FICCI | Centre for SUSTAINABILITY LEADERSHIP

3rd ESG Summit

Future Forward: India's Green Economy and Beyond

31st January 2025 | Mumbai



The Experts' Voice

A compendium of articles

Disclaimer

The information/opinion contained in this document has been compiled or arrived at on the basis of industry opinion and does not necessarily reflect views of FICCI/Author's organisation. Views expressed by the author are his/her own views. FICCI does not accept any liability for loss however arising from any use of this document or its content or otherwise in connection herewith.

FICCI | Centre for SUSTAINABILITY LEADERSHIP

3rd ESG Summit

Future Forward: India's Green Economy and Beyond

31st January 2025 | Mumbai



The Experts' Voice

A compendium of articles

Foreword

With regulators embedding ESG principles into policy frameworks, the discourse around ESG has seen a paradigm shift. ESG compliance is no longer a question of necessity but a strategic imperative. By staying informed and proactive, businesses are effectively navigating ESG complexities and sustainability challenges, securing long-term success in an ever-evolving environment.

FICCI's Centre for Sustainability Leadership has been at the forefront of fostering such critical discussions. Over the last two years, the Centre has engaged with industry and other constituents of the ecosystem, creating multiple platforms which facilitate adoption of climate solutions, promote sustainable consumption, circular economy, and technological innovations.

On this occasion of the 3rd edition of ESG Summit, we are pleased to present The Experts' Voice, a compendium of thought leadership pieces by experts on *Future Forward: India's Green Economy and Beyond.* The publication presents articles on topics such as sustainable finance, circularity as a driver of India's green future, decarbonisation strategies, climate change and how organisations are integrating ESG into their operations while achieving carbon neutrality.

We do hope you will find these insights useful.

We also take this opportunity to thank the Government and Regulators for their continued support of FICCI's initiatives in this space, as well as our members for their valuable contributions to this compendium. We also express our gratitude to the Founding Members of the FICCI Centre for Sustainability Leadership, Hindustan Unilever Limited and HSBC India for their support and guidance.



Jyoti Vij
Director General
FICCI

FICCI Centre for SUSTAINABILITY LEADERSHIP

Contents

1. **Greening of the NIFTY50** 5
   Amit Tandon, Founder & Managing Director, Institutional Investor Advisory Services India Limited (IiAS)

2. **Vulnerability and Opportunity: Climate Change and Indian Businesses in the 21st Century** 13
   Ankit Jain, CEO & Founder, StepChange

3. **Circularity: A Transition with Transformative Potential** 16
   Deeksha Vats, Group Chief Sustainability Officer, Aditya Birla Group

4. **ESG as an Accelerator for Business Growth.** 18
   Manish Kumar, Head-ESG & CSR, ICICI Bank Limited

5. **Corporate India - Preparing for the Green Economy** 20
   Dr Mukund Rajan, Founder and Chairman, ECube Investment Advisors Pvt. Limited

6. **ESG Ratings: Enabler for Indian Corporates Towards Sustainability Transition** 23
   Rohit Inamdar, Chief Executive Officer, CARE ESG Ratings Limited

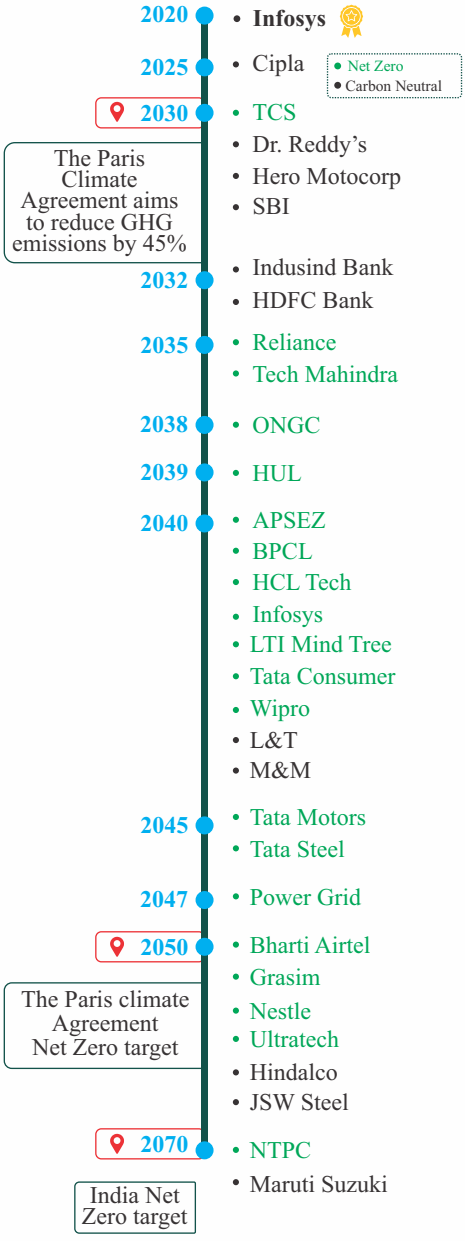
7. **Unlocking India's Investment Opportunity in Green Energy** 27
   Viral Thakker, Partner and Leader, Sustainability and Climate, Deloitte South Asia and Leader, Sustainability Technology & Transformation, Deloitte Global and Prashanth Nutula, Partner, Deloitte India

About FICCI Centre for Sustainability Leadership 30

Greening of the NIFTY50

***Amit Tandon**, Founder & Managing Director, Institutional Investor Advisory Services India Limited (IiAS)*

Recognizing the harmful effects of greenhouse gas emissions on our planet, 196 governments signed the historic Paris Agreement in 2015. This agreement aims to limit global warming to well below 2°C, with an aspirational goal of 1.5°C. To achieve this, it is essential to reach net zero emissions by 2050 at the latest.



* NIFTY50 constituents as per Market cap as of 31 March 2023

India too is committed to reducing emissions. It has undertaken to reducing carbon emissions by 50% by 2030 and for the entire economy to be net zero by 2070. This is alongside its other climate action linked targets:

- Installing non-fossil fuel electricity capacity of 500GW by 2030.
- Sourcing 50% of energy requirement from renewables by 2030.
- Reducing one billion tonnes of projected emissions by 2030.
- Reducing carbon emissions per unit of economic output to 45% of 2005 levels by 2030.

The corporate sector is seen as integral to help India achieve its decarbonisation targets.

To measure the impact that corporates have on the environment, Securities and Exchange Board of India (SEBI) requires the top 1000 listed companies to publish a Business Responsibility and Sustainability Reporting (BRSR) report.

While BRSR asks companies to report on climate related risks and goals, some companies also voluntarily disclose their net zero and/or Carbon Neutrality targets.

Net zero means that a company reduces all GHG gas emissions - carbon dioxide (CO_2), methane or sulphur dioxide, across its supply chain.; this is a far more stringent climate goal[1]. On the other hand, a business can become carbon neutral by offsetting its emissions by buying carbon credits outside of its value chain, without reducing its own emissions. carbon neutrality[2] refers only to a defined part of business operations and typically accounts for only CO_2 emissions.

Corporate India is actively pursuing decarbonisation strategies and climate goals, with companies committing to net zero emissions or carbon neutrality to foster a greener nation.



[1] *https://netzeroclimate.org/what-is-net-zero-2/*

[2] *https://www.weforum.org/agenda/2022/08/carbon-neutral-net-zero-sustainability-climatechange/#:~:text=Carbon%20neutral%20can%20cover%20a,across%20its%20whole%20supply%20ch ain*

How do the NIFTY50 companies stack up in terms of either their net zero or carbon neutrality targets? Based on disclosures upto 30 September 2024, we find 31% or 62% of the NIFTY50 companies either a have a net zero or a carbon neutrality target. For companies that have made a commitment for both climate goals (- listed in Exhibit 1), we have chosen the more stringent net-zero. Note that Infosys which has been carbon Neutral since 2020, has been included in the net zero data.

Exhibit 2 shows the net zero or the carbon neutrality target for the NIFTY50 Companies by year in a single chart. Exhibit 3 shows the same, alphabetically. Exhibits 4 and 5 show the target year for net zero and Exhibits 6 and 7 show the year by which the companies are targeting to be carbon neutral. The NIFTY50 components are as on 30 September 2024.

Exhibit 1: Companies that have disclosed both Net zero and Carbon Neutrality target dates

1. Adani Ports SEZ Limited
2. Infosys Limited
3. Tata Consumer Products Limited
4. Tech Mahindra Limited

Source: IiAS Research, Company filings

Key Observations

- 20 companies have a net zero target.
- 11 companies have a carbon neutrality target.
- Further, four companies have disclosed both net zero and intermediate carbon neutrality targets.

Of the 19 companies that not have not committed to either a net zero or a carbon neutrality target year, a few have nonetheless articulated a de-carbonization strategy.

Climate Targets

- Infosys has been carbon neutral since 2020.
- Of the carbon neutrality target for the balance, the earliest target is for Cipla (2025) and the longest-dated target is for Maruti Suzuki (2070).
- For net zero, the earliest target is for Tata Consultancy Services (2030), while NTPC states it will achieve net zero by 2070.
- Climate targets vary across sectors as well – Tata Motors has a net zero target of 2040 while M&M plans to be carbon neutral by 2040. Tata Steel has a net zero target of 2045 while JSW Steel plans to be carbon neutral by 2050.

