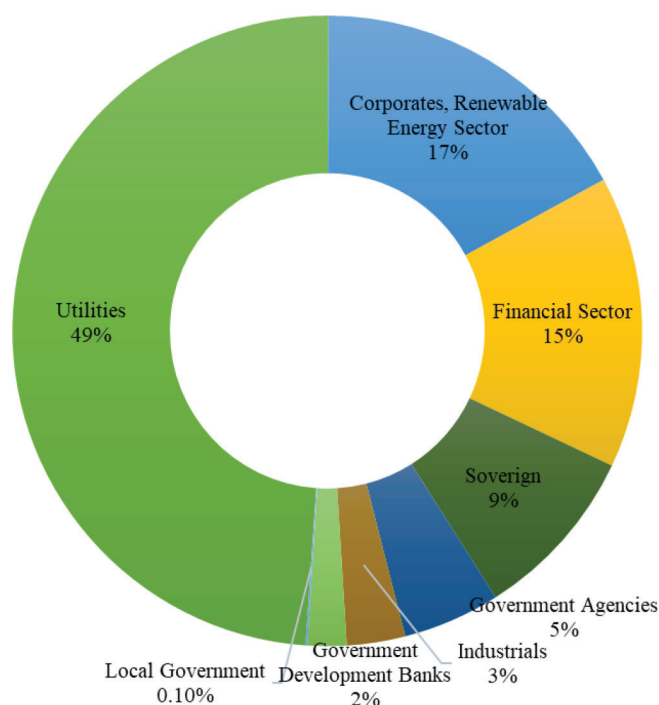


Figure 10: Green bonds issued in India by type of issuer, 2021¹⁴
(Source: World Bank)

¹⁴ India Sustainable Debt State of the Market. CBI. 2021. Link

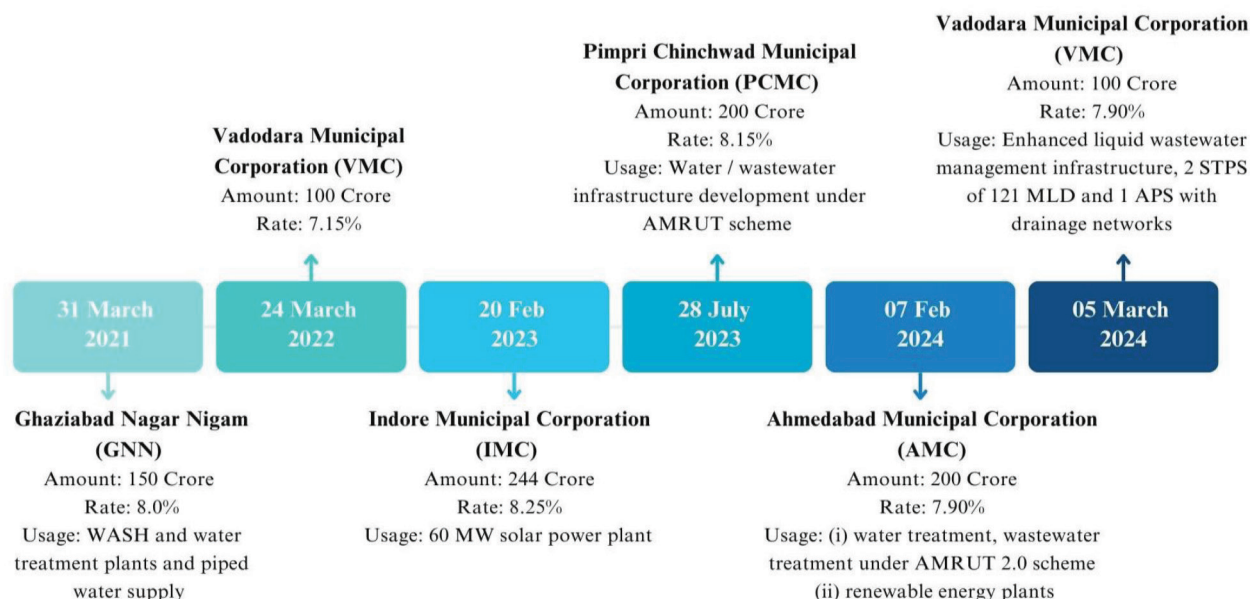


Figure 11: India's experience of leveraging Green Bonds issued by ULBs¹⁵
(Source: SEBI)

Adaptation Financing Gap

Current assessments indicate that investment needs for such interventions are substantial and likely to increase in the future. For example, India's 2015 INDC gave an initial figure - \$206 billion (at 2014-2015 prices)¹⁶ - for investments needed to implement adaptation measures in agriculture, forestry, fish, infrastructure, water resources and ecosystems. (MoEFCC, 2015). It also indicates that more investment is needed to strengthen resilience and disaster management (MoEFCC, 2015).

