



DISCLOSURE: IMPERATIVE FOR A SUSTAINABLE INDIA

CDP India Disclosure Report 2021

Written on behalf of 590+ investors representing over US\$110 trillion in assets

▼ March 2022



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CEO FOREWORD



Paul Simpson,
Chief Executive at CDP

As 2022 progresses, we reflect on the events of another extraordinary and challenging year. As the world continued to grapple with the COVID-19 pandemic, the Intergovernmental Panel on Climate Change (IPCC) released its most devastating report yet.

The report emphasized that climate change is no longer a distant reality, its repercussions are already being felt by people across the globe today. Over the last year, we have seen terrifying wildfires, extreme flooding and some of the hottest temperatures on record around the world.

It is encouraging that against this backdrop – described by the IPCC as a ‘code red’ for humanity – CDP reported a record number of disclosures in 2021. Over 13,000 companies worth over 64% of global market capitalization and over 1,000 cities, states and regions disclosed their environmental data through CDP, an increase of 35% since 2020 and over 141% since the Paris Agreement was signed in 2015.

85 Indian companies disclosed to CDP’s Climate Change questionnaire, in response to a request to do so from investors, representing a 27% growth since 2020 when 67 companies responded. With an ever-increasing number of companies choosing to disclose through CDP, it is imperative to leverage the opportunity to transition from a grey to a green economy and for more companies to join a growing league of climate leaders - including the six Indian companies who made it to the prestigious CDP A List. Once again, some Indian companies have demonstrated great ambition for climate action and impressive environmental leadership.

In the 2022 Climate Change Performance Index (CCPI), India’s performance on climate action has been rated as “high” in the GHG emissions, energy use and climate policy categories, “medium” in renewable energy, and “is already on track to meet its 2030 emissions target aligned to a to a well-below 2°C scenario”. India made further progress towards a 1.5°C future at COP26, declaring an intent to achieve net-zero emissions by 2070 in their Panchamrit commitments.

2022 will be a year of great significance for climate disclosure in India as the Securities and Exchange Board of India (SEBI) introduces mandatory climate disclosure under the new Business Responsibility and Sustainability Report (BRSR) disclosure norms. The BRSR mandates climate disclosure for the top 1,000 listed companies beginning in the financial year 2022/23. Those companies already disclosing through CDP will be well prepared for this requirement and we expect more companies to use CDP to collect a structured data set.

CDP’s new 2025 strategy, Accelerating the rate of change recognizes the urgent need for climate action and accountable, transparent climate plans from companies, cities, states and regions. It sets out how CDP will respond to the interlinked crises of catastrophic climate change and an irreversible loss of nature and habitats. Over the next five years, CDP will work with a broader spectrum of stakeholders to widen our scope to cover more environmental challenges and increase our focus on climate targets, plans, and tracking performance against them.

The science is clear – this is our final wake up call. Climate resilience must be at the forefront of the economy and society. Although it gives us great hope to see another year of record disclosure numbers – there is still a vast amount of action required. The next five years will determine whether reaching net-zero by 2050 is achievable and therefore we need all actors in our economy – national and local governments, businesses and capital markets – to be united in ambitious, urgent, system-wide action.

CDP looks forward to seeing India continue to take meaningful action towards a net-zero, nature positive and equitable world.

INTRODUCTION



Global convergence for greater corporate climate action

COP26¹ created unprecedented convergence between investors, businesses, cities and subnational regions with the potential to drive true economic transformation. The message that emerged at the Glasgow Pact for 1.5°C² was loud and clear - all actors must now deliver, and with greater accountability than ever before.

In 2022, we are at a critical juncture for climate action. As the world increasingly recognizes the reality of climate change, we find ourselves in the midst of a crucial economic transformation, with corporations and states across the globe committing to ambitious net-zero greenhouse gas (GHG) emissions. In this moment sustainability disclosures relating to climate and environmental impact are indispensable. Standardized, transparent and mandatory disclosures with necessary assurances provide essential information for better assessment of climate risks, both physical and transition, and its material impact on businesses, economies, investments and assets.

¹ <https://ukcop26.org/uk-presidency/what-is-a-cop/>

² <https://race2zero.unfccc.int/a-cop26-message-from-the-champions-on-a-glasgow-pact-for-1-5/>

A year-long study conducted by the McKinsey Global Institute exploring the question of “How could Earth’s changing climate impact socioeconomic systems across the world in the next three decades³”, highlighted the urgent need for corporations, cities, states and regions alike to adopt climate action initiatives.

Some key findings included:

- ▶ Countries are expected to experience an increase in at least one major type of impact on their stock of human, physical, and natural capital by 2030. Intensifying climate hazards could change millions of lives and put trillions of dollars of economic activity and physical capital, as well as the world’s stock of natural capital, at risk. The intensification of climate hazards will bring areas hitherto unexposed to impacts into new risk territory.
- ▶ By 2050, under an RCP 8.5 scenario, the number of people living in areas with a nonzero chance of lethal heat waves would rise from zero today to between 700 million and 1.2 billion (not factoring in air conditioner penetration). Urban areas in India and Pakistan may be the first places in the world to experience such lethal heatwaves. For the people living in these regions, the average annual likelihood of experiencing such a heat wave is projected to rise to 14 percent by 2050.
- ▶ The average share of effective annual outdoor working hours lost due to extreme heat in exposed regions globally could increase from 10 percent today to 10 to 15 percent by 2030 and 15 to 20 percent by 2050.
- ▶ In parts of the world, the biome is expected to shift. Today, about 25 percent of the Earth’s land area has already experienced a shift in climate classification compared with the 1901–25 period. By 2050, that number is projected to increase to about 45 percent. Almost every country will see some risk of biome shift by 2050, affecting ecosystem services, livelihoods, and habitats.

3 <https://www.mckinsey.com/business-functions/sustainability/our-insights/climate-risk-and-response-physical-hazards-and-socioeconomic-impacts>

India’s climate vulnerabilities and climate action

In 2021, India continued to battle with the COVID-19 pandemic. At the same time, climate change-induced natural disasters including floods and cyclones have continued to bring hardship for people in India, and sometimes even presented a threat to life and livelihood.

INDIA’S PERFORMANCE ON CLIMATE ACTION FOR THE YEAR 2020 HAS BEEN RATED AS “HIGH” IN THE GHG EMISSIONS, ENERGY USE AND CLIMATE POLICY CATEGORIES, AND MEDIUM IN RENEWABLE ENERGY.

According to the Climate Change Performance Index, India “is already on track to meet its 2030 emissions target aligned to a to a well-below-2°C scenario⁴.” At COP26, India further ensured that the 1.5°C scenario would remain achievable and declared an

4 <https://www.businesstoday.in/latest/world/story/top-three-spots-at-the-climate-change-performance-index-2022-remain-empty-india-at-no-10-312087-2021-11-12>

intent to achieve net-zero emissions by 2070⁵. India aims to do this by reinforcing policies such as mandatory sustainability disclosure and extending these guidelines to more and more industries to promote a standard of corporate accountability that must underpin the creation of a truly green economy.

Should this vision be achieved, India’s green economy transition could create over 50 million jobs and an economic impact of over \$1 trillion by 2030 and \$15 trillion by 2070⁶. Over the past five years India has consistently ranked amongst the top 10 countries for climate technology investment, with venture capital funding surpassing \$1 billion⁷. Efforts like these are proof of India’s seriousness about climate action and its integral role in the country’s efforts towards building a green economy. This will require significant effort, resource and planning, which state leaders seem to understand.

There are significant economic, financial and social considerations implicated in India’s net-zero ambitions. Some of them are:

- ▶ India’s new climate goals will significantly compromise its target of a USD 5 trillion economy by 2024-25 according to global forecasting firm Oxford Economic.
 - ▶ India will need to invest \$200 billion p.a. of funding over the next two decades in order to become net-zero by 2070, accounting for progressive increases in expenditure as low-cost technologies are exhausted⁸.
- The scale of changes necessary for India to reach its climate goals mean that no sector will be left untouched. For example:
- ▶ By 2070, India will need 5,630 gigawatts of solar power and 1,792 GW of wind power.
 - ▶ By the same year, 79% of its freight trucks will need to be electric-powered, and the current percentage of industrial energy powered by electric will have to jump from the current 16% to 65% by 2070.
 - ▶ Crude oil usage must peak by 2050 and drop by 90% between 2050 and 2070.⁹

5 <https://www.businesstoday.in/latest/economy/story/indias-transition-to-green-economy-to-create-50-mn-jobs-contribute-1-trm-in-economic-impact-wef-311550-2021-11-08>

6 <https://www.businesstoday.in/latest/economy/story/indias-transition-to-green-economy-to-create-50-mn-jobs-contribute-1-trm-in-economic-impact-wef-311550-2021-11-08>

7 https://www.business-standard.com/article/economy-policy/india-among-world-s-top-10-for-climate-tech-investment-report-121102601458_1.html

8 https://economictimes.indiatimes.com/news/india/difficult-for-india-to-achieve-climate-goals-without-compromising-economic-targets-oxford-economics/articleshow/88076798.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

9 <https://www.financialexpress.com/opinion/boardrooms-must-get-real-on-climate-aligned-business/2377819/>

“In the midst of this global summit, I want to place five elixirs from India to overcome this challenge (of climate change).

First, India will increase its non-fossil energy capacity to 500 giga watts by 2030.

Second, India will fulfil 50 per cent of its energy requirements from renewable energy sources by 2030.

Third, between now and 2030, India will reduce its total projected carbon emissions by 1 billion tonnes.

Fourth, by 2030, India will reduce the carbon intensity of its economy by 45 per cent.

Fifth, India will achieve the target of net-zero by 2070.

These five elixirs will be an unprecedented contribution by India towards climate action.”

Narendra Modi
Prime Minister of India
at COP26



MANDATORY SUSTAINABILITY DISCLOSURE

A pressing priority

Sustainability disclosure, also known as Environmental, Social, and Governance (ESG) Reporting refers to the disclosures on details such as GHG emissions, air pollution emissions, waste generation, energy use, water use and the disposal practices of companies. **Since we have one planet and the impact of all countries sums up to produce adverse impacts for all, it is vital that sustainability reporting is promoted, mandated, and regulated on a global scale¹⁰.**

Since its inception, ESG Reporting has been voluntary. While existing frameworks evolve to seek high-quality non-financial disclosures with similar areas of focus for different stakeholders, they are not yet comparable thereby compromising clarity for reporting entities and data users.

As a result, there is a growing global momentum to create a harmonized global sustainability reporting framework; the most promising effort is the creation of the International Sustainability Standards Board (ISSB)¹¹ under the International Financial Reporting Standards (IFRS) Foundation¹² launched at COP26 in November 2021. The intention is for the ISSB to deliver a comprehensive global baseline of sustainability-related disclosure standards that provide investors and other capital market participants with information about companies' sustainability-related risks and opportunities to help them make informed decisions.¹³

Building on existing frameworks and endorsed by the Group of Five¹⁴ (which includes CDP), the World Economic Forum International Business Council (WEF IBC) and the International Organization of Securities Commissions (IOSCO), the ISSB has

10 <https://industrytoday.com/mandatory-sustainability-reporting/>
 11 <https://www.ifrs.org/groups/international-sustainability-standards-board/>
 12 <https://www.ifrs.org/>
 13 <https://www.ifrs.org/groups/international-sustainability-standards-board/>
 14 The "Group of Five" comprises of CDP (formerly Carbon Disclosure Project), the Climate Disclosure Standards Board (CDSB), the Global Reporting Initiative (GRI), the International Integrated Reporting Council (IIRC) and the Value Reporting Foundation (VRF)

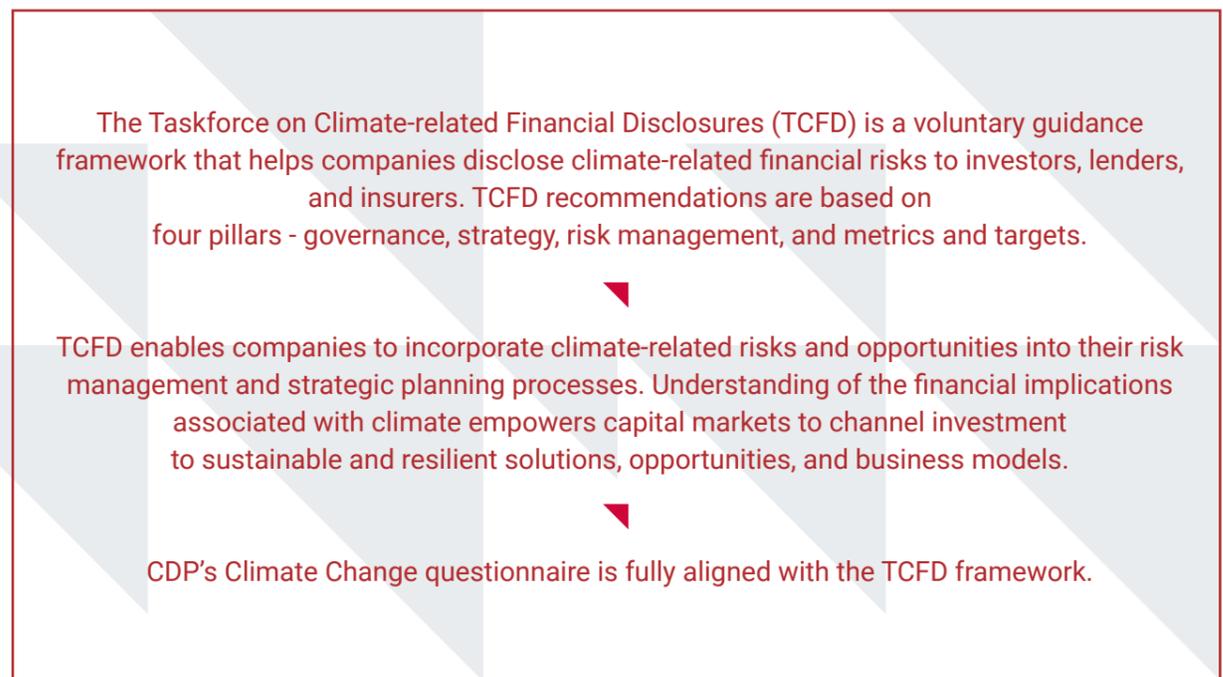
been tasked with developing a comprehensive global baseline of high-quality sustainability disclosure standards to meet investors' data needs. ISSB envisions a robust governance standard "built from the Task Force on Climate-related Financial Disclosures (TCFD) framework¹⁵ and the work of sustainability standard-setters".¹⁶

2021 thus marks a turning point in the development of global reporting standards to fulfil the growing and urgent demand for directing capital flows into building greener and sustainable businesses and economies.