Median Targets

For the 31 companies that have disclosed either target, the median year is 2040.

- Among these, 20 companies have set a net zero target with a median year of 2040.
- For 11 companies that have declared a carbon neutral target, the median year is 2032.



General Comments



- Three of the ten BFSI companies have disclosed a target year. None of these companies have stated a net zero target but have a carbon neutral target.
  - SBI is the first and expects to be carbon neutral by 2030, HDFC Bank and IndusInd Bank by 2032.
- Two of the four PSUs in the NIFTY50 have disclosed net zero targets.
  - BPCL has a net zero target by 2040.
  - NTPC has a net zero target by 2070.
- All six IT services companies have disclosed a net zero target leading the pack; as mentioned above, Infosys has been carbon neutral since 2020 and plans to be net zero by 2040.
- Most companies in the hard to abate sectors, which comprise a significant portion of GHG emissions, have disclosed climate targets with Coal India being the sole exception.

The link to the relevant company disclosures is given in Annex A, appended at the end of this document.

We will continue to monitor this data, not just for the NIFTY50, but for the broader market. We unreservedly believe that the pursuit of net zero or carbon neutrality isn't just ticking the box to meet your compliance needs. In today's world, it is an economic, strategic, and competitive necessity for long-term growth and business resilience.

Exhibit 2 Net-zero or Carbon Neutral: Target Year

Cipla 2025	Dr Reddy's 2030	Hero MotoCorp 2030	SBI 2030	TCS 2030
HDFC Bank 2032	IndusInd Bank 2032	RIL 2035	Tech Mahindra 2035	ONGC 2038
HUL 2039	APSEZ 2040	BPCL 2040	HCL Tech 2040	Infosys 2040
L&T 2040	LTIMindtree 2040	M&M 2040	Tata Consumer 2040	Wipro 2040
Power Grid 2047	Tata Motors 2045	Tata Steel 2045	Bharti Airtel 2050	Grasim 2050
Hindalco 2050	JSW Steel 2050	Nestle 2050	Ultratech 2050	Maruti Suzuki 2070
NTPC 2070	Adani Enterprises	Apollo Hospitals	Asian Paints	Axis Bank
Bajaj Auto	Bajaj Finance	Bajaj Finserv	Britannia	Coal India
Divi's Labs	Eicher Motors	HDFC Life Insurance	ICICI Bank	ITC
Kotak Mahindra Bank	SBI Life Insurance	Shriram Finance	Sun Pharmaceutical	Titan

Source: IiAS Research, Company filings

Companies in green font have disclosed a net zero date. For companies that have made a commitment for both climate goals we have disclosed net zero targets

Companies in grey boxes have not disclosed neither a net zero nor a carbon neutral target year

Infosys achieved carbon neutrality in 2020

Exhibit 3 Net zero or Carbon Neutral: Target Year (Alphabetical)

Adani Enterprises	Apollo Hospitals	APSEZ 2040	Asian Paints	Axis Bank
Bajaj Auto	Bajaj Finance	Bajaj Finserv	Bharti Airtel 2050	BPCL 2040
Britannia	Cipla 2025	Coal India	Divi's Labs	Dr Reddy's 2030
Eicher Motors	Grasim 2050	HCL Tech 2040	HDFC Bank 2032	HDFC Life Insurance
Hero MotoCorp 2030	Hindalco 2050	HUL 2039	ICICI Bank	IndusInd Bank 2032
Infosys 2040	ITC	JSW Steel 2050	Kotak Mahindra Bank	L&T 2040
LTIMindtree 2040	M&M 2040	Maruti Suzuki 2070	Nestle 2050	NTPC 2070
ONGC 2038	Power Grid 2047	RIL 2035	SBI 2030	SBI Life Insurance
Shriram Finance	Sun Pharmaceutical	Tata Consumer 2040	Tata Motors 2045	Tata Steel 2045
TCS 2030	Tech Mahindra 2035	Titan	Ultratech 2050	Wipro 2040

Source: IiAS Research, Company filings
Companies in green font have disclosed a net zero date. For companies that have committed to both, we have disclosed net zero targets
Companies in grey boxes have not disclosed neither a net zero nor a carbon neutral target year
Infosys achieved carbon neutrality in 2020

Exhibit 4 Net-zero: Target Year

TCS 2030	RIL 2035	Tech Mahindra 2035	ONGC 2038	HUL 2039
APSEZ 2040	BPCL 2040	HCL Tech 2040	Infosys 2040	LTIMindtree 2040
Tata Consumer 2040	Wipro 2040	Tata Motors 2045	Tata Steel 2045	Power Grid 2047
Bharti Airtel 2050	Grasim 2050	Nestle 2050	Ultratech 2050	NTPC 2070
Adani Enterprises	Apollo Hospitals	Asian Paints	Axis Bank	Bajaj Auto
Bajaj Finance	Bajaj Finserv	Britannia	**Cipla**	Coal India
Divi's Labs	**Dr. Reddy's**	Eicher Motors	**HDFC Bank**	HDFC Life Insurance
Hero MotoCorp	**Hindalco**	ICICI Bank	**IndusInd Bank**	ITC
JSW Steel	Kotak Mahindra Bank	**L&T**	**M&M**	**Maruti Suzuki**
SBI	SBI Life Insurance	Shriram Finance	Sun Pharmaceutical	Titan

Source: IiAS Research, Company filings
Companies in green font/white box have disclosed a net zero date. For companies that have committed to both, we have shown net zero targets
Companies in grey boxes have not disclosed neither a net zero nor a carbon neutral target year

Exhibit 5 Net Zero: Target Year (Alphabetical)

Adani Enterprises	Apollo Hospitals	APSEZ 2040	Asian Paints	Axis Bank
Bajaj Auto	Bajaj Finance	Bajaj Finserv	Bharti Airtel 2050	BPCL 2040
Britannia	Cipla	Coal India	Divi's Labs	Dr. Reddy's
Eicher Motors	Grasim 2050	HCL Tech 2040	HDFC Bank	HDFC Life Insurance
Hero MotoCorp	Hindalco	HUL 2039	ICICI Bank	IndusInd Bank
Infosys 2040	ITC	JSW Steel	Kotak Mahindra Bank	L&T
LTIMindtree 2040	M&M	Maruti Suzuki	Nestle 2050	NTPC 2070
ONGC 2038	Power Grid 2047	RIL 2035	SBI	SBI Life Insurance
Shriram Finance	Sun Pharmaceutical	Tata Consumer 2040	Tata Motors 2045	Tata Steel 2045
TCS 2030	Tech Mahindra 2035	Titan	Ultratech 2050	Wipro 2040

Source: IiAS Research, Company filings
Companies in green font/ white box have disclosed a net zero date. For companies that have committed to both we have shown net zero targets
Companies in grey boxes have not disclosed neither a net zero nor a carbon neutral target year

Exhibit 6 Carbon Neutral: Target Year

Cipla 2025	Dr Reddy's 2030	Hero MotoCorp 2030	SBI 2030	HDFC Bank 2032
IndusInd Bank 2032	L&T 2040	M&M 2040	Hindalco 2050	JSW Steel 2050
Maruti Suzuki 2070	Adani Enterprises	Apollo Hospitals	APSEZ	Asian Paints
Axis Bank	Bajaj Auto	Bajaj Finance	Bajaj Finserv	Bharti Airtel
BPCL	Britannia	Coal India	Divi's Labs	EICHER Motors
Grasim	HCL Tech	HDFC Life Insurance	HUL	ICICI Bank
Infosys 2020	ITC	Kotak Mahindra Bank	LTIMindtree	Nestle
NTPC	ONGC	Power Grid	RIL	SBI Life Insurance
Shriram Finance	Sun Pharmaceutical	Tata Consumer	Tata Motors	Tata Steel
TCS	Tech Mahindra	Titan	Ultratech	Wipro

Source: IiAS Research, Company filings
Companies in green font/white box have disclosed a net zero date. For companies that have committed to both, we have shown net zero targets
Companies in grey boxes have not disclosed neither a net zero nor a carbon neutral target year
Infosys achieved carbon neutrality in 2020

Exhibit 7 Carbon Neutral: Target Year (Alphabetical)

Adani Enterprises	Apollo Hospitals	APSEZ	Asian Paints	Axis Bank
Bajaj Auto	Bajaj Finance	Bajaj Finserv	Bharti airtel	BPCL
Britannia	Cipla 2025	Coal India	Divi's Labs	Dr Reddy's 2030
EICHER Motors	Grasim	HCL Tech	HDFC Bank 2032	HDFC Life Insurance
Hero MotoCorp 2030	Hindalco 2050	HUL	ICICI Bank	IndusInd Bank 2032
Infosys 2020	ITC	JSW Steel 2050	Kotak Mahindra Bank	L&T 2040
LTIMindtree	M&M 2040	Maruti Suzuki 2070	Nestle	NTPC
ONGC	Power Grid	RIL	SBI 2030	SBI Life Insurance
Shriram Finance	Sun Pharmaceutical	Tata Consumer	Tata Motors	Tata Steel
TCS	Tech Mahindra	Titan	Ultratech	Wipro

Source: IiAS Research, Company filings

Companies in green font/white box have disclosed a net zero date. For companies that have committed to both, we have shown net zero targets