It is predicted that the real financial need will be greater when looking at the necessary investments for both climate adaptation and mitigation, which is roughly estimated as USD 170 billion per year from 2015-2030, as per CPI¹⁷. As it is evident from Section 3.2 above, that almost 100% financing is from Govt. and/or DFI sources, private sector requires to step up to meet the adaptation financing challenge. There is a significant risk in climate financing, as technologies are evolving and financing experiences and modalities are limited in the Indian perspective. Hence, it's important for DFIs to come forward to de-risk climate investment (by first loss default guarantees), share experiences in similar contexts and provide support to scale-up climate tech from pilot to commercial stages.

¹⁵ Municipal Bonds. SEBI. 2024. Link

¹⁶ Report of the Sub-Committee for the Assessment of the Financial Requirements for Implementing India's Nationally Determined Contribution (NDC).2020. Link

¹⁷ Transforming India's Climate Finance through Sector-Specific Financial Institutions. CPI. 2024. Link

Tech-Driven ESG Reporting and Transparency

Importance of ESG Reporting & Risk Management

In India, ESG reporting has gained prominence as businesses recognize the need for sustainable practices, with companies now being evaluated not only on financial performance but also on their environmental impact, social responsibility, and governance practices. This shift reflects a growing awareness of how corporate actions are deeply connected to societal and environmental concerns.

To effectively manage risks, companies must integrate ESG risk identification into their overall risk management strategy. ESG factors are increasingly recognized as key drivers of potential financial and operational risks. Incorporating ESG is essential, as risks related to climate change, labor practices, and regulatory non-compliance can



Interesting Fact:

According to a study conducted by CareEdge Advisory, out of the top 1,000 listed companies, over 249 companies published Sustainability Report in FY23, reflecting almost 80% growth as compared to FY21.