15 <https://www.fsb-tcf.org/>
 16 <https://www.iosco.org/news/pdf/IOSCONEWS608.pdf>



Global efforts on mandatory disclosures





In recent years, many countries globally have been emphasizing the importance of enhanced non-financial disclosures through mandatory regulations:

- ▼ In June 2021, the **G7 Finance Ministers and Central Bank Governors**, joined by **Australia, India, and South Korea** committed to addressing ESG challenges for multilateral economic cooperation. TCFD-aligned¹⁷ disclosures were **made mandatory** by several countries viz. **UK, New Zealand, Hong Kong, and Singapore**.
- ▼ **EU's Green taxonomy regulation** was approved in April 2021 by the European Commission and provides companies with a list of compliance guidelines and threshold related to environmental activities. Companies need to adhere to these guidelines for their activities to be considered sustainable and are required to report against the framework under the Corporate Sustainability Reporting Directive (CSRD). These regulations are not just applicable to UK/EU-based businesses, but impact their overseas value chains as well.
- ▼ In the **APAC region**, China, Japan, Malaysia, Mongolia, and the ASEAN block –, Thailand, Singapore, India, Vietnam, and South Korea – are engaging in policy-level discussions around ESG disclosures.
- ▼ **In India**, the recent announcement by the stock exchange regulator, Securities and Exchanges Board of India (SEBI) extending the mandatory disclosure policy to the top 1000 listed companies by market cap, is in tune with the newly developed Business Responsibility & Sustainability Reporting (BRSR) framework presents a significant push to ESG disclosures amongst emerging markets.
- ▼ **The Central Bank of Brazil** has proposed mandatory disclosure of ESG risks by the top 100 financial institutions, while Chile is considering adopting the policy of mandatory disclosure for listed companies in the year 2022.
- ▼ **Mainland China** issued voluntary green investment guidelines in 2018 which could potentially become mandatory in the near future.

¹⁷ Taskforce for Climate-Related Financial Disclosures (TCFD) is a voluntary global reporting framework for climate-focused financial disclosures across industries

Evolving mandatory disclosures in India:

Sustainability reporting is fast becoming essential for Indian companies seeking business opportunities. Investors and collaborators are asking companies to share their initiatives and policies on climate action mitigation before deciding to invest.

In 2009, the Ministry of Corporate Affairs (MCA) issued guidelines to make social responsibility for companies more mainstream.¹⁸ This was followed by National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business¹⁹ (NVG) issued in 2011 which was later made mandatory for the top 100 listed companies. In 2021, the BRR has been converted to BRSR and seeks compulsory disclosures from the top 1000-listed entities on their performance against the nine principles of the 'National Guidelines on Responsible Business Conduct' (NGBRCs)²⁰ from FY 2022-23.

The BRSR is designed with the intention of having quantitative and standardized disclosures on ESG parameters to enable comparability across companies, sectors and trends. This aligns with global trends where many countries are committing to mandatory corporate disclosures on environmental and climate issues.²¹ Since SEBI has recognized inter-operability with international frameworks, the entities reporting to global frameworks (such as GRI, SASB, CDP, TCFD or Integrated Reporting) may cross-reference the disclosures made under such frameworks to the disclosures sought under the BRSR.²²

¹⁸ <https://www.lawctopus.com/academike/sustainability-reporting-in-india/>

¹⁹ https://www.mca.gov.in/Ministry/latestnews/National_Voluntary_Guidelines_2011_12jul2011.pdf

²⁰ https://www.mca.gov.in/Ministry/pdf/NationalGuideline_15032019.pdf

²¹ <https://timesofindia.indiatimes.com/blogs/development-chaupal/embedding-sustainability-in-work-culture/>

²² For information on alignment between BRSR and CDP Questionnaire, please check here

Since its inception in 2012, CDP India has created a self-reported database of information for investors to access and use when deciding how best to collaborate with Indian companies by analyzing the risks and opportunities along with identifying trends related to climate change action. CDP aims to inspire companies to come forth and join forces towards climate action and build a culture of environmentally conscious business.

CDP Questionnaires & BRSR Connect

Since India has adopted the 2030 Agenda for Sustainable Development, and the Nationally Determined Contributions (NDCs) commitments in the Paris Agreement, accountability for business operations has also increased. Given the current state of affairs, new pathways will have to be explored to deal with an unprecedented situation like the COVID-19 pandemic and other global financial crises. As a developing economy with the highest percentage of youth, India will have to look at making huge investments into the economy while designing plans for a massive generation of employment-age citizens. This has to be done hand-in-hand with action towards achieving net-zero targets, creating a green economy and promoting sustainable business. With this view, CDP has identified great potential in aligning with SEBI's notification of BRSR by reducing the reporting burden, aligning with global frameworks, providing comprehensive and in-depth questioning, focusing on applying a "from disclosure to action" framework and maintaining a consistent transparent reporting process.

In the year 2021, the regulatory body SEBI came out with disclosure requirements under business responsibility and sustainability reporting, covering environmental, social and governance perspectives, which will be applicable on the top 1,000 listed entities by market capitalization.

BRSR asks companies to report on ESG matters including environment-related disclosures like energy and water utilization, greenhouse gas emissions, air pollution emissions, waste generation and management, biodiversity and eco-friendly practices, and initiatives taken towards transitioning to a green economy. Both CDP and BRSR aim to provide investors with transparent and convenient access to information about standardized disclosures, to promote assessment of sustainability-related risks and opportunities that will ultimately facilitate improved investment decisions.

CDP completed a mapping exercise to review the alignment of disclosure requirements between CDP Questionnaires and the BRSR. To showcase the common goal of aligning disclosure frameworks to make companies more accountable and promote responsible businesses and a green economy, particular extracts are highlighted in relevant sections of this report under the title – **CDP & BRSR Connect**.

Indian corporate disclosures to CDP

In 2021, 88 Indian companies disclosed information across CDP's three themes - Climate Change, Water Security and Forests. This was an encouraging **28% increase** in disclosures as compared to 2020.

CDP India Disclosure Trends Across Climate, Water & Forest Themes (# of companies, y-o-y growth)



One of the first steps for the successful acceleration towards a global net-zero transition, is the foundational exercise of annual measurement and reporting of carbon emissions by corporates. This provides a solid argument for mandatory carbon (and ESG) disclosures, which provide valuable information for policy makers, companies and investors to use in informing their decision-making. Indian businesses are choosing to adopt a policy of increased disclosures as evidenced in the marked increase in the number of companies responding to investors' requests to disclose through CDP over the years.

In 2021, 88 Indian companies disclosed information across CDP's 3 themes - Climate Change, Water Security and Forests. This was an encouraging 28% increase in disclosures as compared to the year 2020. In addition to this, 179 Indian companies responded through CDP's Supply Chain program²³ to their corporate buyers ensuring more transparency and accountability in operations. Several business leaders are already playing a key role in the climate fight, helped by the growing customer and investor focus on sustainability, as well as increasing regulatory and disclosure requirements.²⁴ In fact, some big corporate houses are already ahead of the curve, having set net-zero targets steered by several factors such as increasing investor pressures, consumer perception and regulatory compliance requirements to conduct their operations responsibly.

²³ CDP's Investor and Supply Chain programs: Each year CDP supports thousands of companies, cities, states and regions to measure and manage their risks and opportunities on climate change, water security and deforestation. CDP requests information on behalf their investors, purchasers, and city stakeholders.

²⁴ <https://www.orfonline.org/expert-speak/what-indias-net-zero-announcement-means-for-businesses/>



CLIMATE CHANGE



With an ever-increasing number of companies choosing to disclose through CDP, it is imperative to leverage the opportunity to transition from a grey to a green economy and join a growing league of climate leaders. **ACC Limited, Infosys Limited, Mahindra & Mahindra, Tech Mahindra and Wipro** deserve a special mention for being among the Indian companies to make it to the prestigious CDP A List.

Responding companies are rated on a 100 point scale and appointed a final score ranging from A to D, based on their quality of disclosure. The companies invited and the ratings of those who responded to the climate questionnaire are given in Annexures I and II.

Evolving governance and strategy

Companies are increasingly recognizing that stakeholders such as investors, customers, civil society, and employees are holding them to higher standards of accountability on climate action and are looking for assurances in the form of climate-conscious business strategies. As a result, business leaders have begun to prioritize long-term value over short-term profit as they understand that transitioning to a low-carbon economy will boost revenue growth, reduce costs and support the future success of the business²⁵. Climate change is thus rightfully receiving the attention it deserves from corporates at the highest levels of management.

Global sustainability reporting frameworks, through their disclosure requirements, urge corporates to set climate and broader ESG parameters as a cornerstone of their business strategies. For example, according to the TCFD Status Report 2021, more than 2600 organizations from 89 countries, with a combined market capitalization of US\$ 25 trillion, support TCFD recommendations which features climate governance as one of its 4 pillars²⁶.

Climate Change Leaders	
Company Name	Score
ACC	A
Infosys Limited	A
Mahindra & Mahindra	A
Tech Mahindra	A
Wipro	A
Ambuja Cements	A-
ITC Limited	A-
JSW Energy	A-
JSW Steel Ltd.	A-
Mahindra Lifespace Developer Limited	A-
Mindtree Ltd.	A-
Reliance Jio Infocom Limited	A-

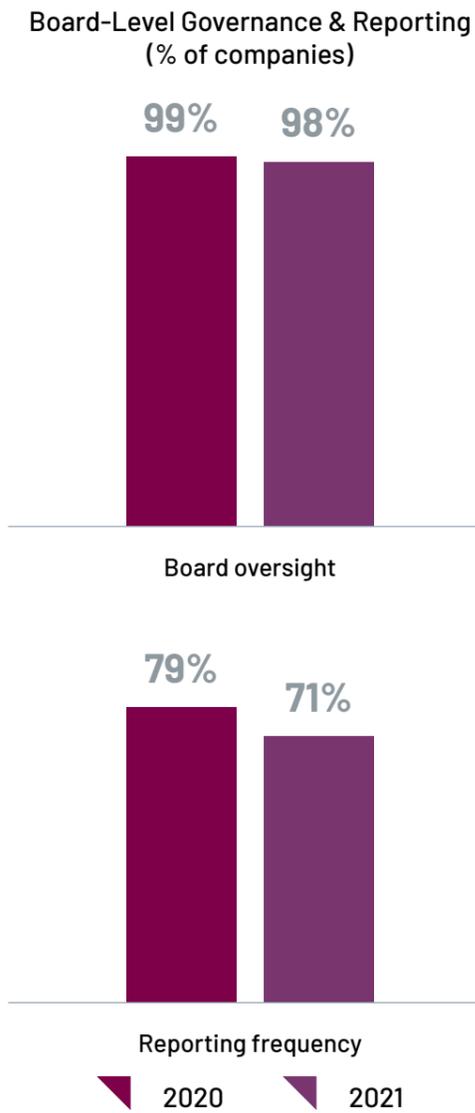
²⁵ <https://hbr.org/2019/09/what-1000-ceos-really-think-about-climate-change-and-inequality>
²⁶ <https://www.fsb.org/wp-content/uploads/P141021-1.pdf>

The SEBI now mandating the BRSR framework²⁷ reflects the seriousness with which Indian regulators and businesses view non-financial disclosures including global environmental risks like climate change.

Climate action is no longer restricted to being a CSR activity but warrants a broad consensus on policies from shareholders, employees, value chain partners, customers and the other stakeholders that form a functioning business. Leaders have the responsibility to drive this action and make sure that they are direct and vocal in conveying the message that climate change mitigation is an essential part of their decision-making, whilst strengthening their own organizations' transparency through adequate disclosures.

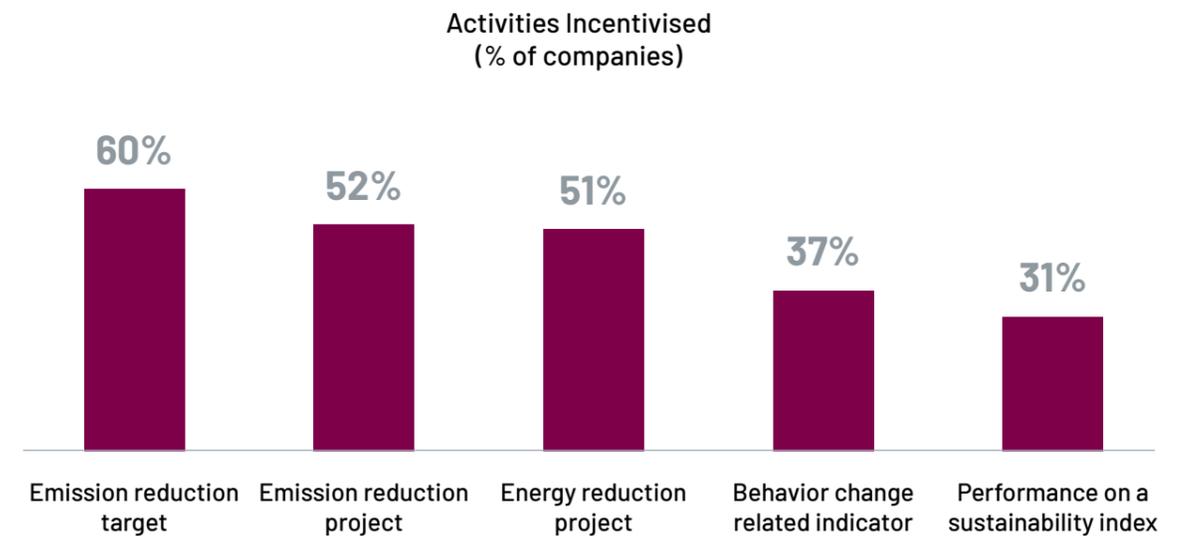
As is evident from CDP India data (see graph on the right), corporate climate governance continues to be a core element of the internal management system of businesses across companies responding to CDP's Climate Change questionnaire. In 2021, 98% of the responding companies have board-level oversight and 71% report to the board at least once in three months on climate issues.

The data further apprises that 65% of the companies with board-level oversight have the Chief Executive Officer (CEO) as the highest management position responsible for climate related issues followed by the Sustainability Committee, Chief Sustainability Officer (CSO) and the Chief Operating Officer (COO), indicating that climate mitigation is a priority.



Among prioritized climate-related actions by companies responding to CDP(see graph below), setting an emissions reduction target was found to be the most widely adopted activity in 2021,

followed by emissions and energy reduction projects. This approach is encouraging and can pave the way for other corporates in collectively achieving India's new climate ambitions.



To better understand the causality of future climate-related risks and opportunities, companies have devised forward-looking tools such as climate-related scenario analysis. This is a modelling application used for assessment of climate-related risk.

unexpectedly and extensively. Scenario analysis prepares organizations to plan in advance for such events, by allowing them to analyse and quantify the business impact, as well as measure the potential repercussions like revenue, effect on profitability, the benefits and the risks.

Scenario analysis is a tool to enhance critical strategic thinking that challenges conventional wisdom about the future. In a world of uncertainty, scenarios are intended to explore alternatives that may significantly alter the basis for "business-as-usual" assumptions.²⁸ The global pandemic of 2020 has demonstrated how business environments can be impacted

In 2021, 64% of companies responding to CDP used scenario analysis to inform their strategy and the two most widely used climate scenario models were Nationally Determined Contributions (NDCs)²⁹ (15%) and 2°C Scenario (2DS)³⁰ (11%).

27 https://www.sebi.gov.in/sebi_data/meetingfiles/apr-2021/1619067265752_1.pdf

28 <https://www.tcfhub.org/scenario-analysis/>

29 NDC is a term used under the United Nations Framework Convention on Climate Change (UNFCCC) for reductions in greenhouse gas (GHG) emissions that all countries that ratified the Paris Agreement have committed to achieve.