Companies in grey boxes have not disclosed neither a net zero nor a carbon neutral target year

Infosys achieved carbon neutrality in 2020



Reference and links

Annex A:

- https://www.adaniports.com/newsroom/media-releases/apsez-strengthens-its-esg- leadership-gains-recognition-for-climate-initiatives
- https://www.airtel.in/airtel-annual-report-2021- 22/pdf/Embedding%20sustainability%20at%20the%20core%20of%20our%20digital%20journ ey.pdf
- https://www.offshore-technology.com/data-insights/bharat-petroleum-net-zero- targets/#:~:text=Bharat%20Petroleum%2C%20an%20Indian%20oil,greenhouse%20gas%20(G HG)%20emissions.
- https://www.cipla.com/press-releases-statements/cipla-champions-its-commitment-carbon- neutrality-its-30-mw-solar-plant#:~:text=By%202025%2C%20Cipla%20plans%20to,Kurkumbh%20and%20Patalganga%20in%20Maharashtra.
- https://www.drreddys.com/cms/cms/sites/default/files/2023-08/CDP%20Climate%20Change%202023.pdf
- https://www.grasim.com/Upload/PDF/tcfd-report-year-2022-23.pdf
- https://www.hcltech.com/sustainability/sustainability-report-fy2024
- https://www.business-standard.com/article/companies/hdfc-bank-announces-plans-to- become-carbon-neutral-by-2031-32-121060300934_1.html
- https://www.heromotocorp.com/content/dam/hero-aem-website/in/en-in/company- section/investors/annual-report/annual-reports/2022-2023/stxintimationbrsr17072023.pdf
- https://www.alcircle.com/news/hindalco-s-net-zero-goals-redefined-on-track-to-meet-clean- energy-targets-before-estimated-time-107956#:~:text=By%202030%2C%20through%20the%20completion,attain%20carbon%20ne utrality%20by%202050.
- https://www.hul.co.in/files/892b45c6-dc0e-4b3d-833a-b94a2a661148/hul-compass- commitments-dacj59.pdf
- https://www.indusind.com/content/dam/indusind-corporate/generic/IndusInd-Bank- Integrated-Report-2021-22.pdf
- https://www.infosys.com/about/corporate-responsibility/documents/carbon-reduction- plan.pdf
- https://www.jswsteel.in/sites/default/files/assets/industry/steel/IR/CSR/Sustainability%20Rep orts/JSW-Climate-Action-Report-2024-23052024.pdf
- https://www.larsentoubro.com/pressreleases/2021/2021-10-21-lt-launches-its-fourth- integrated-report-announces-commitments-for-carbon-and-water-neutrality/
- https://www.ltimindtree.com/wp-content/uploads/2023/11/LTIM-CRA-Executive- Summary.pdf?pdf=download
- https://www.mahindra.com/news-room/press-release/en/mahindra-and-mahindra- strengthens-its-commitment-to-achieve-carbon-neutrality
- https://www.globalsuzuki.com/corporate/csr_environment/environment/climate.html
- https://www.nestle.com/sustainability/climate-change/zero-environmental-impact
- https://www.cdp.net/en/formatted_responses/responses?campaign_id=83630982&discloser_ id=1036089&locale=en&organization_name=NTPC+Ltd&organization_number=12857&progra m=Investor&project_year=2023&redirect=https%3A%2F%2Fcdp.credit360.com%2Fsurveys%2F2023%2Fjwbhd7d6%2F280115&survey_id=82591262
- https://www.angelone.in/blog/ongc-to-invest-for-net-zero-emissions-by-2038
- https://www.powergrid.in/sites/default/files/inline-files/ESG_Policy.pdf
- http://www.ril.com/sustainability/net-zero- carbon#:~:text=And%20at%20the%20same%20time,net%20carbon%20zero%20by%202035.
- https://www.sbi.co.in/documents/16012/396762/290822- Sustainability+and+Business+Responsibility+% 28BR%29+Policy+latest.pdf/04ce597a-977a-3860-7bd4-72c6594ff1f4?t=1661762709904#:~:text=Bank%20shall%20explore%20the%20possible,achi eving%20Carbon%20Neutrality%20by%202030.
- https://www.tataconsumer.com/news/tata-consumer-products-reaffirms-commitment- sustainability-announces-sustainability-targets
- https://www.tatamotors.com/corporate-responsibility/planet-resilience/
- https://www.tatasteel.com/media/newsroom/press-releases/india/2023/tata-steel-joins-un- initiative-leadit-to-drive-net-zero-emissions-in-heavy-industry/
- https://www.tcs.com/who-we-are/newsroom/press-release/tcs-targets-net-zero-emissions- by-2030
- https://www.mahindra.com/news-room/press-release/en/tech-mahindra-recognised-as-the- only-indian-company-with-a-double-a-score-for-transparency-on-climate-change-and-water- security#:~:text=The%20recognition%20from%20CDP%20validates,sourcing%20and%20wate r%20conservation%20initiatives.
- https://www.ultratechcement.com/content/dam/ultratechcementwebsite/pdf/sustainability- reports/ultratech-tcfd-report.pdf
- https://www.wipro.com/content/dam/nexus/en/sustainability/pdf/carbon-reduction-plan- wipro-ltd.pdf
- https://www.infosys.com/about/corporate-responsibility/documents/carbon-reduction- plan.pdf

Disclaimer

This document has been prepared by IiAS Sustainability Solutions Private Limited (IiAS Sustain). The information contained herein is solely derived from publicly available data, but we do not represent that it is accurate or complete and it should not be relied on as such. IiAS Sustain shall not be in any way responsible for any loss or damage that may arise to any person from any inadvertent error in the information contained in this report. This document is provided for assistance only and is not intended to be and must not be taken as the basis for any voting or investment decision and/or construed as legal opinion/advice. The user assumes the entire risk of any use made of this information. Each recipient of this document should make such investigation as it deems necessary to arrive at an independent evaluation of information referred to in this document (including the merits and risks involved) and exercise due diligence while using this report. The discussions or views expressed may not be suitable for all investors. The information given in this document is as of the date of this report and there can be no assurance that future results or events will be consistent with this information. This information is subject to change without any prior notice. IiAS Sustain reserves the right to make modifications and alterations to this document as may be required from time to time; however, IiAS Sustain is under no obligation to update or keep the information current. Nevertheless, IiAS Sustain would be happy to provide any information in response to specific queries. No copyright infringement is intended in the preparation of this document. Neither IiAS Sustain nor any of its affiliates, group companies, directors, employees, agents or representatives shall be liable for any damages whether direct, indirect, special or consequential including lost revenue or lost profits that may arise from or in connection with the use of this information. This report may cover listed companies (the 'subject companies'); IiAS Sustain/ IiAS may hold a nominal number of shares in some of the subject companies to the extent disclosed on its website and/or these companies might have subscribed to IiAS Sustain or IiAS' services or might be shareholders of IiAS. IiAS Sustain/IiAS and/or its research analyst(s) do not have any financial interest in any of the subject companies except to the extent disclosed on its website.

Confidentiality

This information is strictly confidential and is being furnished to you solely for your information. This information should not be reproduced or redistributed or passed on directly or indirectly in any form to any other person or published, copied, in whole or in part, for any purpose without the written permission of IiAS Sustain. This report is not directed or intended for distribution to, or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject IiAS Sustain to any registration or licensing requirements within such jurisdiction. The distribution of this document in certain jurisdictions may be restricted by law, and persons in whose possession this document comes, should inform themselves about and observe, any such restrictions. The information provided in these reports remains, unless otherwise stated, the copyright of IiAS Sustain. All layout, design, original artwork, concepts and other Intellectual Properties, remains the property and copyright of IiAS Sustain and may not be used in any form or for any purpose whatsoever by any party without the express written permission of the copyright holders.

Other Disclosures

IiAS Sustain is a SEBI registered ERP (SEBI Registration No. IN/ERP/Category-II/0006). The company was incorporated in 2024 and registered as a Category-II ESG Rating Provider with SEBI. It is a wholly owned subsidiary of IiAS. The main objects of the company are to carry out Environment, Social and Governance (ESG) Rating in India or outside India, provide counsel, advice, research, analysis or data for any persons in areas of ESG, sustainability, climate change, by whatever named called, to provide opinions, including second party opinions, commentary, certification, publication, training, audit, evaluation framework, scorecard and assist with policies and disclosures, among other things, as per applicable laws. There are no significant or material orders passed against the company by any of the Regulators or Courts/Tribunals.

IiAS (proxy advisor registration number: INH000000024) is dedicated to providing participants in the Indian market with independent opinions, research and data on corporate governance issues as well as voting recommendations on shareholder resolutions of 1000+ listed Indian companies (https://www.iiasadvisory.com/iias-coverage-list). Our products and services include voting advisory reports, standardized services under the Indian Corporate Governance Scorecard, and databases (www .iiasa d rian .com and www.iiascomp ayre.com). There are no significant or material orders passed against the company by any of the Regulators or Courts/Tribunals.

This article is a commentary on general trends and developments in the securities market.

Vulnerability and Opportunity: Climate Change and Indian Businesses in the 21st Century

***Ankit Jain**, CEO & Founder, StepChange*

As we navigate the complexities of the 21st century, one undeniable truth stands out: climate change is no longer a distant threat; it is an immediate reality that demands our attention. For enterprises in India, particularly those in agriculture, construction, transportation, and tourism, the implications of climate change are immediate and highly destabilizing. The question is not whether these risks exist, but rather how quickly and efficiently can we adapt to them.