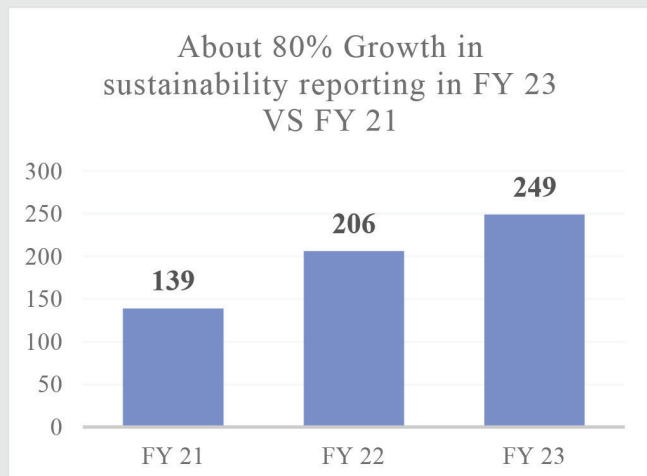


Figure 12: Challenges in ESG Reporting

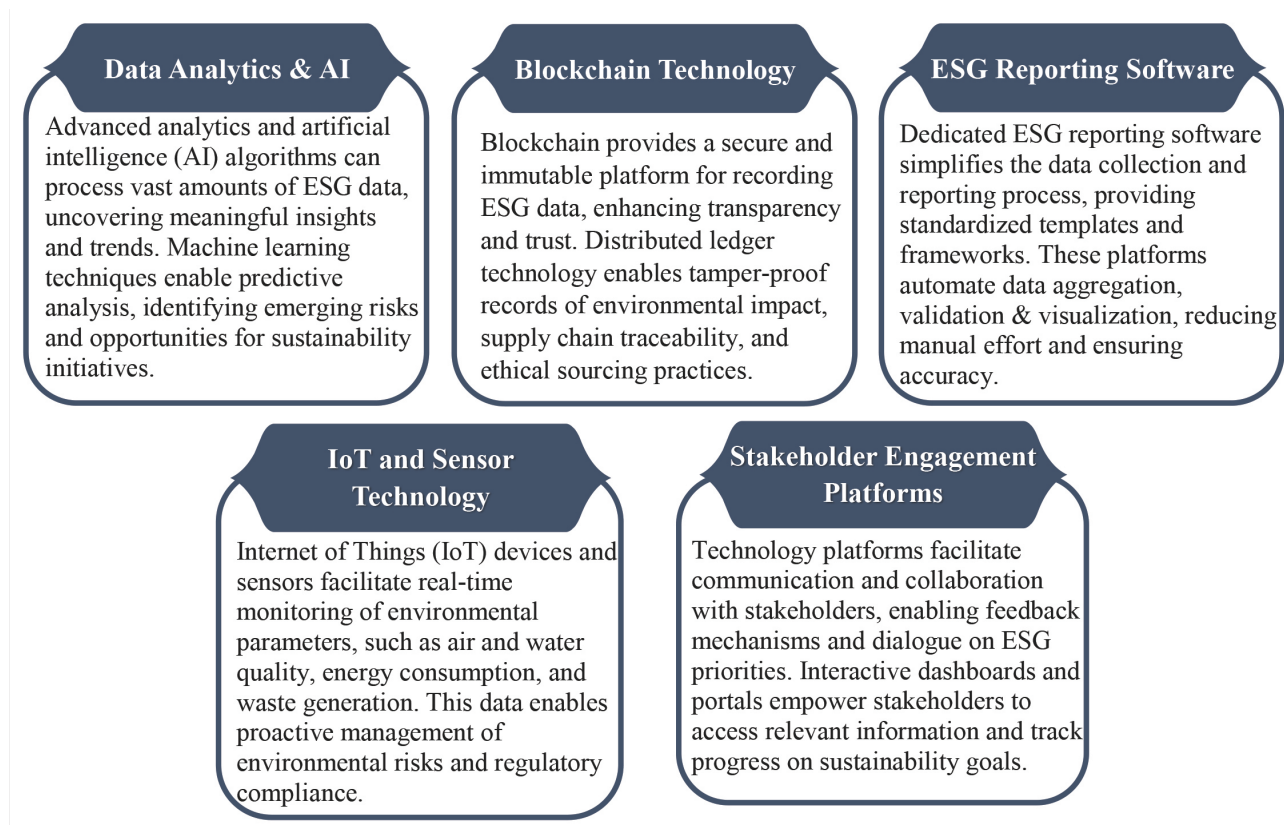
significantly impact a company's long-term sustainability. Figure 12 highlights some of the challenges in identifying and managing ESG risks.

Voluntary ESG Reporting includes sustainability reporting (aligning with global standards and frameworks such as SASB, IIRC / IR, GRI), Climate Risk Reporting (as per TCFD), CDP Reporting, UN Global Compact Reporting etc. whereas ESG Regulatory Compliance includes BRSR, Green Deposit Framework, Listing Obligations & Disclosure Requirements, CSR Disclosures, Environmental Impact Assessments etc.

Role of Technology in reshaping ESG Disclosures

Embracing ESG principles is vital in today's business landscape, with technology enabling better data analytics, reporting, and transparency. From tracking emissions to enhancing supply chain visibility, tech tools help companies effectively measure, manage, and communicate ESG efforts. By leveraging real-time data, risk assessments, and scenario analysis, businesses can strengthen transparency, compliance, and risk management while driving sustainable growth. In addressing climate change, cutting-edge technologies offer companies the opportunity to go beyond compliance, fostering innovation and strategic reinvention to enhance competitiveness.

Here's how technology is reshaping ESG disclosures:



Interesting Fact:

According to BCG, organizations that have adopted automated digital solutions for emissions measurement are 2.2 times as likely as their peers to measure their emissions comprehensively and 1.9 times as likely to reduce emissions in line with their ambitions.¹⁸

Leveraging the use of Technology for enhancing ESG Disclosures

By embracing innovation and remaining adaptable to emerging technologies, companies can effectively address future ESG challenges and drive sustainable growth.

01

Enhanced Data Accuracy

Automation minimizes the risk of manual errors, resulting in more reliable and accurate ESG disclosures.



02

Improved Efficiency & Time Saving

Technology streamlines data collection, analysis, and reporting, allowing organizations to focus on strategic initiatives.



03

Increased Transparency

Digital platforms and data visualization tools make ESG information more accessible & comprehensible, fostering transparency & stakeholder engagement.



04

Real-time Communication

Technology enables real-time updates and alerts on ESG performance, demonstrating a commitment to continuous improvement.



05

Data-driven Insights

The convergence of technology and ESG reporting equips organizations with data-driven insights for risk assessment, strategic planning, and value creation.



¹⁸ Technology Is the Fast Track to Net Zero. BCG. 2022. Link

ESG reporting has become an integral component of a business's sustainability strategy. The use of technology in ESG reporting is swiftly evolving, and emerging trends such as artificial intelligence and blockchain are altering how businesses collect, analyze, and report ESG data. Best practices include selecting a software solution that corresponds with organization's objectives, involving stakeholders to ensure transparency and accuracy in reporting, and employing standardized frameworks to ensure consistency. To enhance their ESG performance while adhering to regulatory requirements, businesses must leverage technological advances.