30 A 2°C scenario lays out a pathway and an emissions trajectory consistent with limiting the average global temperature increase to a temperature range around 2°C above pre-industrial levels with a certain probability

Mobilizing for climate action with increased stakeholder engagement

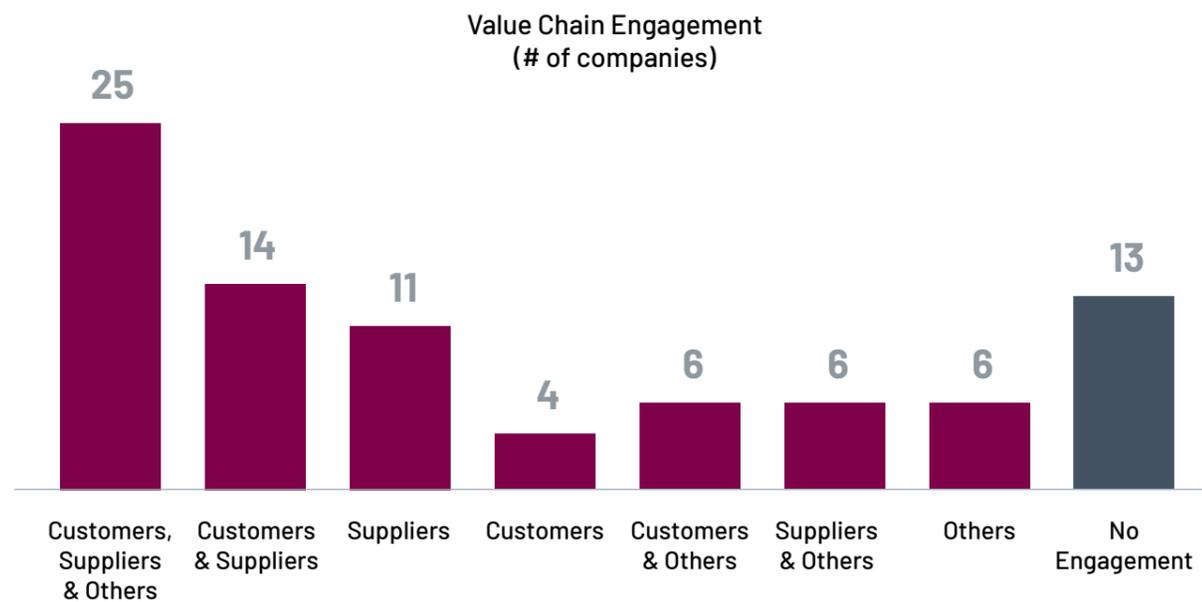
Companies today are not operating in isolation; value chain partners, shifting consumer demand and an evolving policy environment all have material impacts on sustainability and financial objectives performance. A company's sustainability strategy is designed to involve relevant stakeholders in order to deliver a more comprehensive approach and fast, effective deployment.

CDP disclosures ask companies to share information about how they engage with their value chain partners as well as the level of direct customer engagement they incorporate into their operations.

VALUE CHAIN ENGAGEMENT

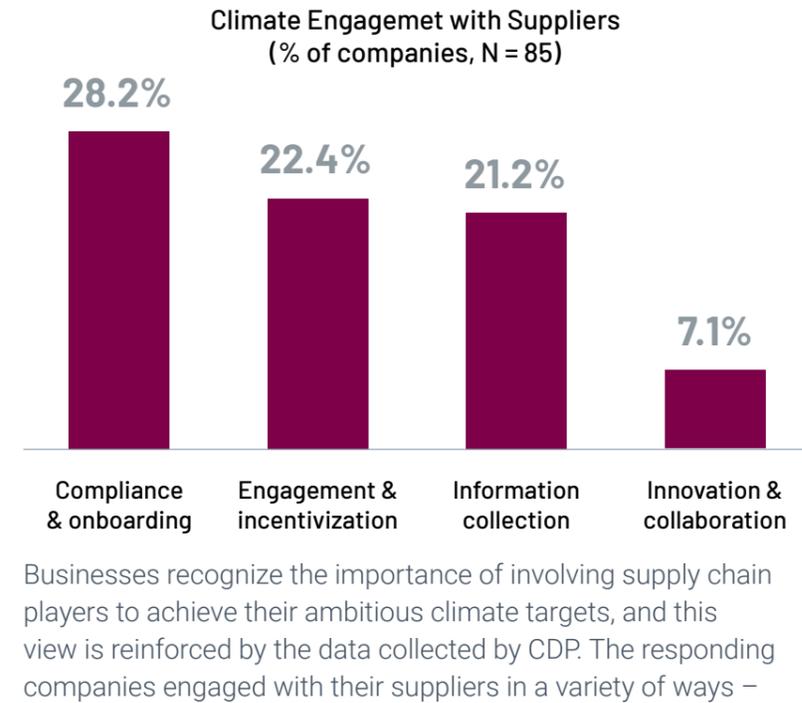
CDP India's 2021 data shows that 72 companies representing 85% of all companies responding to CDP engaged at different levels across their value chain on climate related issues.

About 30% engaged with all stakeholders across the value chain including customers, suppliers, and other partners (e.g., industry/trade associations, policy makers). Of these, 16% engaged with both customers and suppliers. Only 5% reported engaging solely with customers.



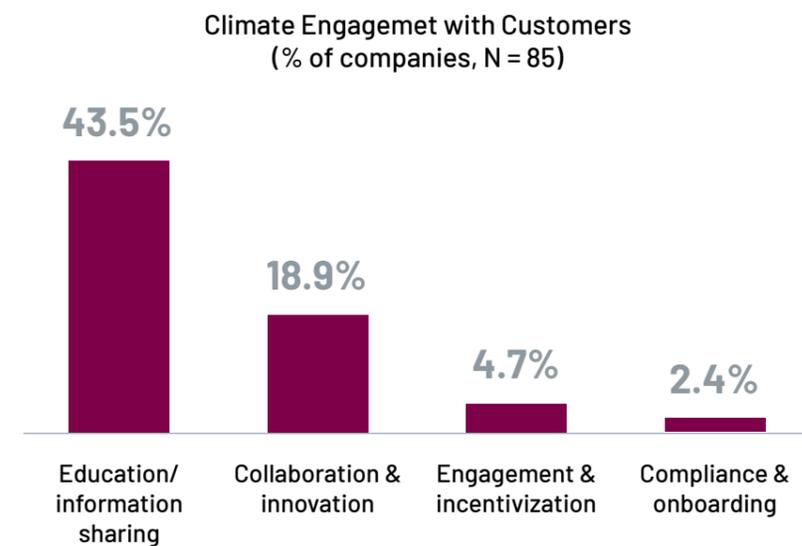
CDP enquired into whether and how companies engaged in activities that could either directly or indirectly influence public policy on climate-related. The results found that 50% directly engaged with policy makers and over 54% engaged with trade associations. These are the two groups that exercise significant influence when building sustainable business models.

CDP responses further confirmed that clean energy (39%) and energy efficiency (30%) were the top two themes of engagement with policy makers. Other themes include resilience and adaptation, mandatory carbon reporting, carbon tax, trade, climate finance, steel and cement policy, sustainable development goals, waste management and resource efficiency.



28.2% engaged with suppliers on climate issues through compliance and onboarding, 22.4% used engagement and incentivization systems to influence supplier behaviours, and 21.2% gathered data to gain further insights into supplier behaviour. The remaining 7.1% engaged by means of innovation and collaboration. This data aligns with our 2020 findings, where compliance and on-boarding came out as the primary form of engagement with suppliers, followed by incentivization and information collection.

DIRECT CUSTOMER ENGAGEMENT



Urban consumption patterns are shifting towards environmentally and socially conscious choices in many countries and the trend is gradually gaining popularity in India, albeit at a small scale and pace. Companies responding to CDP that engaged directly with customers on climate-related action, employed various tools of customer engagement strategies as demonstrated in the graph above.

43.5% of companies involved education and information sharing on the corporate's commitment to sustainability and influencing consumer behaviour while 19% used a collaborative innovation approach.

These were also the most common forms of engagement with customers for the year 2020, a pattern that possibly indicates how, through customer interaction, companies can raise awareness of climate risks and work together to develop collaborative projects that can claim a material stake in the fight against climate change.

CDP & BRSR Connect

There are 16 BRSR questions aligned to the Governance and Business Strategy of each company out of which 12 questions are from Section B (Management and Process disclosures) and 2 each from Section A (General details) and Section C (Principle wise performance disclosure). These questions include:

SECTION A:

- ▼ Transparency and Disclosure compliance: Grievances received on BRR by investors, communities, shareholders, employees, workers, customers, value chain partners, etc.
- ▼ Overview of entity's material responsible business conduct: pertaining to environment and social matters that present risk or opportunity to the business, and the rationale used to identify this.

SECTION B:

Policy and Management Process:

- ▼ Whether it covers all 9 principles of NGRBCs; approved by Board
- ▼ Translated policy into procedures
- ▼ Extended to value chain partners
- ▼ Any international codes/standards adopted
- ▼ Commitments/goals/targets set by the entity with defined timelines
- ▼ Performance of entity against the goals

Governance and leadership oversight:

- ▼ Statement by director responsible for BRSR highlighting ESG challenges, targets, achievements
- ▼ Highest authority responsible for implementation and oversight of BRSR
- ▼ Any Board/Director responsible for decision making on sustainability related issues
- ▼ Details of review of NGRBCs by the company -Performance and Compliance
- ▼ Independent assessments conducted if any by external agency
- ▼ State reasons if company has not yet developed policy to cover any of the 9 principles of NGRBC

SECTION C:

- ▼ **Principle 2-** Businesses should provide goods and services in a manner that is sustainable and safe.
 - ▼ Percentage of R&D and capex investments in specific technologies to improve environmental & social impacts of product and processes to total R&D and capex investments
- ▼ **Principle 3-** Businesses should respect and promote the well-being of all employees, including those in their value chains.
 - ▼ Details of performance and career development reviews of employees and workers

Climate change-related risks & opportunities

The climate-related risks and opportunities for a company's finances are not always direct and obvious; therefore, the process of identifying material issues can be a challenging process. A robust climate-related risk assessment process helps identify the likelihood and magnitude of present and future climate-related impacts not only on the environment but also on business performance. Many global climate disclosure frameworks therefore place immense emphasis on assessing and reporting on the actual and potential impacts of climate-related risks (physical, transition and liability risks as discussed later in this section) and opportunities (like markets, products, resource efficiencies, energy) on an organization's business, strategy, and financial planning.³¹

India is the 7th most climate vulnerable country according to the Global Climate Risk Index 2021. German Watch³² published alarming projections of manifold increase in the frequency of extreme weather events by the end of the 21st century by IPCC³³, underpinning the importance of India-based risk assessment for better business performance and long-term value creation.

RBI (the central bank of India), is committed to integrating climate-related risks into financial stability monitoring as well as exploring use of climate scenario exercises to identify vulnerabilities in the central bank-supervised entities³⁴. Mandated climate-related mitigation plans could cause a decrease in financial valuation or downgrade of credit ratings of climate-harmful businesses and therefore such plans can cause a shift in market power.³⁵

As the graph indicates, a vast majority of companies responding to CDP are currently evaluating or have confirmed the influence of climate change related risks and opportunities on several areas of their business strategy. Product and services and operations rank among the topmost strategic areas for climate change influence as confirmed by 88% and 87% of responding companies respectively followed by supply chain related initiatives. Companies also identified direct operations as an area severely affected in 2020. This could indicate companies re-strategizing policies to overcome and/or reduce climate change factors like physical risk that affect operations. It is encouraging to note that a significant 82% of the reporting companies saw a shift in their engagement with their value chain and/or supply chain, re-emphasizing the fact that the role of supply chain partners can no longer be neglected in delivering on climate goals.

31 <https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf>

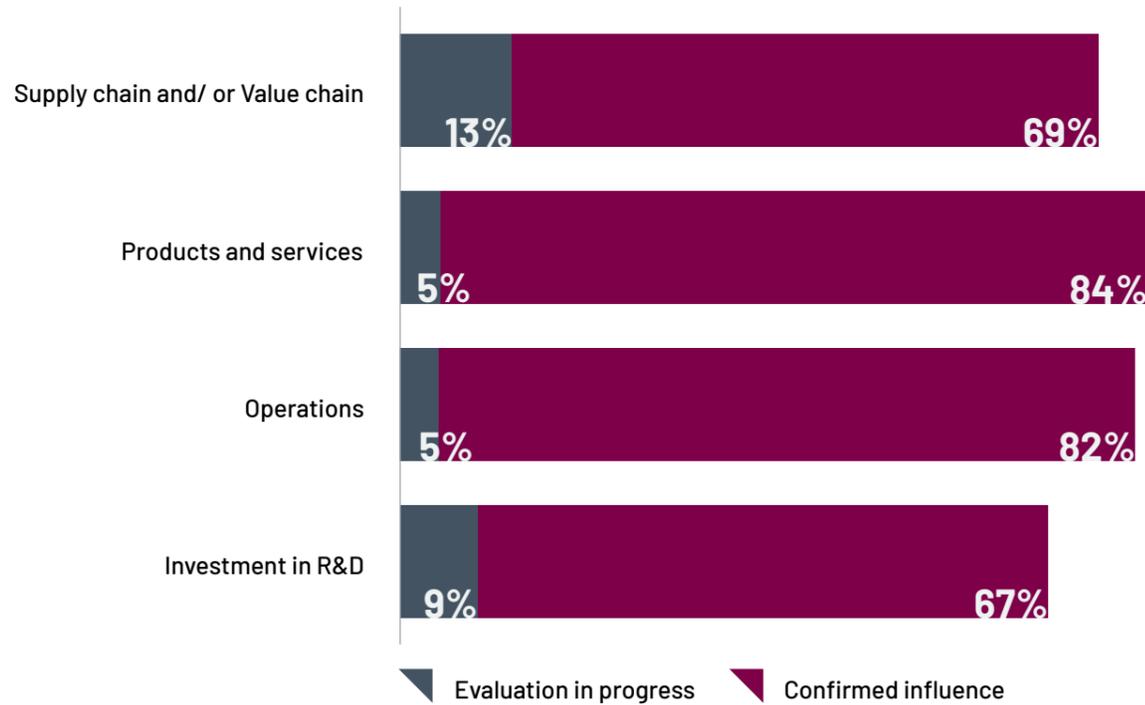
32 https://germanwatch.org/sites/default/files/Global%20Climate%20Risk%20Index%202021_2.pdf

33 <https://reliefweb.int/sites/reliefweb.int/files/resources/Assessment%20of%20climate%20change%20over%20the%20Indian%20region%20-%20A%20report%20of%20the%20Ministry%20of%20Earth%20Sciences%20%28MoES%29%2C%20Government%20of%20India.pdf>

34 https://www.business-standard.com/article/economy-policy/will-focus-on-climate-related-risks-says-reserve-bank-of-india-121110400055_1.html

35 <https://www.thehindu.com/business/climate-change-is-a-key-driver-of-financial-risk/article36575486.ece>