India is uniquely positioned at the intersection of vulnerability and opportunity when it comes to climate change. Our diverse geography and socio-economic landscape mean that the impacts of climate change—be it erratic rainfall, extreme heat, or rising sea levels—are felt across various sectors. The Reserve Bank of India has already identified climate risks as a significant concern for the financial system, warning that failure to address these issues could lead to asset damage and business disruptions.

Agriculture, for example, employing nearly half of India's workforce, is the backbone of our economy, yet it's highly vulnerable to climate change. Extreme weather events like floods and droughts threaten crop yields, with projections indicating a 16% drop in agricultural output by 2030, translating to a 2.8% GDP loss. This impact extends beyond farms, affecting the entire food supply chain.

Rising temperatures and erratic rainfall already impact crop yields, with rainfed rice and wheat yields projected to decline significantly by 2050. Lower yields reduce farmer income, leading to increased debt and instability. This disrupts the entire agricultural ecosystem, impacting suppliers, processors, distributors, retailers, and ultimately, consumers.

The Indian real estate sector is on the brink of significant transformation, yet it faces mounting vulnerabilities due to climate change. As urbanization accelerates, the risks associated with extreme weather events, such as flooding and rising temperatures, threaten not only individual properties but the entire ecosystem of real estate. Projections indicate that by 2050, up to 14 million people and $1.2 trillion in assets could be at risk from flooding alone. The consequences of neglecting climate risks extend beyond immediate property concerns. For developers, increased construction costs associated with climate-resilient infrastructure can impact profitability. Moreover, market instability may arise as property values fluctuate due to perceived risks, deterring investment in vulnerable areas. Rising housing costs due to climate adaptation measures will likely be passed on to buyers, exacerbating affordability issues in a market already strained by demand. Additionally, a lack of affordable housing options could lead to increased displacement in vulnerable areas, further straining local communities and services.



India's tourism sector, a vital contributor to the economy and a significant source of employment is increasingly vulnerable to the impacts of climate change. The country's

diverse geography, from the snow-capped peaks of the Himalayas to the coastal paradises of Goa and Kerala, attracts millions of domestic and international tourists each year. However, rising temperatures, erratic monsoons, and extreme weather events are reshaping travel preferences and threatening the very foundations of this industry. A 2023 report by a Delhi-based think tank Centre for Science and Environment indicated that India experienced extreme weather events almost every day in the first nine months of the year.

The monsoon has always been a vital artery for India, nourishing our agriculture and replenishing our water resources. But the monsoon of today is not the monsoon of our forefathers. Erratic rainfall, devastating floods, and prolonged droughts are becoming the new normal, stark reminders of a rapidly changing climate. While global discourse on climate change intensifies, a critical segment of our economy seems to be missing from the conversation: **Indian enterprises.**

Many businesses in India have not yet internalized this new normal and continue to neglect the implications of climate change on their operations. The fragility of **supply chains** is particularly concerning; extreme weather events can disrupt transportation networks, damage infrastructure, and halt production. Are our businesses adequately prepared for such disruptions? Have they fully integrated these increasing risks into their operational strategies? For many, the answer is likely no. While some businesses are beginning to recognize the importance of climate risk, a significant portion are yet to fully incorporate it into their decision-making processes.

As businesses grapple with these risks, they must also contend with the changing landscape of resource availability, which is increasingly influenced by climate change. **Water scarcity**, for instance, is becoming a pressing concern in many parts of India. Industries reliant on water, such as textiles, agriculture, and manufacturing, face increasing operational challenges. Ignoring these looming resource constraints is akin to navigating a ship without a compass, blindly sailing toward inevitable disaster. As organizations begin to understand the interconnectedness of climate risks and resource availability, they must take proactive measures to ensure practices that protect both their operations and the environment.

Beyond physical risks, there are also market risks to consider. As global **consumers** become more **environmentally conscious**, they are increasingly demanding sustainable products and practices. Indian businesses that fail to adapt to this shift risk losing market share to competitors who prioritize sustainability. Ignoring climate change is not just an environmental issue; it's a business issue that directly impacts competitiveness and profitability.

Moreover, the **financial sector** cannot remain immune. Banks and investors must begin to assess the climate risks associated with their lending and investment portfolios. Businesses vulnerable to climate change pose a higher risk of default and financial distress. Ignoring these risks could lead to significant financial instability in the long run.

Indian enterprises have a **remarkable history of resilience and adaptability**. However, the scale and pace of climate change demand a proactive and strategic approach. To effectively address climate risks, companies need to embed climate preparedness into their core business models which involves reassessing supply chains to identify vulnerabilities and implementing strategies that enhance resilience. Innovation plays a pivotal role in navigating the challenges posed by climate change. Businesses should leverage technology to enhance efficiency and reduce their environmental footprint.



In conclusion, the time for Indian enterprises to act is now. The impacts of climate change are not abstract threats; they are immediate realities that require urgent attention. By integrating near-term and long-term climate preparedness into business strategies, investing in resilient infrastructure, adapting supply chains for weather-related disruptions, and collaborating with stakeholders, companies can navigate the complexities of the 21st century effectively.

An increasing crop of Indian and global startups have risen up to help enterprises manage these complexities. These include companies working on extreme weather prediction, long-term physical risk assessments, transition risk, decarbonization solutions, supply chain risk assessments, and many others. The first step for most organizations is to start **measuring climate risks** as an integral part of their annual planning and decision-making.

The future of India's economy depends on our collective ability to respond proactively to these challenges—transforming potential crises into opportunities for growth and innovation. Managing climate risk is not merely an environmental imperative; it is core to our ambitions of achieving a 'Viksit Bharat' - a developed economy by 2047. A climate-resilient economy is essential for sustainable and inclusive development, ensuring that the benefits of progress reach all corners of the nation. This requires a concerted effort from all stakeholders, including businesses, government, and civil society. By embracing climate action as an opportunity for innovation and sustainable growth, India can unlock its full economic potential and build an equitable future for all its citizens.



Circularity: A Transition with Transformative Potential

***Deeksha Vats**, Group Chief Sustainability Officer, Aditya Birla Group*

India has long embraced resource conservation, a principle deeply embedded in our cultural practices and millennia-old philosophies of reuse and sustainability. As the country transitions towards a greener, more sustainable future, these age-old practices are being rejuvenated with modern approaches, laying a strong foundation for India's green economy. What was once seen as a niche environmental concern, circularity has now evolved into a central pillar of India's economic transformation. Importantly, circularity is not an 'end' but a 'means' for decarbonization, resource conservation, and product stewardship.

Circularity: A Transition with Transformative Potential

The shift from the traditional "take, make, dispose" linear economic model to a circular one-where resource efficiency, recycling, and sustainability are integral-marks a critical turning point for India. This transformation is not only essential for mitigating climate change but also for fostering innovation, creating green jobs, and driving sustainable economic growth. Circularity is no longer a buzzword; it is a strategic necessity for India's sustainable future.

At its core, the circular economy focuses on ensuring that resources are continually reused, repurposed, and recycled, thereby extending the lifecycle of materials. India's longstanding practices-from crop rotation in agriculture to waste recycling-align seamlessly with these principles of circularity. In today's context, these principles have been translated into modern economic and industrial strategies. Businesses are now rethinking product design, consumption patterns, and waste management processes. Reducing dependence on virgin materials not only supports environmental sustainability but also reduces carbon emissions, positioning India as a key player in achieving its green economy targets. Circularity is a key enabler of decarbonization, helping industries reduce their carbon footprints in line with global sustainability goals.

India's Roadmap to a Circular Economy

India is actively driving its circular economy agenda through national initiatives like the Swachh Bharat Mission, Jal Jeevan Mission, and the Vehicle Scrapping Policy. The India-Waste Solutions for a Circular Economy project is enhancing regulatory frameworks and promoting investments in waste management and recycling infrastructure. Additionally, Extended Producer Responsibility (EPR) regulations across sectors such as plastics, e-waste, batteries, and tires incentivize efficient recycling, reduce reliance on virgin materials, and mitigate environmental harm.

Exemplars of Circularity



India has already seen some impressive examples of circularity, particularly in the aluminium industry, where recycling plays a crucial role. Hindalco, an Aditya Birla Group company, has made substantial strides in aluminium recycling with state-of-the-art facilities for recycling and remelting aluminium scrap. This approach not only reduces the environmental impact of mining and refining aluminium but also contributes to sustainable production practices. Hindalco's aluminium recycling rate stands at over 90%, significantly contributing to circularity while reducing its carbon footprint.

Beyond metals, circularity is making significant inroads in other

industries. For instance, Hindalco has partnered with UltraTech Cement to develop a sustainable method of incorporating red mud-a by-product of alumina refining-into cement production. This innovative approach reduces the environmental impact of bauxite residue and promotes sustainable cement manufacturing.



In textiles, Grasim Industries has developed Liva Reviva, a circular textile product made from recycled cotton fabric waste. This initiative not only reduces water usage by up to 20% but also minimizes land consumption and cuts down on energy usage. Similarly, Aditya Birla Chemicals has pioneered Recyclamine®, a technology that recycles non-recyclable thermoset plastics into thermoplastics, which can then be used in industries such as wind energy. This breakthrough technology plays a crucial role in addressing plastic waste and promoting the circular use of plastics across various industries.