Conclusion

India's dynamic ESG reporting landscape is driving business resilience and unlocking new avenues for growth. Integrating ESG into core strategies helps companies navigate regulatory challenges and market shifts more effectively. Embracing ESG principles safeguards against potential issues while positioning companies to seize sustainability-driven opportunities.

As India advances toward its Nationally Determined Commitments (NDC), industrial decarbonization is essential. The increasing adoption of Science-Based Targets (SBTi) among Indian companies is a strong indicator of this shift, with 375 companies registered, 191 with approved targets, and 158 committed to net zero as of September 2024,¹⁹ with many more expected to join. This progress highlights India's alignment with global sustainability goals.

While investments into combating climate change continue to increase, the challenge of adaptation financing remains substantial. While the government and DFIs fund a majority of adaptation initiatives, the financing gap is too large for public resources alone. Increased participation from private sector organizations will be crucial in closing this gap and ensuring the timely implementation of adaptation projects across key sectors.

Technology-driven ESG reporting marks the next frontier in enhancing transparency and accountability. New data technologies, such as AI, blockchain, and IoT, are transforming the ESG reporting landscape, offering businesses real-time insights and thus improved efficiency. As companies embrace these technological advancements, they must also remain agile, adhering to evolving regulatory frameworks while optimizing ESG disclosures to drive sustainability and long-term resilience.

By adopting ESG, businesses will not only meet regulatory demands but also thrive in an increasingly complex global landscape, positioning themselves for sustainable growth and a greener future.

¹⁹ SBTi Companies Taking Action. 2024. [Link](#)

About CareEdge Group

CareEdge is a knowledge-based analytical group offering services in Credit Ratings, Analytics, Consulting and Sustainability. Established in 1993, the parent company CARE Ratings Ltd (CareEdge Ratings) is India's second-largest rating agency, with a credible track record of rating companies across diverse sectors and holding leadership positions in high-growth sectors such as BFSI and Infra.

About CARE Analytics and Advisory Private Limited (CAAPL)

CARE Analytics and Advisory Private Limited (CAAPL) is a knowledge-based analytical arm and a wholly-owned subsidiary of CARE Ratings Ltd. We are one of the leading providers of credible, high-quality Consulting, Research & Sustainability Services.

Advisory Division, established in 2016, is an innovative wing of CAAPL, an entity already thriving since its inception. We specialize in sustainable business practices and strategic advisory services across two main areas. In the ESG Segment, we focus on ESG Integration, Assessment, Gap Analysis, and Sustainability/BRSR Compliance Reporting, promoting sustainable business conduct. In the Advisory & Research Segment, we offer services to corporates, financial institutions, government bodies, and multi-lateral institutions.

About ASSOCHAM

The Associated Chambers of Commerce & Industry of India (ASSOCHAM) is the country's oldest apex chamber. It brings in actionable insights to strengthen the Indian ecosystem, leveraging its network of more than 4,50,000 members, of which MSMEs represent a large segment. With a strong presence in states, and key cities globally, ASSOCHAM also has more than 400 associations, federations and regional chambers in its fold.

Aligned with the vision of creating a New India, ASSOCHAM works as a conduit between the industry and the Government. The Chamber is an agile and forwardlooking institution, leading various initiatives to enhance the global competitiveness of the Indian industry, while strengthening the domestic ecosystem.

With more than 100 national and regional sector councils, ASSOCHAM is an impactful representative of the Indian industry. These Councils are led by wellknown industry leaders, academicians, economists and independent professionals. The Chamber focuses on aligning critical needs and interests of the industry with the growth aspirations of the nation.

ASSOCHAM is driving four strategic priorities – Sustainability, Empowerment, Entrepreneurship and Digitisation. The Chamber believes that affirmative action in these areas would help drive an inclusive and sustainable socio-economic growth for the country.

ASSOCHAM is working hand in hand with the government, regulators and national and international think tanks to contribute to the policy making process and share vital feedback on implementation of decisions of far-reaching consequences. In line with its focus on being future-ready, the Chamber is building a strong network of knowledge architects. Thus, ASSOCHAM is all set to redefine the dynamics of growth and development in the technology-driven 'Knowledge-Based Economy. The Chamber aims to empower stakeholders in the Indian economy by inculcating knowledge that will be the catalyst of growth in the dynamic global environment.

The Chamber also supports civil society through citizenship programmes, to drive inclusive development. ASSOCHAM's member network leads initiatives in various segments such as empowerment, healthcare, education and skilling, hygiene, affirmative action, road safety, livelihood, life skills, sustainability, to name a few.

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