Strategic Areas Influenced by Climate Risks & Opportunities
(% of companies, N = 85)



RISKS OF CLIMATE CHANGE

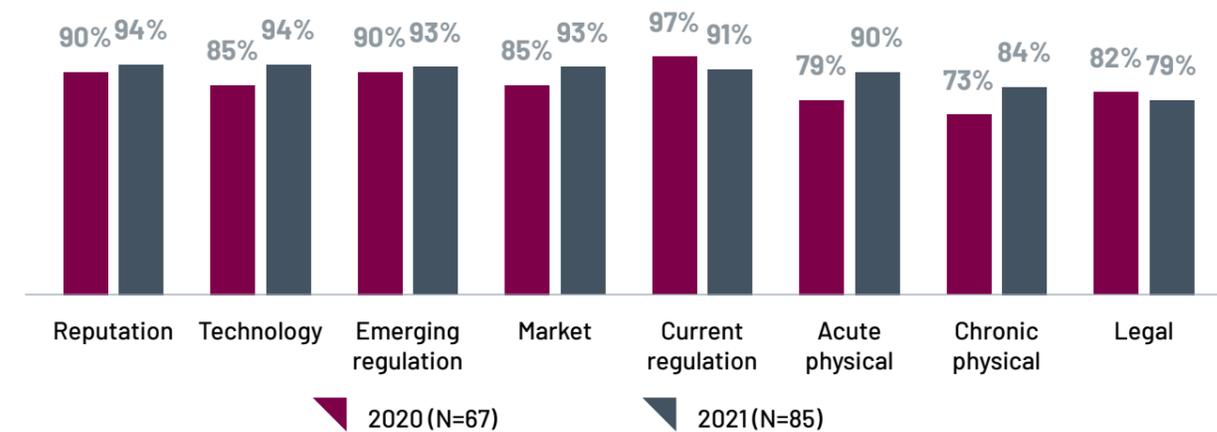
Climate change presents not just immediate damages but also brings huge risks for the future of the planet and global economies. For example, climate events could trigger harvest failure in multiple breadbasket locations in the world—that is, significantly lower-than-average yields in two or more key production regions for rice, wheat, corn, and soy. This could lead to rising food prices, particularly hurting the poorest communities, including the 750 million people living below the international poverty line.³⁶

Measuring climate risks before financing, followed by adequate reporting, is indispensable to support decarbonization strategies and targets. Capital providers are becoming more emboldened and discerning the type and quality of data reported by companies with increasing integration of sustainability factors in decision-making as reflected in CDP’s disclosure statistics of 2021. Of the 85 Indian companies disclosing to CDP’s Climate Change questionnaire in 2021, 96% of them have a process in place for identifying, assessing, and responding to climate-related risks rising from 90% in 2020. 87% have quantified the magnitude of potential financial or strategic impact on business performance from climate risks.

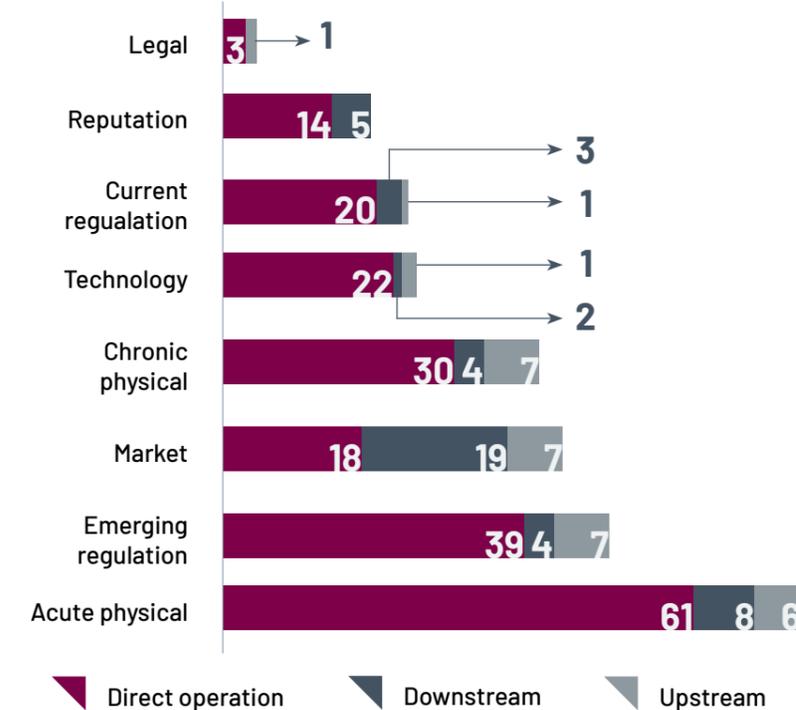
³⁶ <https://www.mckinsey.com/business-functions/sustainability/our-insights/climate-risk-and-response-physical-hazards-and-socioeconomic-impacts>

Reputational and technological risks were identified as the topmost concerns by 94% of the companies, as depicted in the graph below. This contrasts with responses in 2020, where 97% deemed current regulation as the most relevant climate change risk. This signifies a shift in consumer preferences and an increase in awareness levels, which are often key drivers influencing corporates to be more sustainable. Physical risks still hold an important place in risk management and mitigation considerations, with 90% of the responding companies finding acute physical risks to remain relevant.

Risks relevant to Indian Companies
(% of companies)



Risks Identified in Value Chain
(# of companies)



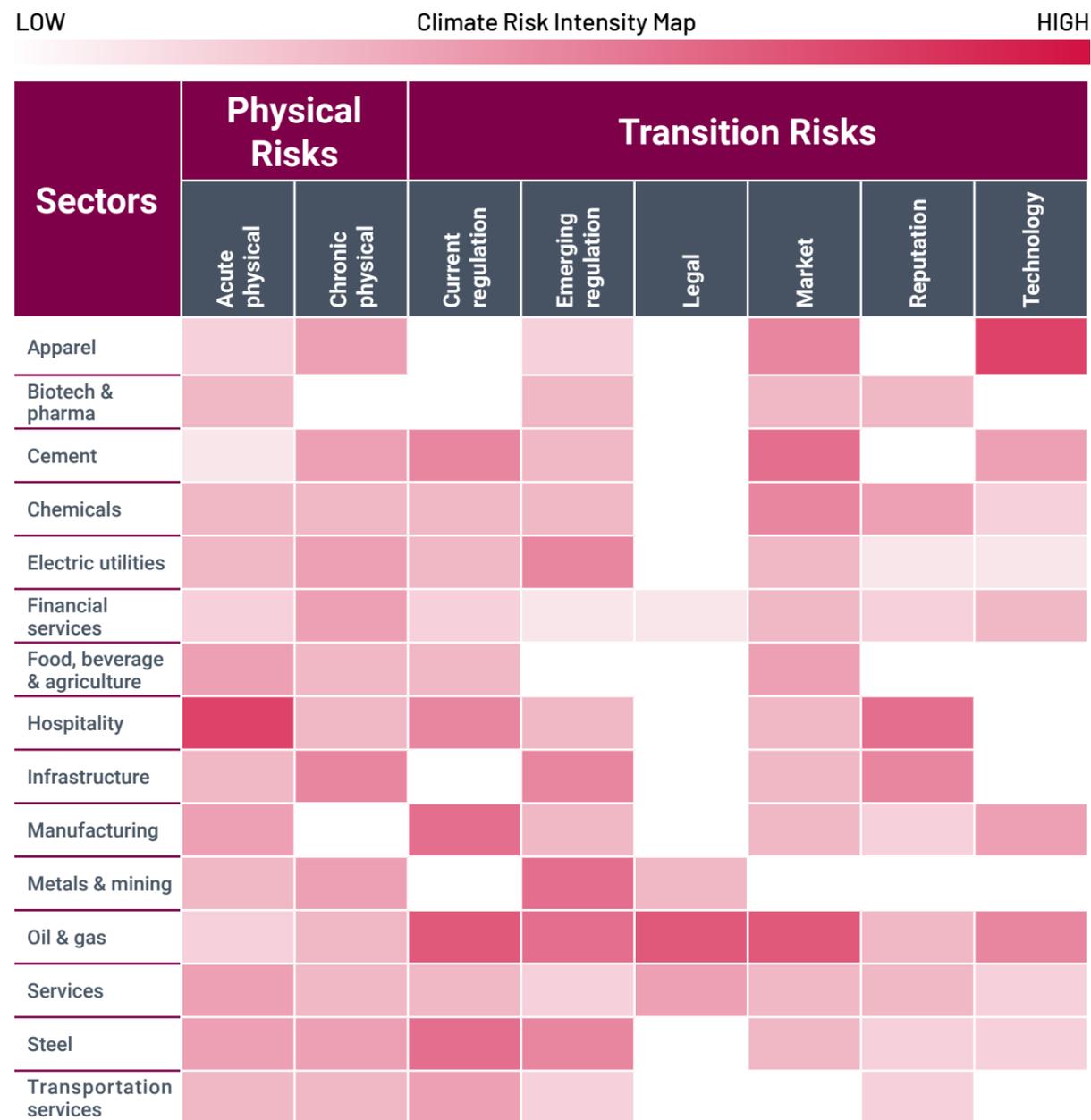
In addition to direct operations, climate-related risks significantly disrupt supply and value chains. In 2021, companies reporting through CDP identified acute physical and emerging regulation as top risks in their direct operations which follows the same trend as last year. Market risks were proven to be most relevant for companies’ downstream operations which means that demand and supply is a key climate-related risk for companies.

A company's Climate Risk Indicator is measured as a function of the magnitude of impact of climate risk, the frequency with which the risk is likely to occur, and time frame in which risk impact would be experienced by the business. As evident from the heat map below, some sectors are more

affected by certain climate risks than others depending on the industry, associated value chain, and the efficiency of the risk management and mitigation processes.

The climate risk indicator heat map below demonstrates the range of risks that impact key industry sectors in India based on companies responding to CDP. Regulatory risks and physical risks pose a greater challenge for hard-to-abate sectors like cement and steel while the service sector faces higher physical risks, caused by extreme weather events.

Intensity of Climate-related Risks across Key Sectors



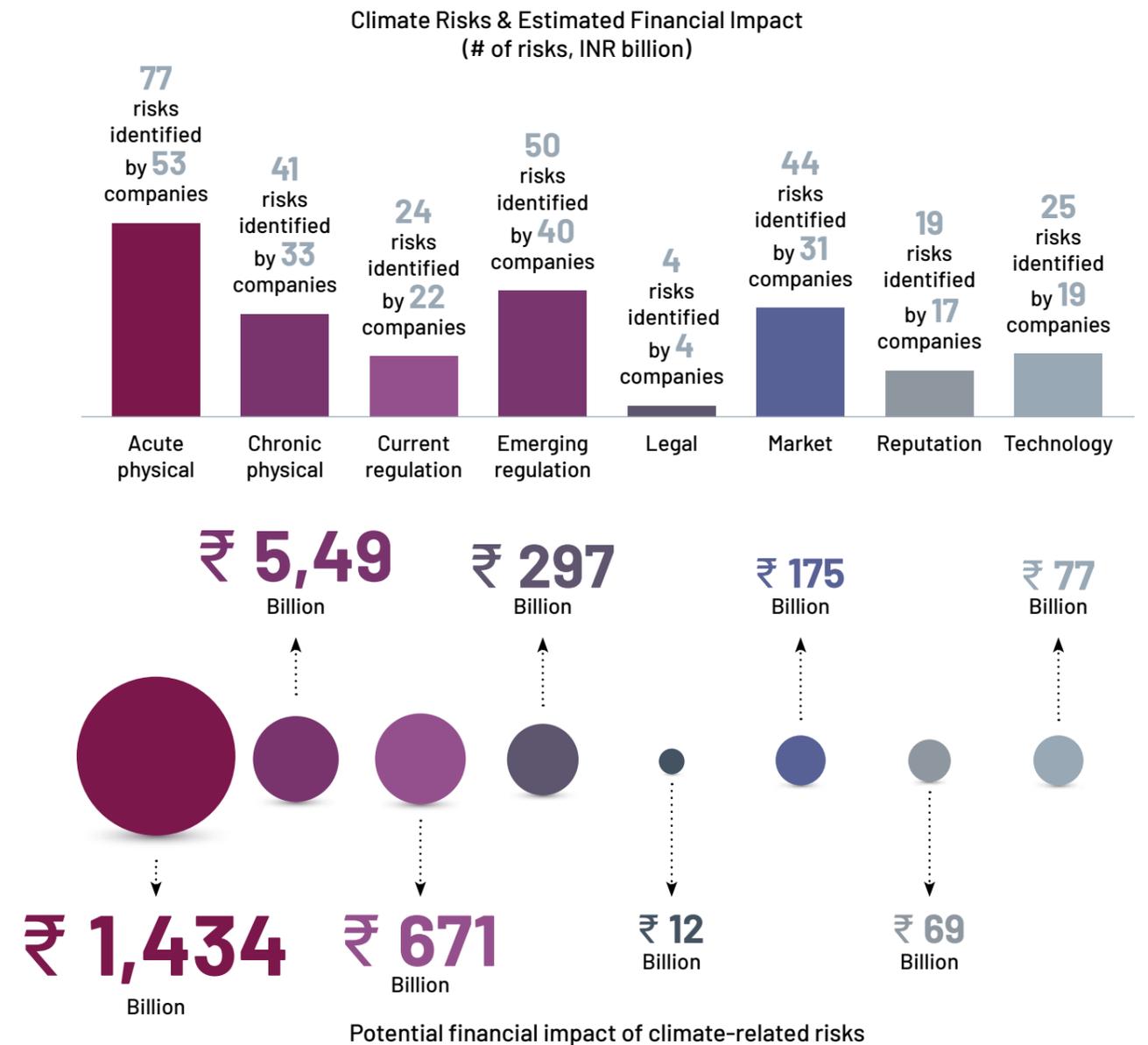
₹ The financial impact of climate-related risks was estimated to be **INR 3,285 billion** by Indian companies responding to CDP.³⁷

The largest identified and financially impactful climate-related risk is acute physical risks valued at INR 1,434 billion. These are extreme weather events that are a direct threat to the livelihood of people and organizations. However, uncertainty and unpredictability of these extreme weather events remain a challenge despite several climate mitigation models and pathways.

The financial sector has reported the largest financial impact from acute physical risks at around INR 850 billion. Our collected data indicates that credit risk in lending portfolios accounts for around 90% of this risk.

The agricultural sector emerged as the most at-risk portfolio for various financial institutes effected by climate related risks.

³⁷ This figure is lower compared to CDP India's 2020 data due to some companies not providing their potential financial impact figures.