As part of our broader strategy, Aditya Birla Group is on track to achieve Zero Waste to Landfill (ZWTL) by 2030, with 20 units already having achieved this milestone. These examples illustrate how Indian businesses are at the forefront of circularity, driving sustainability across multiple sectors and creating solutions that contribute significantly to both environmental and economic growth.

Opportunities and Challenges: A Path to Sustainable Growth

The circular economy offers businesses opportunities to innovate and enter new markets. Developing resource-efficient manufacturing processes, creating environmentally friendly products, and reducing reliance on raw materials provide companies with avenues to enhance competitiveness in a global market that increasingly values sustainability.

India's transition to a circular economy presents vast opportunities, but also significant challenges. One of the key obstacles is securing financial support for large-scale circular initiatives. Another one is the rise of e-waste. The rapid pace of technological advancement and growing consumption of electronic devices has led to an unprecedented surge in e-waste. In 2022, the World Health Organization reported that an estimated 62 million tonnes of e-waste were generated worldwide. However, only 22.3% of this waste was formally collected and recycled. In India, Hindalco has invested in a state-of-the-art copper and e-waste recycling facility, addressing this issue while reducing environmental damage caused by improper disposal and resource extraction. Hindalco's e-waste recycling facility has set a new industry benchmark, with a 90% recycling rate across its operations, including bauxite, fly ash, and other industrial by-products.

Circularity as a Driver of India's Green Future

At Aditya Birla Group, we understand that India's deep-rooted tradition of resource conservation, combined with modern circular economy principles, presents a unique opportunity for sustainable development. India is well-positioned to build a greener, more resilient economy, where resources are continually reused, waste is minimized, and innovation propels progress.

The transition to a circular economy is not just a business decision; it is a strategic imperative for ensuring long-term sustainability. By 2050, India's circular economy could create over ten million jobs in sectors like recycling, sustainable product design, green technology, and waste management. Circularity is a key driver of economic growth, job creation, and environmental protection. As businesses, we have a responsibility-and an opportunity-to lead the way in driving change that benefits both our bottom lines and the planet. However, the economic potential of a circular economy is undeniable. Moreover, circularity is a critical means of achieving decarbonization, a goal that sits at the heart of global sustainability agendas.

The shift towards circularity is not just a local opportunity; it is a global one. With its abundant resources, skilled workforce, and innovative spirit, India is poised to be a global leader in the transition to a circular economy, helping shape a sustainable future for generations to come.

ESG as an Accelerator for Business Growth

***Manish Kumar**, Head-ESG & CSR, ICICI Bank Limited*

Globally, we are increasingly experiencing a shift in the narrative on economic growth. Governments and institutions are expected to ensure the well-being of the society as part of growth and to meet the needs of the present, without compromising the ability of future generations to meet their own needs. The requirement is for sustainable development which must ensure that the pursuit of today's development does not put burden on the future generation. This should be achieved by adopting "Sustainable Development Goals (SDGs)."

As articulated in the book, The Next New, the fourth industrial revolution is a lived reality now and the fifth industrial revolution is upon us. The fourth industrial revolution was about the application of emerging technologies which were connected and intuitive. The end objective was to derive maximum benefit from the allocated resources, be it financial capital or social capital, and at times without considering the impact on society. The fifth industrial revolution is more caring with additional objectives of sustainability, governance and social impact also coming to the forefront. Business rules are being redefined by the ethics and values-based demands of ESG. Environmental, Social, and Governance (ESG) practices help attain the objectives of sustainability. ESG, at its core, comprises a set of factors used to measure the non-financial impacts of a company's operations and, from an investor's perspective, helps evaluate the quality of investments with respect to a broad range of socially desirable ends. Adopting ESG practices requires managements to take a fresh look at the business strategies and get onto a path of just transition – one where sustainability objectives are met without depriving others of their opportunity to grow and prosper. The rising investment in digital public infrastructure is an example of such transitory business model that helps the society and not only investors.

Today, business models are changing faster than the ability of most CEOs to understand, absorb and adapt to them. The change is on all fronts – technology, regulation, geopolitics, consumer preferences and climate risks. Materiality assessment and transition planning are key ingredients of every ESG framework and these help overcome such challenges. Materiality assessments help prioritise available resources for sustainability issues and focus time and money on the important topics that matter the most to the business and stakeholders. It helps in highlighting areas to manage and monitor risks that are important but not currently addressed and facilitates identifying whether the company is creating, or reducing, value for society. The output of a materiality assessment becomes the input to transition planning, which is a dynamic business exercise to operationalize a firm's strategic targets and commitments to achieve its sustainability goals. Real leadership is not about holding on to a current revenue generating business model but in being, at the least, ahead of change, if not leading the change. It will be the survival of those who change faster than the others. A well thought out transition plan can inform market actors about a firm's competitive positioning in relation to strategic risks and business opportunities.



The process of assessing material areas of focus also leads to identifying fields of disruption as well as opportunities for the next phase of business growth. For example, ESG as a megatrend is disrupting several ecosystems – decarbonisation in power, utilities, heavy industries like steel and cement – and at the same time providing opportunities for growth in completely new areas like green hydrogen, Carbon Capture Utilisation



and Storage (CCUS), electric aircrafts, biodegradable polymers in chemical industry, green data centres and the list goes on. Some years ago, no one would have imagined large scale adoption of remote working or gene therapy for cancer cure. But the changes are taking place and at a fast pace. It is estimated that the capex required to capitalise on the ESG and sustainability opportunities in India is likely to be worth at least USD 10 trillion until 2050 across several end-use industries. The revenues that these new opportunities could generate will be multi-trillion! The opportunities will not only spiral down to ecosystems which support or depend on these industries but these ecosystems are also likely to be beneficiaries when these opportunities start getting exploited. Opportunities are also coming up for public-private collaborations in this evolving area. In a global economy, it is hard to operate in isolation.

It is also important that government policy framework and the administrative ecosystem facilitates the understanding of the basic requirements and enable the making of a business case for these ESG initiatives. Businesses have the potential to steer the economy and consumer behaviour in a direction for the better and in a manner to address societal and environmental issues. India is leading the charge in addressing societal issues like financial inclusion, meeting primary education needs and access to healthcare by using tech platforms at scale. Using new technologies is not only about renewables and e-mobility but also about measuring and mitigating the impact of human action on aspects like environment, ecology and biodiversity. This was brought on to the agenda of the G20 during India's presidency in 2023 with the adoption of the theme “One Earth, One Family, One Future”. We can now see how adoption of organic farming practices is changing lives of agriculturists. It is helping them make more money, improve their health by not getting exposed to chemicals and also explore alternate or multiple cropping in their landholdings.

Organisations are increasingly including ESG metrics in their annual reports to help stakeholders make investment choices. The reporting provides stakeholders with the necessary insights to make informed decisions by highlighting potential ESG risks and opportunities that might affect the company's long-term value. ESG scoring has evolved to track a company's ESG performance, providing greater visibility into its operations. Organisations that demonstrate more robust ESG practices typically score higher and garner interest from investors and stakeholders like employees and customers. The benefits of embracing ESG leads to better management of risks (and opportunities) leading to improved long-term value creation. The potential of ESG to be an accelerator for sustainable business growth is not immediately evident.

It is imperative to constantly remind ourselves that ESG is more than just metrics, regulations and frameworks. At its core, ESG is an actionable way to grow businesses, measure progress and take steps towards a more sustainable future.

Corporate India - Preparing for the Green Economy

***Dr Mukund Rajan**, Founder and Chairman, ECube Investment Advisors Pvt. Limited*



The 2023-24 Union Budget declaration of "green growth" as one of seven Government priorities was an important milestone in India's evolution towards a green economy. Indian businesses now understand that with major adverse developments such as global warming (2024 was the hottest year experienced in recorded history) and the quality of life consequences of environmental degradation (as seen for instance with increased respiratory ailments caused by extremely poor air quality across major Indian cities), this movement towards a green economy has become essential. They also acknowledge the many benefits this can create, including energy security (and its link with a stable and strong international rupee) and job creation in emerging green sectors such as waste-to-energy and biofuels.

As more Indian companies take on a green agenda, the number of these companies rated well at A or higher on their Environment, Social and Governance (ESG) ratings by an ESG ratings provider like MSCI has increased from 23% of the pool to 32% of a larger pool over a five year period. It is worth reflecting on what these forward-looking companies are doing right.

Governance: First, they are putting in place the right governance structures to develop and execute their sustainability strategies. Most of these companies are now assigning responsibility within the senior management team for sustainability, and the role of Chief Sustainability Officer is becoming quite common. At the level of the Board of Directors, market leaders like Infosys, Airtel and Tata Steel are creating dedicated ESG or Sustainability Committees of their Boards. It is worth noting that as a result of the strategic climate-related guidance provided by Boards in the last year, at 135 India saw the fastest growth of companies in the world which have put in place validated science-based climate targets.

Resource-use efficiency: We see a significant focus within forward-looking companies on resource use efficiency and circular economy practices, including designing products, services and business models in ways that minimize waste and extend life across product life cycles. There is also increasing recognition that many of these measures are no-regrets measures that require little by way of capital investment; investments in energy efficiency improvement, for instance, have high returns on investment and can pay for themselves quite swiftly.

Supply chain performance: Forward-looking businesses are also embracing their supply chains in their progressive actions. They recognize that the Micro, Small and Medium Enterprises (MSMEs) that form a significant part of the supply chain account for up to 40% of the actual resource consumption that takes place within the Indian economy. They are therefore sensitive to audit protocols that discourage the outsourcing of dangerous and polluting business by them to their suppliers.

Innovation, including in business models: Forward-looking companies are constantly innovating and pivoting their business models to find competitive advantage. For instance, leading Indian energy producer Tata Power changed its strategy for growth after it found its stock being divested by a major investor, Norges Bank, in 2016, in

the wake of the latter's portfolio decarbonization initiative. Tata Power soon pivoted away from coal-fired thermal power, towards renewable energy through both organic and inorganic expansion.

Innovation also helps bring down costs earlier seen as prohibitive, as India has seen in the solar industry over the past decade (solar power tariffs, for instance, have fallen over 85% over the past decade) and is now witnessing in the electric vehicle industry (lithium battery prices have fallen over 90% over the past decade). As a result, more Indian companies are now becoming comfortable pricing climate risk and putting a price to carbon.

New enterprise is consequently taking root across many sustainability-friendly segments, like green hydrogen; high efficiency materials; biomass to energy; water and energy efficient agricultural techniques; meat alternatives; robots and drones for better safety and managing high risk operations; wearable sensors to monitor worker health and heat stress and fatigue; carbon credits trading; and carbon capture and storage. At one end of the spectrum, large Indian conglomerates like Reliance and Adani are announcing significant capital investments, to the tune of over USD 50 Bn each over the next decade, in sectors like Green Hydrogen. At the other end of the spectrum, many start-ups are driving innovation, such as SmartJoules, which is providing energy efficiency solutions, or Zypp Electric, which offers sustainable delivery as a service, or Banofi, which repurposes banana waste to premium leather substitutes.

Diversity: Forward-looking enterprises also endeavour to improve diversity within their workforces, recognizing that even beyond helping them to adapt better to the complex social context in which they operate in India, this can strengthen a culture of innovation.

Community involvement: Such organizations tend to demonstrate heightened awareness about their responsibilities towards the welfare of local communities. They adopt a participative approach, encouraging local communities to make informed decisions, for instance on the issue of land use for renewable power generation alongside ongoing agricultural activity.

They also leverage their statutory CSR spending obligations to become neighbours of choice, investing in the future of local communities through initiatives such as skills development.

Linking Sustainability performance with executive compensation: To catalyse sustainability performance improvement, companies like Marico have started linking performance on material issues like carbon emission reduction to executive compensation. What gets measured gets improved, and linking senior executive compensation to sustainability outcomes forces the pace of change.

Measurement and disclosure: Integral to the link with compensation is a strong focus on measurement, tracking sustainability performance and making transparent disclosures. Multiple reporting frameworks are being used, including the Global Reporting Initiative or GRI and Integrated Reporting. The Business Responsibility and sustainability Report (BRSR) mandated by SEBI is becoming central to the communication by listed Indian companies of their sustainability commitment to stakeholders.



To be fair, there is considerable scepticism in the market about the data that companies report. There are concerns around the integrity of data, the inconsistency of ESG rating data, and how data gets integrated into company strategies. The best companies therefore put in place clear, consistent reportage of data over time, backed by third party assurance. By doing this, they

also avoid the perils of "greenwashing", which has created reputational and other risks for a number of prominent global brands.

In sum: Successful and forward-looking Indian businesses understand that sustainability indicators are becoming a critically important measure of their performance; they architect strategies that span the material factors impacting their businesses; they put in place the right governance linking performance incentives to sustainability outcomes; they transparently engage with all their stakeholders and take feedback for further improvement; and they avoid any kind of misrepresentation that could tantamount to greenwashing.

These actions are delivering value to stakeholders. This is evidenced in the returns such companies are providing to their investors, reflected for instance by the outperformance of the MSCI India ESG Leaders Index when compared to the broader benchmark index. These companies are also increasingly able to access diverse pools of sustainable finance, having already raised capital to the tune of over USD 43 Bn over the past ten years via green bonds and other variants of such sustainable finance instruments. And no surprise, these companies are also receiving significant capital via the Government's PLI schemes and other subsidies, and going forward, will likely access significant chunks of the close to USD 12 Bn that the Government announced last year for long-term financing to the private sector for research and innovation in sunrise sectors.

By preparing for the Green Economy, Corporate India is prudently mitigating emerging risks while also being better placed to take advantage of emerging new opportunities, and paving the way for achieving India's Viksit Bharat ambitions.



ESG Ratings: Enabler for Indian Corporates Towards Sustainability Transition

***Rohit Inamdar**, Chief Executive Officer, CARE ESG Ratings Limited*

ESG Ratings: To Lay Benchmark for India's Sustainable Future

In today's business environment, where corporate responsibility and sustainability are imperative rather than optional, Environmental, Social, and Governance (ESG) ratings serve as a crucial benchmark for companies worldwide. These ratings have become essential to the global investment landscape, driven by a growing demand for sustainability and ethical considerations in decision-making. ESG ratings allow companies to evaluate and improve their sustainability performance by comparing themselves against industry benchmarks and assessing their positions among peers. They consolidate various aspects of a company's disclosures, compliances, strategies, initiatives, and performance across ESG areas into a comprehensive score. As the momentum for sustainable investing accelerates, ESG ratings are increasingly influencing the future trajectory of businesses. CareEdge-ESG, a leading ESG Rating Provider (ERP), aims to catalyse change for a sustainable future with the most credible ESG assessments in India.

Why ESG matters more than ever?

Despite the challenges, the significance of ESG ratings should not be underestimated. A strong ESG performance for companies translates into more than just good public relations. It enhances brand reputation, reduces risk exposure, and increases attractiveness to both equity and debt investors. In an environment where investors seek entities capable of managing ESG-related risks and opportunities, a robust ESG rating is a significant differentiator. Furthermore, companies with solid ESG credentials are often better positioned to diversify their investor base and raise capital more efficiently.

Based on assessing its non-financial information, disclosures and policies, ESG ratings evaluate how well a company manages environmental, social, and governance risks and opportunities. CareEdge-ESG's India-specific approach to ESG ratings considers the challenges specific to Indian companies within the given sector. From enhanced brand reputation to reduced risk exposure, the advantages of better ESG performance are diverse and far-reaching. Solicited ESG ratings provided by ERPs following the "Issuer-Pays" model (ERP-IP) equip stakeholders with an independent assessment of companies' ability to manage ESG-related risks through a comprehensive evaluation of its public and non-public data in the form of frameworks, transition strategy, disclosures, policies and performance.

There are various compelling reasons why companies should focus on improving their ESG Ratings and the tangible benefits it can bring. Some of the obvious benefits of ESG ratings include following key aspects:

- Establishing and effectively communicating clear ESG goals and targets significantly enhances the company's appeal to equity and debt investors
- A strong ESG performance and demonstrated commitment to ESG principles bolster a company's brand presence and foster stakeholder loyalty
- A company with robust ESG credentials often finds greater opportunities to diversify its investor base and raise capital more efficiently



- ESG rating provided by an independent SEBI regulated ERP assists the users of ESG rating to understand company's level of transparency in ESG reporting and disclosures

Identifying and managing environmental, social, and governance risks and opportunities can impact long-term financial performance. Companies with strong ESG performance may be better positioned to mitigate risks and capitalise on opportunities such as climate change, human rights, and corporate governance.

Beyond Just Numbers

At a glance, ESG ratings may appear as another set of metrics in a data-saturated world. However, these ratings transcend mere numerical assessments; they represent a comprehensive evaluation of a company's dedication to sustainable practices. ESG ratings provide a detailed overview of a company's performance across environmental, social, and governance dimensions, presenting a complete picture of its operations. These ratings go beyond reflecting a company's ethical stance - they provide an insight on its long-term sustainability in an ever-evolving global landscape.

For Indian companies, ESG ratings provide a critical tool for benchmarking themselves against peers within their industry. They offer a pathway to improve sustainability performance, not only by identifying areas for improvement but also by enhancing transparency and accountability. While numbers are used in calculations for performance-related Key Indicators (KIs), ESG ratings also analyse qualitative factors like a company's ESG frameworks policy, statements, leadership commitment, and transparency regarding their ESG practices. ESG ratings provide quantitative medians and benchmarks for critical parameters, e.g., comparing one's scope-1 emissions against industry benchmark emissions for the sector, which can provide insights regarding short-and long-term emission reduction target setting. With benchmarking, companies can understand the velocity and magnitude of their actions towards transition. Another instance is the median female-to-male ratio in the workforce. Gender equality and equal opportunity are essential to the core of human capital. Still, the criteria vary across industries; hence, comparing one's ratios with those if the industry shall provide a better understanding of self-performance. For example, services-based organisations generally have a better female-to-male ratio; however, Non-Banking Financial Companies (NBFCs) have a relatively lower ratio compared to banks or IT services. Therefore, it is pertinent that companies assess themselves against peers to gauge their performance.