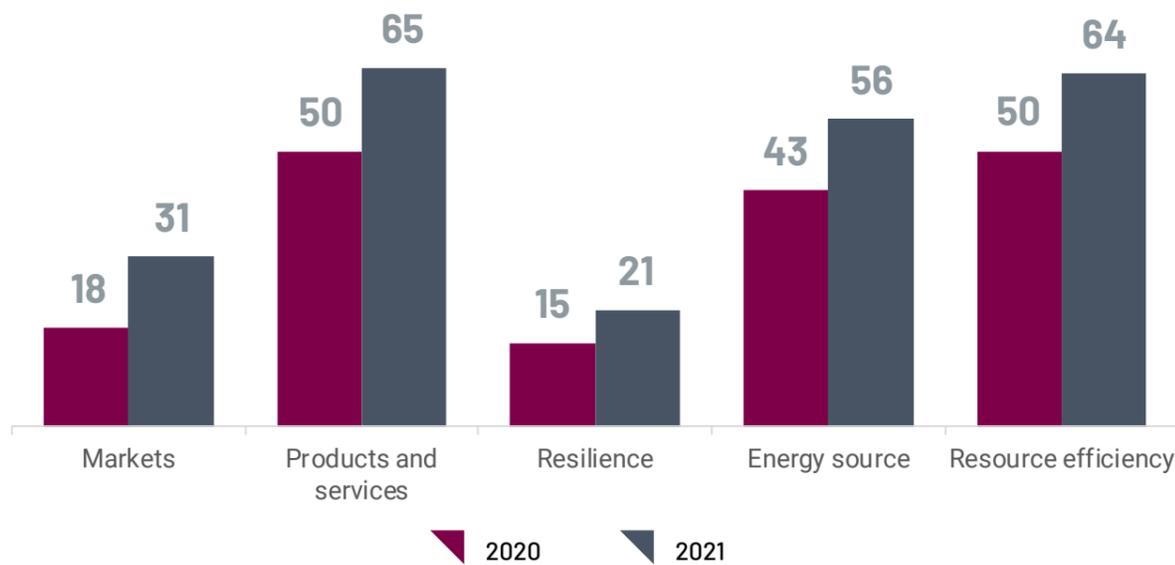


OPPORTUNITIES OFFERED BY CLIMATE CHANGE

The TCFD defines climate-related opportunity as the potential positive impacts related to climate change an organization faces.³⁸ Efforts to mitigate and adapt to climate change can produce opportunities in the form of resource efficiency and cost savings, low-carbon energy transition, new products and services, and supply chain resilience. In 2021, 87% of the responding companies identified climate-related opportunities as having the potential to make a substantive financial or strategic impact on their business performance as compared to 94% of responding companies in 2020.

The graph below demonstrates that resource efficiency (especially in direct operations), and product and services emerged at the top of climate-related opportunities. Business operations and sectors influences the nature of opportunities across the value chain. The financial sector identified climate-related opportunities in their product and services as banks envisage financing green projects and clean energy sources as direct opportunities. Resource efficiency in direct operations were reported by energy intensive chemical sectors.

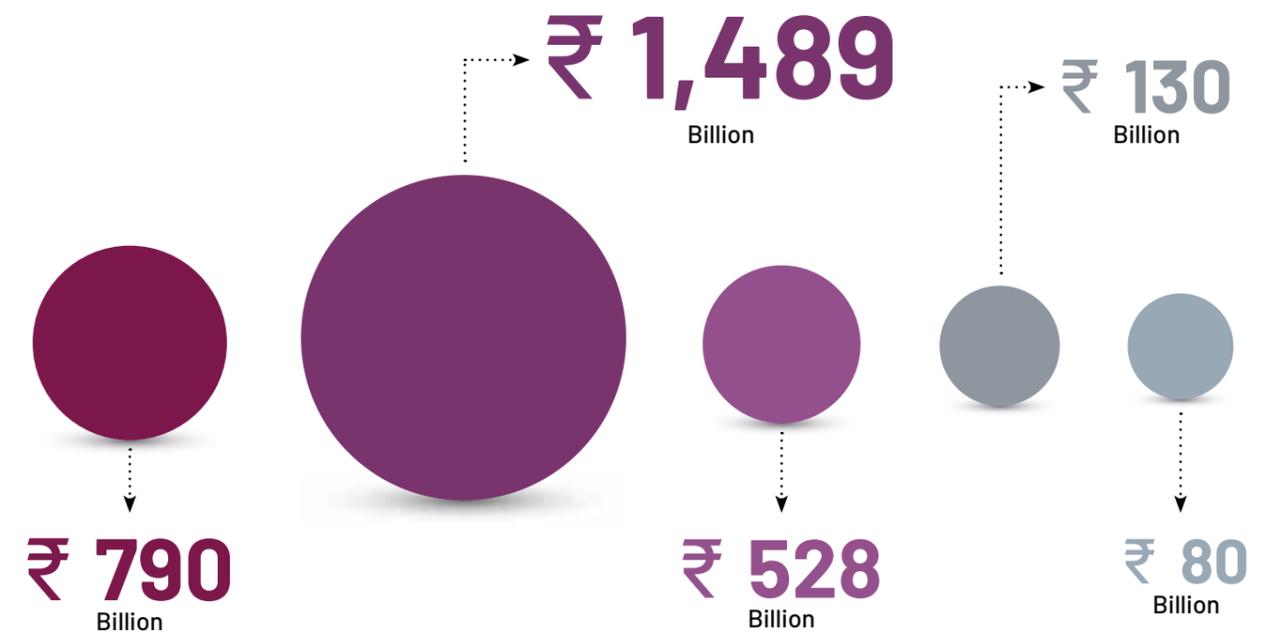
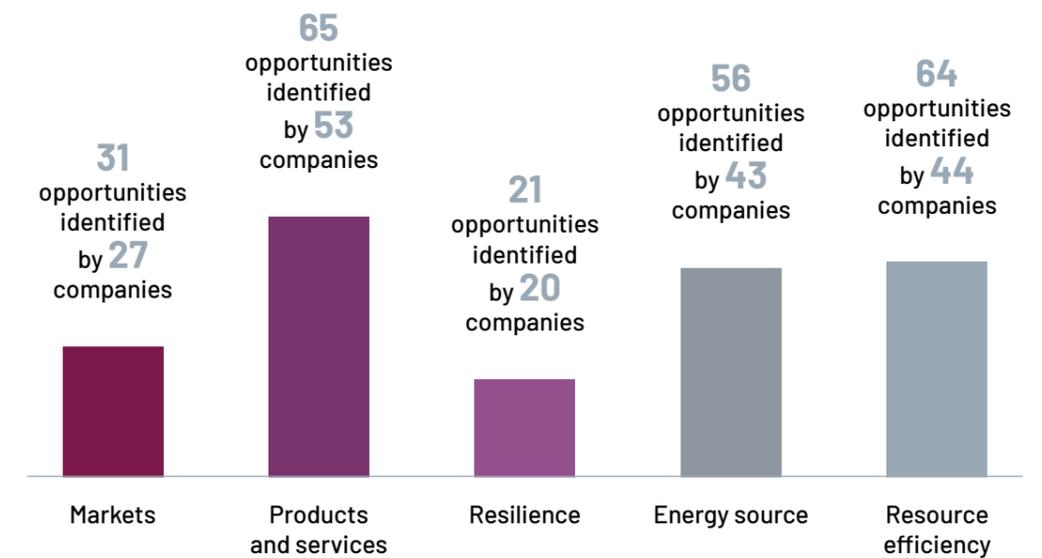
Opportunities identified by Indian companies (# of opportunities)



38 <https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf>

As the graph below shows, the total identified opportunity estimated by Indian companies reporting through CDP in 2021 is approx. INR 3000 billion with products and services being the most prominent opportunity driver at INR 1489 billion. Interestingly, the financial services sector i.e. banks and asset managers identified around INR 650 billion worth of market opportunity – an indication of the demand for transition finance, especially the power generation and material sectors and the shifting supply of capital for green projects.

Climate-Related Opportunity (# of Opportunities, INR billion)



Potential financial opportunities identified

ACC Limited: Maximizing the benefit of climate opportunities

ACC Limited is one of the leaders in reducing carbon dioxide emissions through its active initiatives in renewables energy transition and resource efficiency with the company committing to Science Based Targets initiative and setting ambitious near-term targets to stay well below 2°C by 2030. ACC were awarded an A rating by CDP in 2021 for Climate Change disclosure. Key highlights of the company’s decarbonization goals include:

- ▼ ACC Limited has taken a target of cutting down emissions by 23% for each tonne of cementitious material used by 2030.
- ▼ Addition of renewable energy projects in the pipeline for daily operations, reducing future coal-generated energy expenses by increasing their Thermal Substitution Rate.
- ▼ A multi -fold increase in clean energy consumption by 2023 through (i) Power Purchasing Agreements (PPA) to procure renewable electricity that will lead to cost savings and result in annual emission reductions.
- ▼ ACC has committed to reduce its CO₂ footprint related to power generation and utilization by installation of waste heat recovery-based system with an investment of 257 crore and expected to reduce emissions by ~194,000 tonnes.
- ▼ Commitment to produce low-carbon cement and driving efficiencies in production processes including the launch of ECOPact (an eco-friendly concrete product with a 30-50% lower carbon footprint) and expected increased demand for green concrete by 10%.

Emissions trends and verification

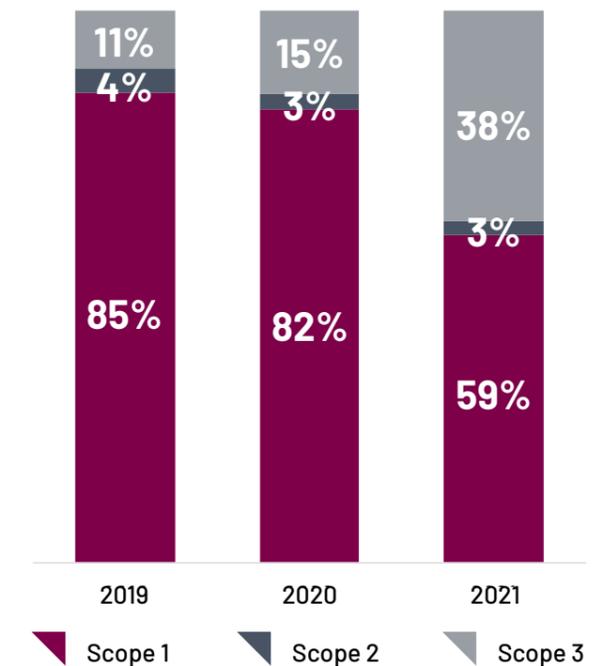
“Disclosure” and “verification” are the two vital elements for transition towards sustainable development and climate adaptive mitigation efforts for corporates. In 2021, CDP responding companies reported total carbon equivalent emissions of about 1.2 billion tonnes, an increase of 39% compared to 2020 figures primarily due to an increase in the number of CDP responding companies in 2021.³⁹ Scope 1 carbon emissions increased by 1% to 686 million MtCO₂e in 2021 while scope 2 rose by 34% to 30 million MtCO₂e. Scope 3 increased by a whopping 249% to 440 MtCO₂e.⁴⁰

As can be seen from the adjacent graph, Scope 1 constituted 59% of the total overall emissions in 2021 in comparison with 82% in 2020, as a number of companies have shifted this to their supply chains by adopting more outsourcing as a policy. The share of Scope 2 emissions remained flat at 3%. The share of Scope 3 emissions increased from 15% in 2020 to 38% in 2021, reiterating the importance of engaging supply and value chain partners in decarbonization strategies.

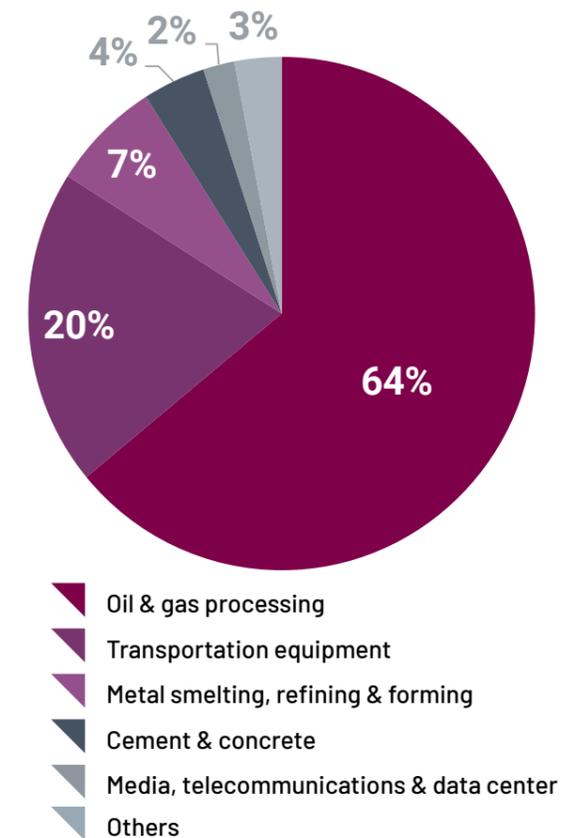
As the adjacent pie chart shows, hard-to-abate sectors dominate Scope 3 emissions. The largest contribution was from oil and gas, which stood at a significant 64% followed by transportation equipment at 20%, metal smelting, refining and forming at 7% and cement and concrete at 4%. The magnitude and growth trajectory of Scope 3 emissions as evidenced over the years reinforces how critical it is for companies to influence their value chain partners to amplify their climate impact and to make rapid and meaningful strides towards decarbonization goals.

³⁹ 85 companies responded to CDP in 2021 as compared to 67 companies in 2020
⁴⁰ Million tonnes CO₂ Equivalents.

Scopewise Emissions Trends (% to Total Emissions)

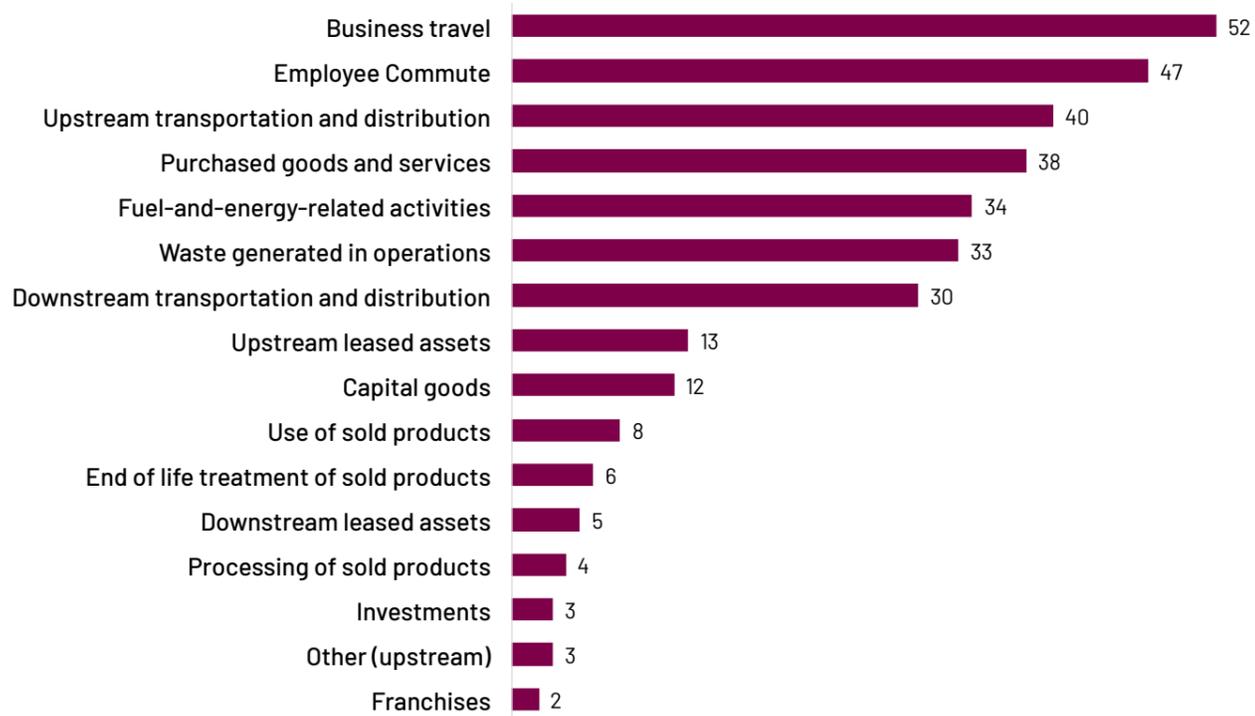


Scope 3 Emissions - Sectoral Breakdown



Besides managing Scope 1 and Scope 2 emissions where companies have the most control, businesses are recognizing the need to take more responsibility for their outsourced emissions, fully accounting for Scope 3 in order to fully understand their true carbon footprint through disclosure. Today, there are more conversations around Scope 3 in board rooms and policy strategies to steer decarbonization goals through technical innovations across the value chain. In addition to emissions assessment and disclosures, business leaders find it meaningful to include third party assurances in their emissions reporting. Although this is not yet mandatory, doing so contributes to increased credibility, transparency, and accountability.

Scope 3 Categories Reported in 2021 (# of companies)

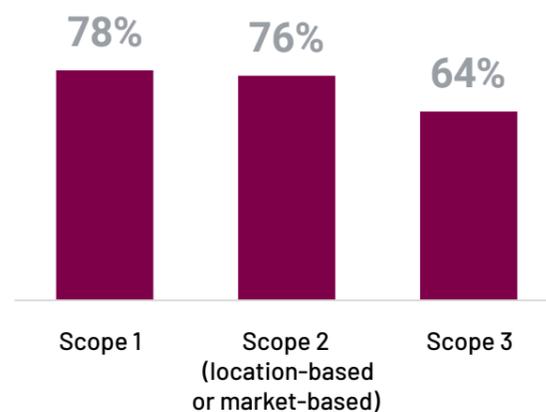


EMISSION VERIFICATION

Third party verification carried out by an independent external organization is a significant component of emissions reporting that adds credibility to disclosures and enhances transparency.⁴¹

⁴¹ CDP & verification partners

Third-party Assurance for Scopewise Emissions (% of companies, N=85)



Of the 85 companies responding to CDP in 2021, 66 companies (78%) have reported third party verified Scope 1 emissions; assurances by third party for Scope 2 and relevant/ reported Scope 3 categories stood at 76% (65 companies) and 64% (54 companies) respectively. There was a 32% increase in third party verified Scope 1 data disclosures in 2021 compared to 2020. Several companies across different sectors reported verified emissions data for all 3 scopes including relevant and/or reported Scope 3 emissions categories.

WHY SHOULD COMPANIES CONSIDER VERIFICATION?

Although not currently mandatory, CDP encourages companies to source the submitted data verified through its scoring methodology which allocates a noteworthy percentage to verified data disclosures. This percentage varies according to the specific question routes chosen. Alongside other requirements, to qualify for entry into CDP A List, companies must gain full leadership points on the Scope 1 and 2 verification question (CC 10.1a).

Our verification process provides a competitive advantage to reporting companies, supporting them to build a strong reputation by demonstrating enhanced commitment and accountability to address material climate issues.



Targets and performance

Greater expectations and scrutiny by stakeholders has led to voluntary and mandatory sustainability reporting frameworks increasingly integrating disclosures related to metrics and targets to enable them to assess and manage relevant and material climate-related risks and opportunities. The following are some common disclosures encouraged by well-accepted frameworks, such as GRI, TCFD and the proposed global baseline ESG disclosure standards currently spearheaded by IOSCO (not an exhaustive list of frameworks).

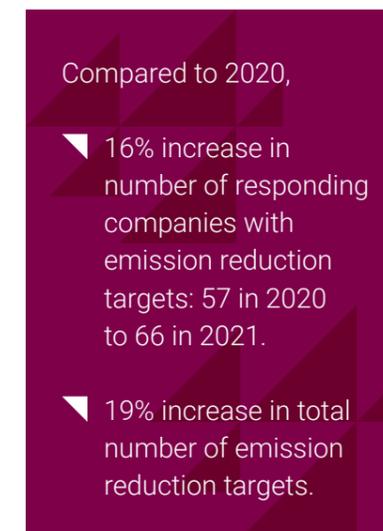
- Disclosing the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.
- Disclosing Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

Describing the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

Historical data on GHG emissions and associated metrics are important to allow for trend analysis. Where this information is not available organizations should provide a description of the methodologies used to calculate or estimate the metrics. When describing their targets, organizations should consider including the following⁴²:

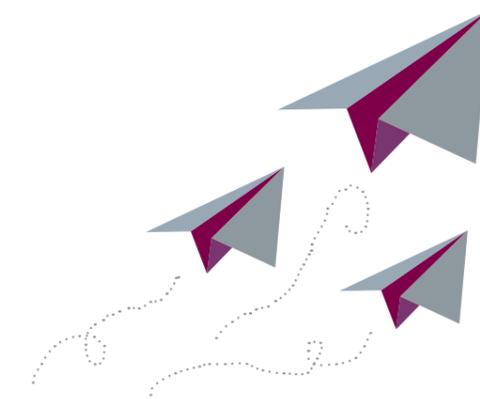
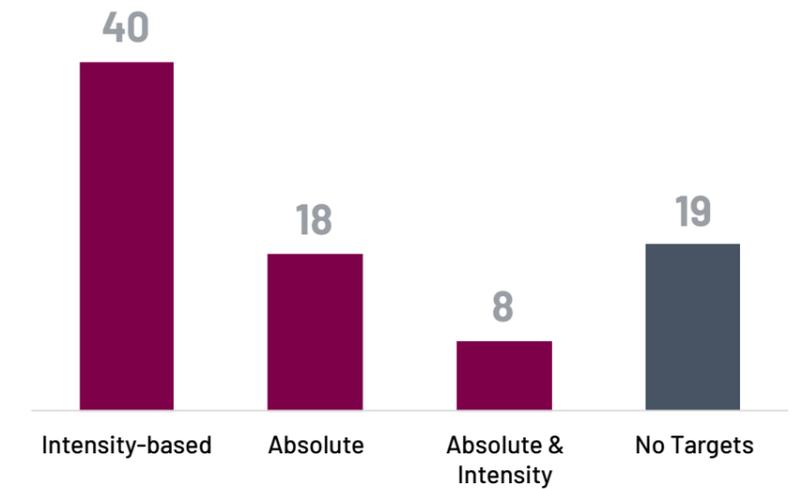
- Whether the target is absolute, or intensity based.
- Time frames over which the target applies.
- Base year from which progress is measured.
- Key performance indicators used to assess progress against targets.

According to the 85 companies responding to CDP India in 2021, 78% of the companies have undertaken a total of 113 emission reduction targets which are either absolute, intensity or both absolute and intensity-based targets. 29 of the 113 total emission reduction targets are approved by the Science-based Targets Initiative (SBTi) with different temperature-aligned transition pathways of (i) 8 Science-based targets (SBTs) aligned to 1.5°C (ii) 16 SBTs aligned with well below 2°C and (iii) 5 targets aligned to 2°C.

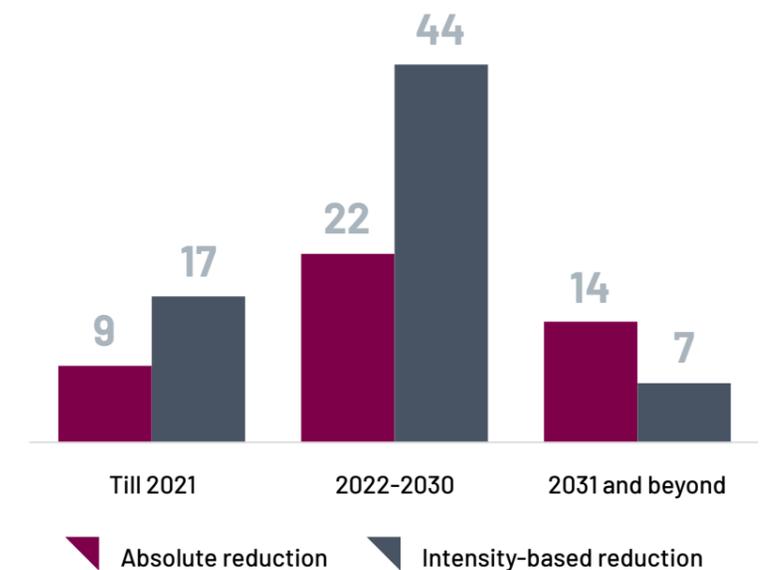


The IPCC has stipulated the urgency of halving of GHG emissions before 2030, achieving net-zero emissions before 2050 and halting global temperature rise to 1.5°C. The 2021 numbers are encouraging compared to the previous year, with companies focused more on medium and long-term horizon emissions reduction targets i.e., 2022-2030 (38% increase from 2020) and 2031 and beyond (11% increase).

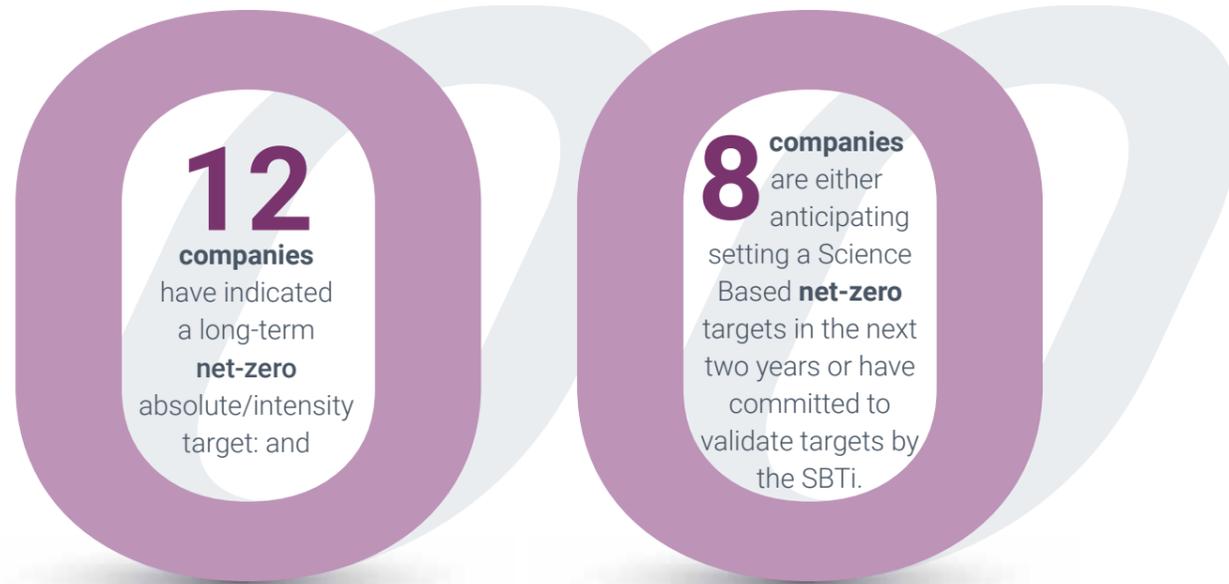
Type of Emission Reduction Targets (# of companies)



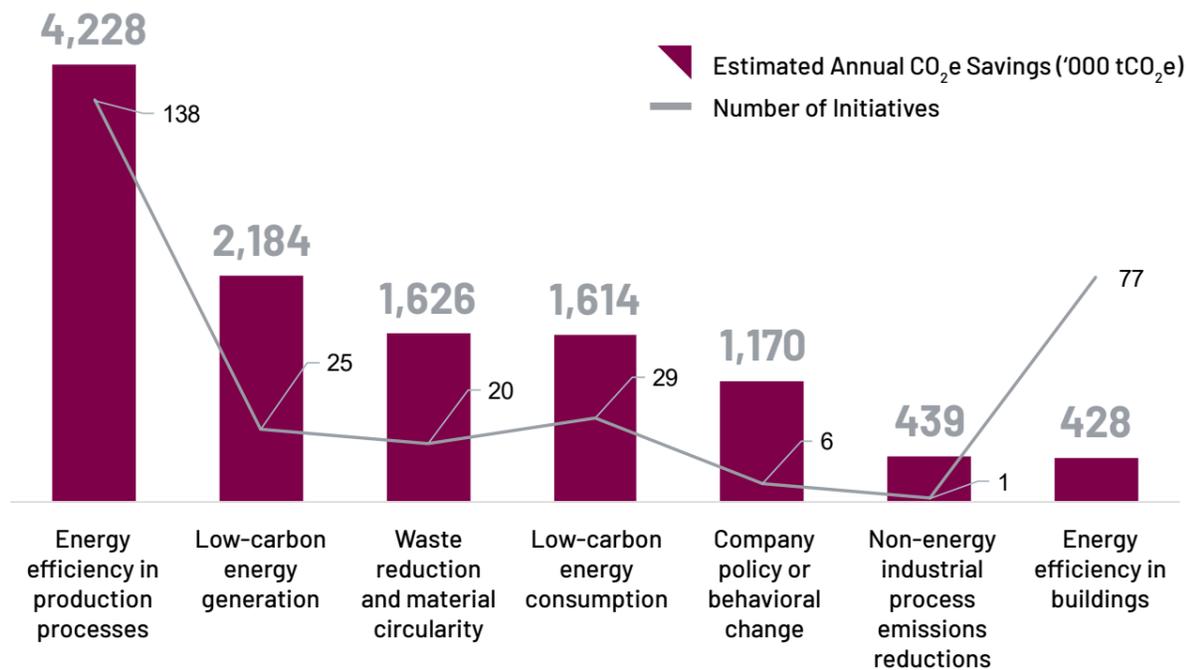
Emission Reduction Targets & Timelines (# of companies)



42 Metrics and Targets - TCFD Knowledge Hub (tcfdhub.org)



Top Emission Reduction Initiatives & Estimated Annual Savings (# of Initiatives, tCO₂e)

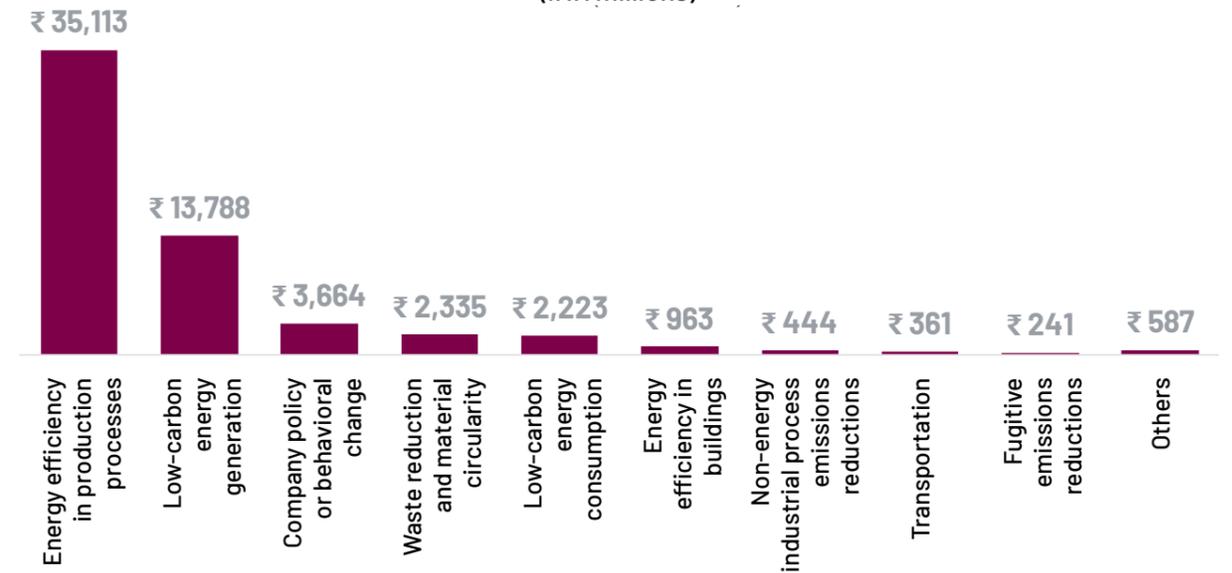


The reported annual savings of CO₂ emissions was estimated to be over 39 billion metric tons. Corporates are focusing on energy efficiency in production processes followed by low-carbon energy generation. Energy efficiency in buildings ranks amongst the top two categories of emissions reductions initiatives, indicating that the focus of companies is shifting to production processes where maximum efficiency can be reaped.