ESG ratings and disclosures (whether voluntary or regulatory) have also emerged as a crucial tool for companies to demonstrate their commitment to sustainable practices and responsible business conduct. Companies report their non-financial performance, risks, and opportunities related to sustainability practices based on ESG frameworks. These frameworks guide reporting the underlying data that the ERPs use in their rating assessment. ESG ratings go beyond just numbers because they consider not only quantitative data on E, S & G parameters but also undertake granular and objective scoring of qualitative factors like company policies, training to board members, employees, and value chain partners, stakeholder engagement, and overall commitment to sustainability, providing a broader picture of a company's impact beyond just financial performance. The ERP-IPs carry out comprehensive engagement with the companies to understand their level of commitment, goal setting and future transition. These aspects are then judiciously combined with publicly available data and disclosures in assigning a comprehensive ESG score on the SEBI mandated 100-point scale.

The Regulatory Push



India's regulatory landscape has begun to reflect the growing importance of ESG. The Securities and Exchange Board of India (SEBI) has taken significant steps to embed ESG principles into the fabric of corporate India. Introducing the Business Responsibility and Sustainability Reporting (BRSR) framework for the top 1,000 listed entities is a landmark move aiming to standardise ESG disclosures and promote transparency and accountability. As the ambit of the



BRSR framework and other disclosure regulations/ frameworks expand, all companies, listed or private, as well as SMEs, will have to address ESG principles if they want to sustain any competitive advantage in the market.

In July 2023, SEBI introduced guidelines for ERPs. India now has a regulatory framework that mandates ERPs to assign ESG scores on a uniform 100-point scale together with the constituent Environmental, Social and Governance scores and their respective weights. As spearheaded by SEBI, India brought the first such mandate of a regulatory framework for ERPs, setting a precedent for other jurisdictions. This move is groundbreaking, not just for its rigour but for its potential to bring consistency and comparability to ESG ratings in India.

International Financial Services Centres Authority (IFSCA), GIFT City, has provided a roadmap for ESG Rating services in the IFSC (International Financial Services Centre). IFSCA is working towards increasing the mobilisation of sustainable finance into India. IFSCA has taken significant steps in accelerating global sustainable capital flows by creating a conducive regulatory environment based on international best practices focused primarily on the needs of India and developing countries. The use of proceeds verification of these sustainable finances shall be conducted by the ESG Ratings providers.

Financial sector-Regulated Entities (REs) play a crucial role in financing the transition towards an environmentally sustainable economy. Thus, they must implement robust climate-related financial risk management policies and processes to counter the impact of climate-related financial risks. Given this, the Reserve Bank of India (RBI) developed a draft disclosure framework on climate-related financial risks (2024) requiring REs to report information on governance, strategy risk management and metrics and targets from FY26 and FY27 reporting period onwards, respectively. These disclosures are in addition to the SEBI-mandated BRSR data disclosure requirements.

Not Without Challenges

While the global shift towards ESG is undeniable, the Indian context presents unique challenges. India's energy security status and its socio-economic conditions differ significantly from those in developed economies, and a one-size-fits-all approach to ESG ratings won't work. Consequently, India has a different net zero trajectory and its own Nationally determined contributions (NDCs). These national goals and targets should be integral to India's taxonomy and its regulatory and supervisory disclosure frameworks for its BFSI and industrial/service sectors.

However, the journey is not without its hurdles. The availability and quality of ESG data in India are still evolving. Accordingly, an issuer-pays model of rating assignments leads to a more refined approach to ESG assessment. Companies can share their non-public information with the ERPs and explain their strategies in detail, providing better insights into their sustainability initiatives. Issuer-pays ERPs, such as CareEdge-ESG, provide such assessments through a structured approach, leading to consistency and reliability in the ratings.

The current BRSR framework helps investors assess non-financial parameters related to ESG and sustainable activities. However, the framework is generic and does not consider sectoral nuances. To improve transparency and effectiveness in ESG reporting, the BRSR should be:

- Customized for each industry (e.g. ESG parameters are different for banks vs manufacturing sector)
- Addressing the distinct environmental, social, and governance risks which are unique to each sector
- Providing detailed guidelines on reporting to eliminate ambiguity

- Dispense clear guidelines usage of unit for reporting on quantitative indicators
- Sector specific data points need to be introduced to make reporting relevant to respective industries

There is an impending need of framework revision to reflect market expectations. It is witnessed that many companies either do not understand the nuances of data reporting under BRSR or feel that the data is not relevant to them and, hence, do not report appropriately in BRSR. The current one-size-fits-all approach often leads to the omission of crucial sector-specific data.

India Taxonomy

The 2024 Budget announced the development of an India-specific sustainable taxonomy, which needs acceleration to direct funds towards climate adaptation, mitigation, and reduced financed emissions. A Green/Sustainable Taxonomy is essential for efficient climate financing to meet national climate goals. It helps screen green projects, prevents greenwashing, and lowers financed emissions in loan portfolios. The financial system can support the transition to a sustainable economy by efficiently allocating resources to green/sustainable activities. (RBI) acknowledges the need for consistent, comparable disclosure frameworks. Upcoming RBI guidelines on climate-related financial risks will further standardise sustainability data reporting. An India-specific taxonomy will help price financial risks and allocate capital for transitioning to a sustainable economy.

India's ESG future

As India continues its journey towards a sustainable future, ESG ratings will play an increasingly critical role. The focus on evaluation-oriented, objective assessments of sustainability risks is essential for fostering positive transformation and building stakeholder trust. Globally, there is a push towards more regulated and transparent ESG ratings, which are crucial for building investor confidence and ensuring consistency among rated companies. Accurate ESG data fosters consistency and comparability among rated companies, enhancing trust in the ratings. India stands at a crossroads. On one hand, the country faces significant socio-economic challenges that complicate the adoption of ESG practices. Conversely, an enormous opportunity exists to lead the way in sustainable development, setting an example for other emerging economies. By adopting a localised approach to ESG assessments, Indian companies can better navigate the complexities of their operating environment while contributing to the global push for sustainability. As ESG disclosures gain prominence, especially in the financial market, CareEdge-ESG's India-specific ESG Ratings Framework will support enhanced decision-making across stakeholders and contribute to the growth of the Indian economy.

A Strategic Imperative

In conclusion, ESG ratings are not just a regulatory checkbox but a strategic imperative. For India, embracing ESG is more than aligning with global trends; it is about securing a sustainable and prosperous future. As ESG ratings evolve, they will undoubtedly add significant value to the global economy by promoting responsible business practices and fostering long-term sustainability. The question is not whether India will join this movement-it already has. The real question is how quickly, and effectively Indian businesses can leverage ESG to drive growth and ensure their place in the global economy.



Disclaimer

This report is prepared by CARE ESG Ratings Limited (CareEdge-ESG). CareEdge-ESG has taken utmost care to ensure accuracy and objectivity while developing this report based on information available in public domain. However, neither the accuracy nor completeness of information contained in this report is guaranteed. CareEdge-ESG is not responsible for any errors or omissions in analysis / inferences / views or for results obtained from the use of information contained in this report and especially states that CareEdge-ESG Ratings has no financial liability whatsoever to the user of this report.

Unlocking India's Investment Opportunity in Green Energy

***Viral Thakker**, Partner and Leader, Sustainability and Climate, Deloitte South Asia and Leader, Sustainability Technology & Transformation, Deloitte Global and **Prashanth Nutula**, Partner, Deloitte India*

Introduction



Climate change has caused global temperatures to rise by 1.2°C since pre-industrial times, with the past decade being the hottest on record. This has been driven by anthropogenic activities, such as fossil fuel combustion, rapid urbanization, and land use changes. Energy production accounts for approximately 80% of global greenhouse gas emissions.[1] This necessitates a swift transition to cleaner energy sources to meet the Paris Agreement's 1.5°C target, a critical threshold beyond which the world faces irreversible damage. This includes frequent extreme weather events, significant biodiversity loss, and severe risks to food and water security for millions globally. To avoid this scenario, emissions must be halved by 2030, leaving two-thirds of fossil fuel reserves unused by 2050.[2] This transition requires significant annual investments in renewable energy through 2030, alongside shifts in energy subsidies and technology accessibility.[3]

India's climate and energy landscape

India's energy landscape is undergoing significant transformation, marked by rising demand, growing renewable energy sector, and increasing vulnerability to climate change. With temperatures rising by 0.7°C over the past century, climate impact could reduce India's GDP by 2.8% by 2050.[4] Coal dominated 59% of India's energy mix in 2023, followed by Oil at 29%.[5] While renewable energy's current contribution is low, it shows great promise, with installed capacity reaching 199 GW in 2024, with an aim of 500 GW by 2030.[6]

As the third-largest global energy consumer, India faces increasing energy needs and climate-related challenges.[7] These challenges threaten agricultural productivity and public health. Due to extreme heat, a 20% decline in rainfed rice yields and loss in working hours are expected.[8] Air pollution exacerbates health risks - for instance, Delhi's PM2.5 levels at 100 µg/m³ far exceed WHO recommendations.[9]

In response to these challenges, India is taking ambitious steps to decarbonize its energy system and reduce emissions. As a part of India's Nationally Determined Contributions (NDC) goals, our country aims to cut emissions intensity by 45% and source 50% of its energy from renewable sources by 2030 and achieve net-zero emissions by 2070. India's proactive approach is evident through initiatives such as the National Action Plan on Climate Change (NAPCC), State Action Plans, Renewable Purchase Obligations, and Green Hydrogen mandates. The promotion of biofuels, particularly Sustainable Aviation Fuel (SAF), plays a pivotal role in mitigating agricultural waste-related emissions. Initiatives like the Ethanol Blended Petrol (EBP) Program and mandates for SAF blending not only decarbonize transportation sectors but also contribute to reduced stubble burning, a significant source of air pollution.