28% increase in number of companies implementing emission reduction initiatives: 73 in 2021 vs. 57 in 2020

The financial impact of emissions reduction initiatives reported by companies resulted in an annual savings of over INR 59.7 billion across several initiatives (see graph below); the top categories continue to be energy efficiency in production processes followed by low-carbon energy generation.

Financial Impact of Emission Reduction Initiatives (INR millions)



Temperature rating

IPCC's AR6 has issued a code red alert for the entire planet affirming that the average global surface temperature has increased by 1.09°C during the last decade from 1850–1900 levels⁴³. Today, businesses are increasingly tapping into opportunities to align themselves with net-zero carbon economies. Thus, proper action to counter the impacts of climate change is of utmost importance.

COP26 featured transformational development strategies with net-zero aspirations by 2070 from India. The 1 billion tonne of carbon emissions reduction target by 2030 is an ambitious announcement requiring concerted efforts from all stakeholders including corporates, policy makers, capital providers. As the country strives to mitigate the disastrous impacts of climate change, the baton is now with Indian businesses to carry in accelerating towards towards emissions reduction and eventually reaching net-zero. While several Indian companies are setting targets to align their business with the required climate science, it is far below the requirements for 1.5°C aligned pathways.

43 2021: Technical Summary. In Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change

Based on information of targets disclosed by companies, CDP assesses their ambition⁴⁴. The temperature rating is allocated through the process laid out below:

Science-based targets	If the company has an approved science-based target, the temperature classification of the company is taken directly from the SBTi.
Publicly disclosed targets via CDP	If the company does not have an approved science-based target, but has disclosed a target to CDP, the ambition of the target is translated to a temperature rating via the CDP-WWF temperature rating methodology ⁴⁵ . This method uses a warming function, built on Intergovernmental Panel on Climate Change (IPCC) scenarios, that enables the translation of corporate targets into temperature ratings across sectors, target types and time frames.
No valid targets	If the company does not have an approved science-based target or any other target disclosed through CDP that fulfils certain minimum criteria, the company is given a default temperature rating of 3.2°C. This rating is based on 2100 warming projections based on current country pledges (66 per cent probability).

⁴⁴ When corporations report to CDP, they must disclose the scopes covered by their target: direct (Scope 1), indirect (Scope 2 and value chain emissions (Scope 3); boundary coverage (which percentage of emissions is covered by the target) ; and timeframe of the targets, in order to assess the ambition of targets. While targets are often reported publicly in other forms, as in annual sustainability reports, this information is typically insufficient as the full breadth of supporting information on scope, boundary coverage and timeframe is often not disclosed. The CDP target database represents the most comprehensive source of non-verified target information. Learn more here.

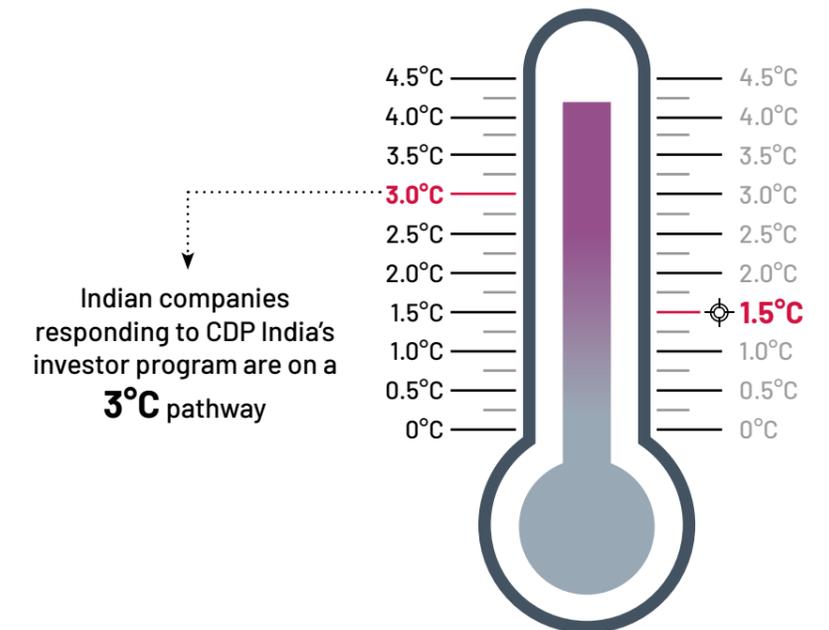
⁴⁵ This temperature rating analysis uses mid-term targets (GHG-reduction targets for target years between 2025 and 2035). To be included in the analysis, these targets must be forward-looking, meaning that they have not already been achieved, and must be sufficiently disclosed with corresponding information on target ambition, timeframe, scope coverage and boundary coverage within scopes.

The temperature rating methodology was applied to the 85 Indian companies responding to CDP that disclosed through the Climate questionnaire in 2021. Only the emissions from companies' own operations (Scopes 1 and 2) were considered. As the graphic below shows, companies responding to CDP are on an **alarming 3°C pathway**, much higher than the required 1.5 degrees for climate change mitigation.

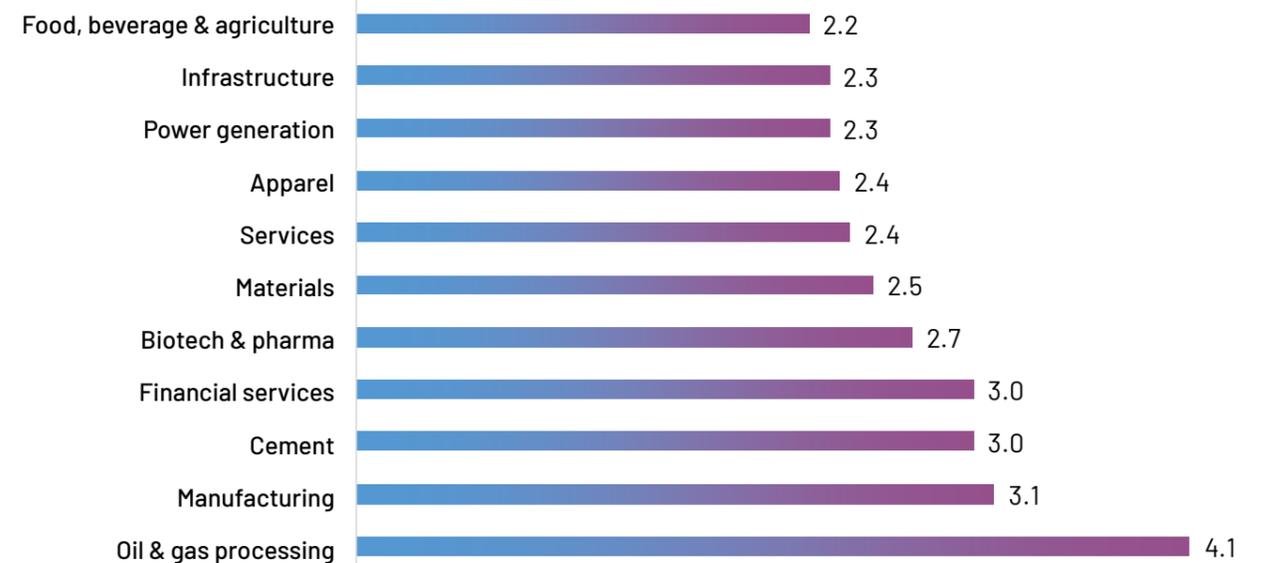
If the leading corporates are unaligned with climate goals, the capital invested in them will continue to be at risk, putting the Indian financial sector at a high risk as well. But when companies move toward more ambitious action, the resultant market shift will have the potential to influence the wider economy.

The graphic below shows how various sectors are aligned to the 1.5°C pathway. While all sectors are unaligned, some of them such as oil and gas, manufacturing, cement and others are well above the required 1.5° pathway.

Warming Pathways of Indian Companies Responding to CDP at 3°C



Temperature Rating - Sectoral Analysis showing alignment to the 1.50 pathway (Average °C)



CDP & BRSR Connect

Following section of the BRSR overlaps with this section:

- ▼ **PRINCIPLE 2:** Businesses should provide goods and services in a manner that is sustainable and safe.
- ▼ **E3:** Process to safely reclaim products for reusing, recycling for Plastics, e-waste
- ▼ **L1:** Life Cycle Perspective / Assessments (LCA) for products and services
- ▼ **L3:** % of recycled/reused input to total material
- ▼ **L5:** Reclaimed products, packaging materials for each category
- ▼ **PRINCIPLE 6:** Businesses should respect and make efforts to protect and restore the environment.
- ▼ **E6:** Details of GHG emissions - S1 & 2 intensity
- ▼ **E7:** Projects related to reducing GHG emissions
- ▼ **E8:** Waste management details- plastic, e-waste, bio medical waste, C&D waste, battery waste, other hazardous waste
- ▼ **E9:** Describe waste management practices adopted by your establishment

SCIENCE BASED TARGETS (SBTs)

Overview

Decarbonization targets and performance related disclosures are encouraged by climate reporting frameworks such as TCFD and the evolving ISSB standards. SBTi⁴⁶ is one of the growing international initiatives designed to emphasize the need for targets to be science-based and validated to enhance the credibility and transparency of decarbonization initiatives by corporates.

SBT enables companies to converge on meeting the TCFD recommendations regarding targets. For example, companies must calculate Scope 1⁴⁷ and Scope 2⁴⁸ emissions and screen Scope 3⁴⁹, they need to select a baseline and a target year, and once their target is set, progress towards meeting it must be disclosed annually. Besides incentivizing long-term planning for resilience, SBTs increase investors' confidence in the company's commitment to manage climate risks⁵⁰.

⁴⁶ The Science Based Targets initiative (SBTi) drives ambitious climate action in the private sector by enabling companies to set science-based emissions reduction targets.

⁴⁷ Scope 1 covers direct emissions from owned or controlled sources

⁴⁸ Scope 2 covers indirect emissions from generation of purchased electricity, steam, heating and cooling

⁴⁹ Scope 3 includes all other indirect emissions that occur in a company's value chain.

⁵⁰ <https://eco-act.com/tcfd/taskforce-on-climate-related-financial-disclosures/connecting-the-sbti-with-the-tcfd/>



Disclosure of SBT's helps companies to track their progress and make amends to realize the shortfalls. Companies choosing to go through the process of disclosure, gain insight and support from technical experts. Science-based target setting makes business sense – it future-proofs growth, saves money, provides resilience against regulation, boosts investor confidence, spurs innovation and competitiveness – while also demonstrating concrete sustainability commitments to increasingly-conscious consumers⁵¹. The disclosure requirements related to targets and metrics cover the following aspects:

- ▼ **Type of Targets:**
Whether the target is absolute, or intensity based.
- ▼ **Time Frame:**
SBTs should cover a period of 5-10 years from the date the target is submitted to the SBTi for validation.
- ▼ **Key performance indicators used to assess progress against targets:**
Annual reporting on progress and initiatives towards meeting the SBTs.
- ▼ **Approaches for calculating targets:**
Disclose the approach selected from among the several approaches accepted by the SBTi for setting SBTs.