[1] *https://www.eesi.org/topics/fossil-fuels/description*
[2] *https://www.ipcc.ch/2022/04/04/ipcc-ar6-wgiii-pressrelease/*
[3] *https://www.un.org/en/climatechange/five-ways-jump-start-renewable-energy-transition*
[4] *RBI's report on Currency & Finance 2022-23*
[5] *Niti Ayog ICED*
[6] *Ministry of New and Renewable Energy: https://mnre.gov.in/physical-progress, https://npp.gov.in/dashBoard/cp-map-dashboard*
[7] *https://www.iea.org/reports/india-energy-outlook-2021*
[8] *https://www.unescap.org/kp/2024/survey2024#*
[9] *https://www.eesi.org/topics/fossil-fuels/description*

Investment Drivers:

India stands at the cusp of a transformative journey, where bold climate ambitions converge with unparalleled investment opportunities, shaping a resilient, low-carbon future fueled by innovation and sustainable growth. The investment potential across prominent sectors is as follows:



- India is making significant strides in **renewable energy** adoption, targeting 500 gigawatts (GW) of installed capacity by 2030.[10] Grid expansion also demands significant outlays, with 180,000 km of transmission lines added in the last decade, marking a 60% increase.[11] Policies such as the Green Open Access initiative and the PLI scheme for solar PV manufacturing have incentivized investment and technological advancements.
- In the **biofuels** space, India's Ethanol Blended Petrol (EBP) Programme targets 20% ethanol blending by 2025-26, with blending levels exceeding 13% in 2024.[12] Additionally, the country has set ambitious targets for Sustainable Aviation Fuel (SAF), aiming for a 5% blending level by FY30 to achieve 2-3 MMT production capacity by 2030.[13] The nation's ethanol production capacity of 10.9 million metric tonnes per annum (MMTPA) will need to grow to 13.4 MMTPA by 2025-26. Compressed Biogas (CBG) production under the Sustainable Alternative Towards Affordable Transportation (SATAT) initiative, which promotes the production and adoption of CBG as a cleaner, affordable fuel alternative, aims for 15 MMT by 2030.
- Key industrial **hard-to-abate** sectors like steel, cement, and refining are transitioning to low-carbon technologies such as hydrogen-powered Direct Reduced Iron (DRI) and Carbon Capture Utilization and Storage (CCUS). Operational efficiency improvements in blast furnaces and cement kilns are reducing emissions incrementally. Green hydrogen, biofuels, and advanced electrification are central to decarbonization efforts, with these technologies projected to require billions in investment by 2030 to achieve net-zero targets.
- To increase production of **green hydrogen and its derivatives**, The National Green Hydrogen Mission targets annual production of 5 MMT by 2030, with potential export markets pushing demand to 10 MMT.[14] India's abundant renewable energy resources make it a cost-competitive hub for green hydrogen..
- To stabilize its growing renewable energy grid, India plans to increase **energy storage capacity** from 5 GW in 2024 to 40 GW by 2030. Pumped hydro and battery storage dominate the market, with projected storage needs of 4-hour and 6-hour configurations. Investment in grid-scale storage infrastructure is critical for integrating intermittent renewable sources.
- India's **water** management sector is crucial for addressing a projected 56% water demand-supply gap by 2030.[15, 16] Key opportunities include urban water management, desalination, and irrigation solutions, alongside expanding wastewater treatment and advancing precision agriculture technologies.
- **Digital solutions** are critical to achieving India's climate goals, with technologies like AI, IoT, and smart grids reducing emissions in key sectors. The National Smart Grid Mission has planned investments of $130 million, while smart meters and intelligent traffic systems offer significant emissions reduction potential.[17] The digital climate tech market is valued at $20 billion, with investments in transportation, energy, and industry leading the charge.[18]

---

[10] *Deloitte Analysis*
[11] *https://www.morganstanley.com/ideas/india-renewable-energy-investing-opportunities*
[12] *https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2043042*
[13] *Deloitte Analysis, additional scale & efficiency benefits considered*
[14] *https://assets.bbhub.io/professional/sites/24/BNEF_New-Energy-Outlook-India-2023.pdf*
[15] *Financing the Water Sector - An Alternate Approach, World Bank Group*
[16] *AMRUT Scheme Report, Ministry of Housing and Urban Affairs*

- India generates 62 million tonnes of municipal **waste** annually, which is expected to triple by 2030.[19] The waste-to-energy market, with a potential capacity of 5,690 MW, has only 556 MW installed.[20] Investments in e-waste, plastic recycling, and bio methanation are growing, supported by initiatives like the Swachh Bharat Mission.
- **Transportation** contributes 14% of India's GHG emissions. By 2052, passenger and freight emissions are expected to increase 1.5x and 3x, respectively. Investments in EV adoption, multimodal integration, and alternative fuels are crucial. Initiatives like the National Electric Mobility Mission Plan and FAME aim to transform the sector
- India's **agriculture** sector employs 50% of the population and contributes ~18% to GDP. Climate-smart practices like precision farming and zero tillage are reshaping the sector. The market for sustainable agriculture inputs is expected to grow at a CAGR of 12%, with investments in agritech and carbon farming presenting lucrative opportunities to enhance productivity and sustainability.

Table 1: Investment potential across key renewable energy sources

S. No.	Investment theme	Potential investment (US$ billion)
1.	Renewable Energy: Solar, Wind, Hydropower	200-250
2.	Bioenergy: Includes Biofuels such as Bioethanol, Methanol, Sustainable Aviation Fuel (SAF) and Compressed Biogas (CBG)	75-80
3.	Green Hydrogen and its Derivatives (including green ammonia)	90-100
4.	Energy Storage Solutions	250-300
5.	Water Sector Solutions	60-75
6.	Digital Systems and Platforms for Climate Solutions	60-75
7.	Circular Economy and Waste Management	18-20
8.	Sustainable Transport Infrastructure	600-650
9.	Sustainable Agriculture	20-22

In totality, the investment opportunity in financing India's transition to renewable energy (by 2030) is estimated to be approximately $1.5 trillion.

Conclusion



India's journey towards 'clean' energy reflects its commitment to addressing climate change, energy security, and economic growth. Solar power leads the way with exponential expansion supported by manufacturing incentives, while wind energy and hydropower diversify and stabilize the energy mix. Biofuels, especially Sustainable Aviation Fuel (SAF), are critical to decarbonizing hard-to-abate sectors like aviation, reducing reliance on fossil fuels while creating rural economic opportunities through feedstock utilization. Thus, India's push for green energy offers unparalleled investment opportunities and supports the fight against climate change.

[17] *National Smart Grid Mission website*

[18] *Cumulative market size for energy, transportation, building and infrastructure, and smart factories, as obtained from research estimates of multiple independent agencies*

[19] *Ministry of Housing and Urban Affairs (MoHUA); ITA Dept. of Commerce, US Government (2023)*

[20] *Economic Times (2023)*



About FICCI Centre for Sustainability Leadership

The Centre for Sustainability Leadership is a transformative initiative by the Federation of Indian Chambers of Commerce & Industry (FICCI). Launched in 2023, the Centre is designed to drive climate action in alignment with India's net-zero ambitions, in line with the government's Panchamrit framework. The Centre's objective is to accelerate the sustainability journey of Indian businesses including small and medium enterprises (SMEs) and start-ups. Acting as a catalyst for change, the Centre facilitates adoption of climate solutions that promote sustainable consumption, circular economy, and climate technology innovations.

In alignment with the Government's Mission LiFE mantra, the Centre is committed to encouraging businesses to embrace sustainable practices. The goal is to inspire companies to adopt pathways that drive sustainable production, consumption, and lifestyles while actively contributing to the fight against climate change.

The Centre's Founding Members, Hindustan Unilever Limited (HUL) and HSBC India support its initiatives aimed at promoting decarbonization, green entrepreneurship, and nature-based solutions. Recognizing the crucial role of SMEs in the economy, the Centre advocates adoption of inclusive and sustainable practices amongst India's SMEs, ensuring their integration into global value chains.

Supported by its Knowledge Partner, ECube Investment Advisors, the Centre highlights cutting-edge climate technologies from India's start-up ecosystem, advancing circular economy principles and sustainable consumption patterns. Its bespoke training programs and workshops equip businesses with the tools to navigate the complexities of sustainability and help companies meet Environmental, Social, and Governance (ESG) reporting requirements. Through its outreach initiatives, the Centre showcases global best practices and emerging policies. offering targeted interventions for technology adoption, and facilitating access to finance.

The Centre's capacity-building efforts are accelerating the adoption of sustainable practices, paving the way for a greener, more resilient future for businesses across India.

For more information, please write to us at sustainability@ficci.com

NOTES

NOTES

FICCI

Centre for
SUSTAINABILITY
LEADERSHIP

Founding Members

Hindustan Unilever Limited

HSBC