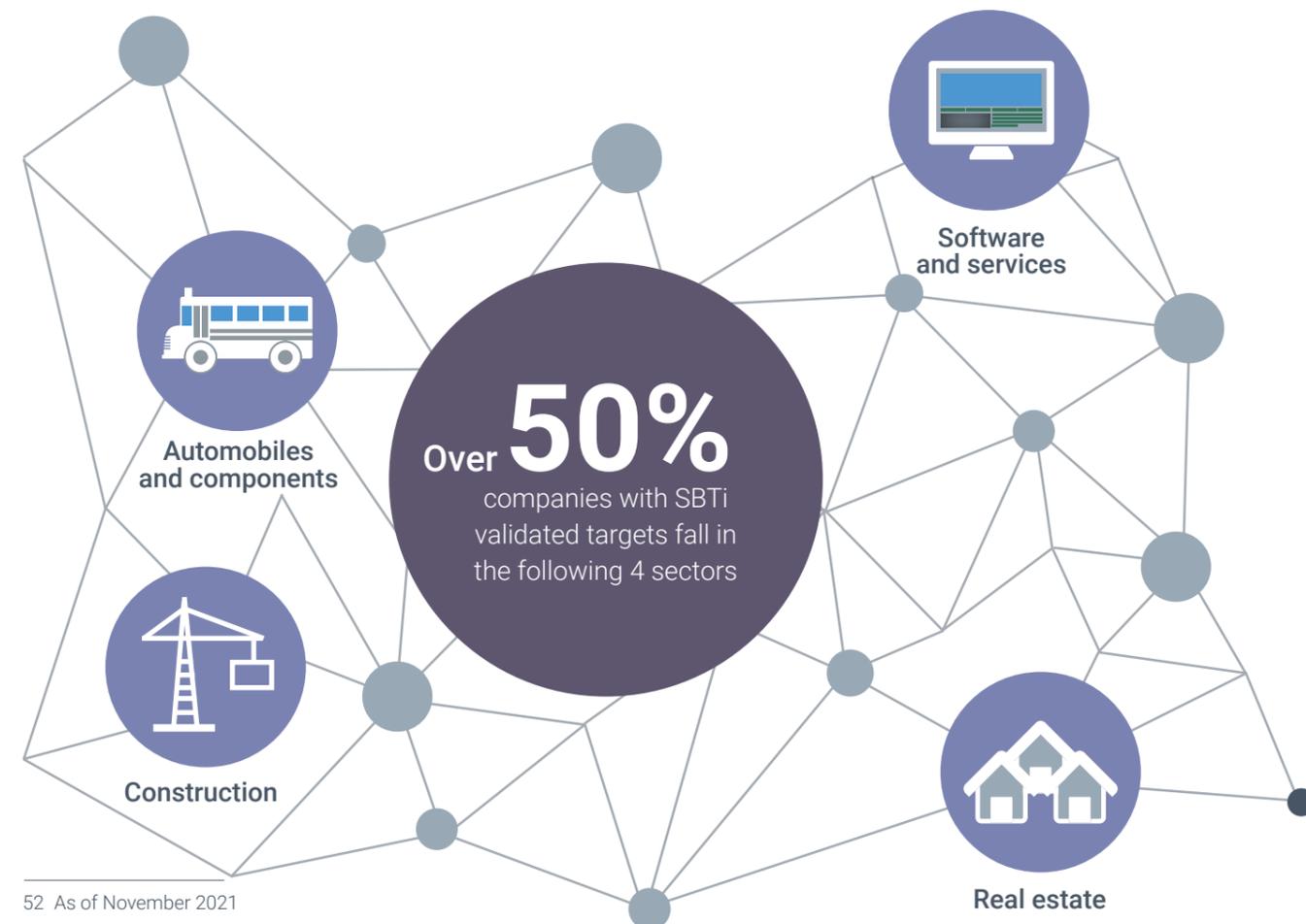
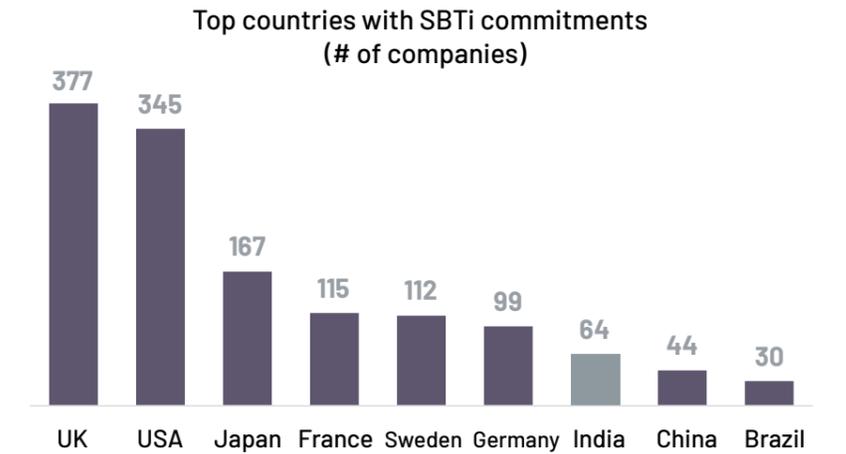


Science Based Targets can be defined as the GHG emissions reduction targets consistent with the latest climate science necessary to meet the level of decarbonization to achieve the goals of the Paris Agreement – limiting global warming to well-below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C. In other words, science-based targets provide companies with a clearly-defined path to reduce emissions in line with the Paris Agreement goals.

51 <https://sciencebasedtargets.org/how-it-works>

SBT disclosures

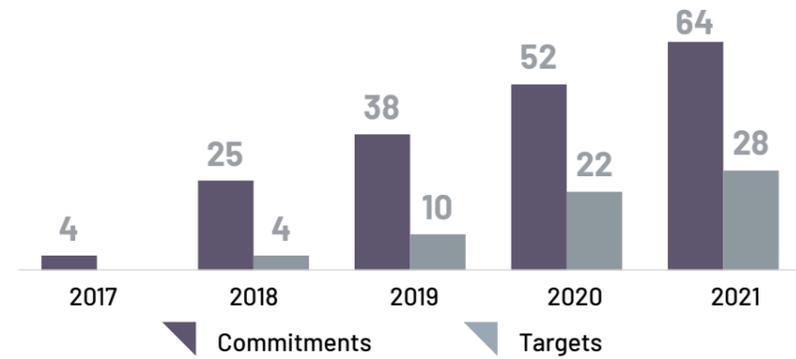
India leads the emerging economies with the maximum number of SBT commitments and ranks seventh globally with 64⁵² Indian companies joining the SBTi as of November 2021. It is evident that Indian companies are becoming increasingly climate conscious as more companies commit to the SBTi to transition towards a low carbon economy.



52 As of November 2021

Increased momentum in climate corporate action

CDP Responding Companies with SBT
(Number of companies responding per year)



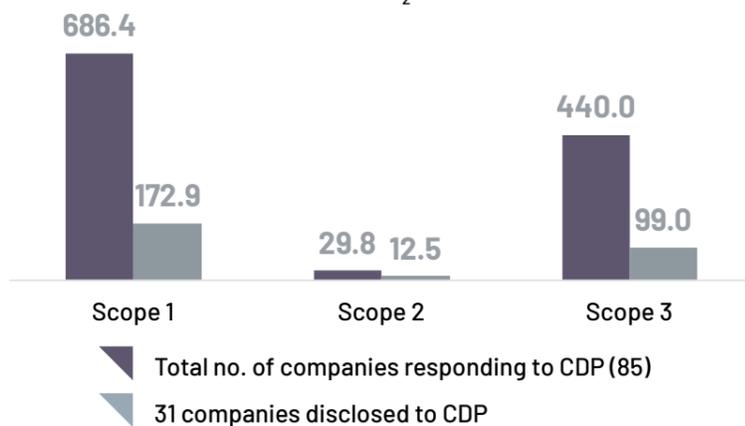
There has been a marked increase from 4 companies setting SBT targets in 2017 to 64 companies choosing to set the targets in 2021. This manifold increase over the last 5 years is a very encouraging state of affairs as more companies understand and recognize the benefits of disclosures and actively work towards adopting the climate change action policy.

Compared to 2020,
23%
growth in new SBTi commitments

27%
growth in companies setting SBTs

Emission coverage over time by SBTi companies

Emissions Profile of Companies in 2021
(MtCO₂e)



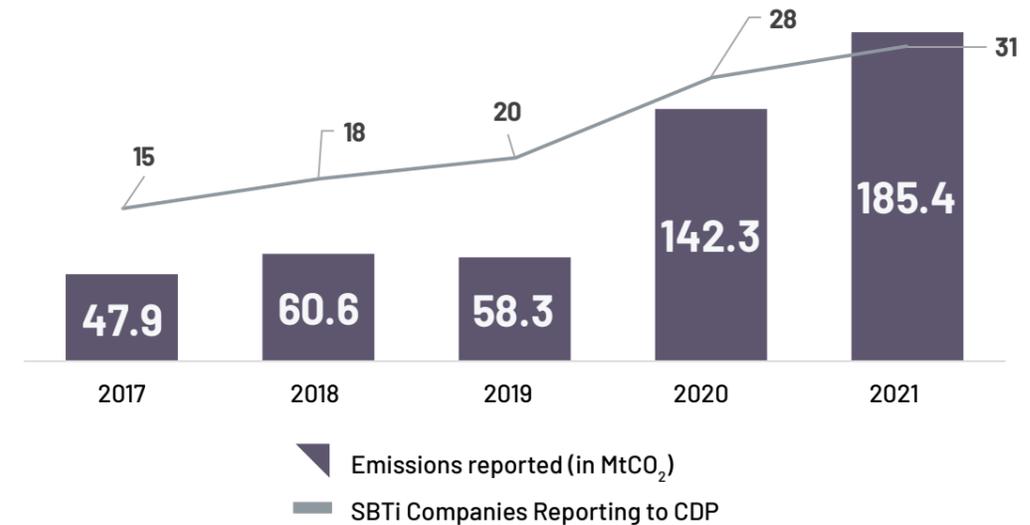
In order to catalyze and support efforts of greater transparency, the SBTi will publish measurement, reporting and verification (MRV) guidance for companies in the coming year.⁵³ Progress reporting of SBTs by corporates enhances transparency and credibility of commitments in addition to identifying shortfalls that enables corporates to take necessary action in achieving targets.

⁵³ <https://sciencebasedtargets.org/resources/files/SBTiProgressReport2020.pdf>

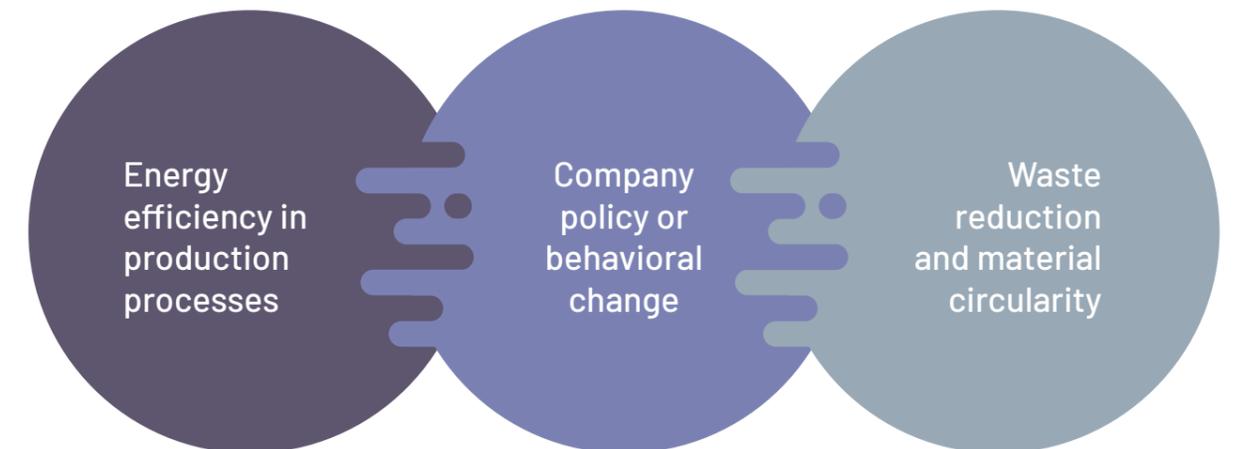
48% of Indian companies that have committed to or set targets have responded to the CDP Climate Change questionnaire.⁵⁴

Compared to the previous year, combined Scope 1 and Scope 2 emissions reported by SBTi companies increased by 34% to 190.3 MtCO₂e while Scope 3 emissions increased by 10%. The primary reason for the increased emissions coverage is due to more comprehensive and transparent GHG inventory – related disclosures after setting SBTs among heavy industries such as automobiles and components, construction materials, electric utilities and independent power producers and energy traders. Enhanced disclosures and measurement of financial and decarbonization impacts are therefore critical drivers for achieving targets.

Comparison of Absolute Scope 1 + Scope 2 in MtCO₂e for SBTi Companies

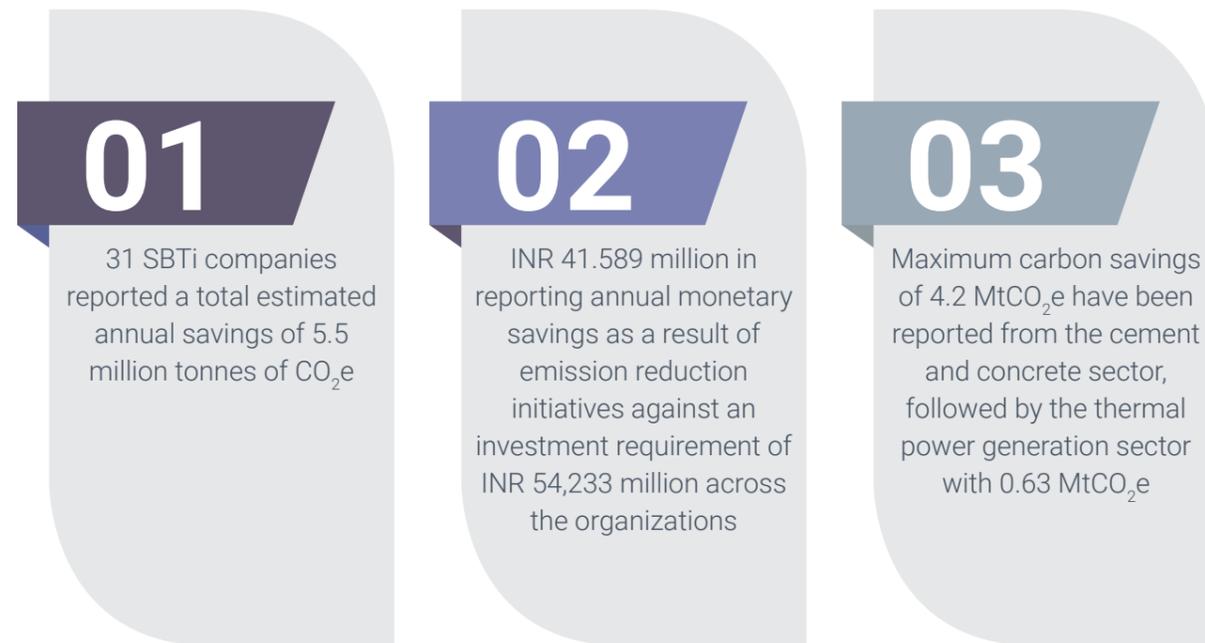


The top 3 emission reduction initiatives that have resulted in maximum annual CO₂e savings



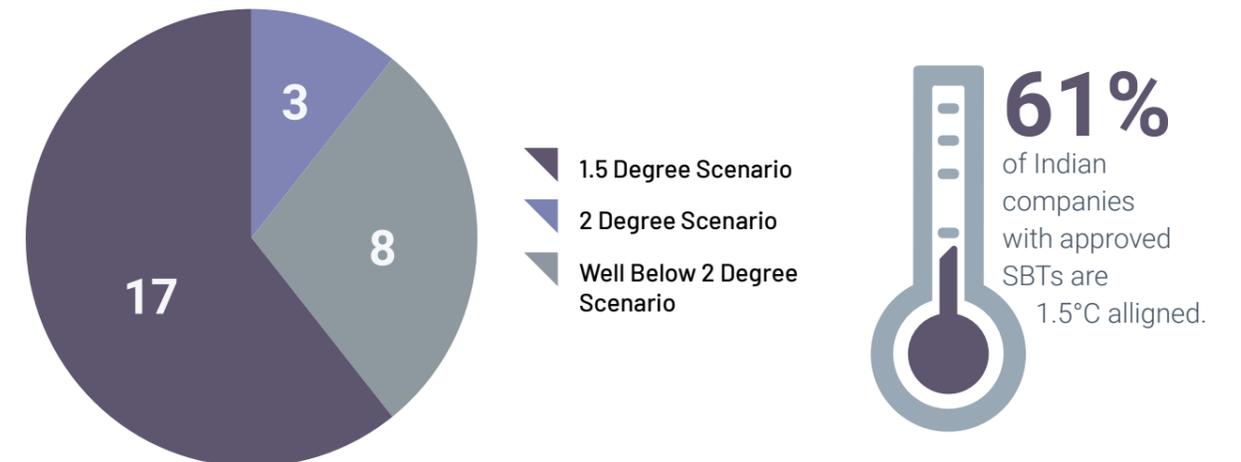
⁵⁴ <https://www.cdp.net/en/guidance/guidance-for-companies>

Emission Reduction Initiatives Reinforced by Disclosures

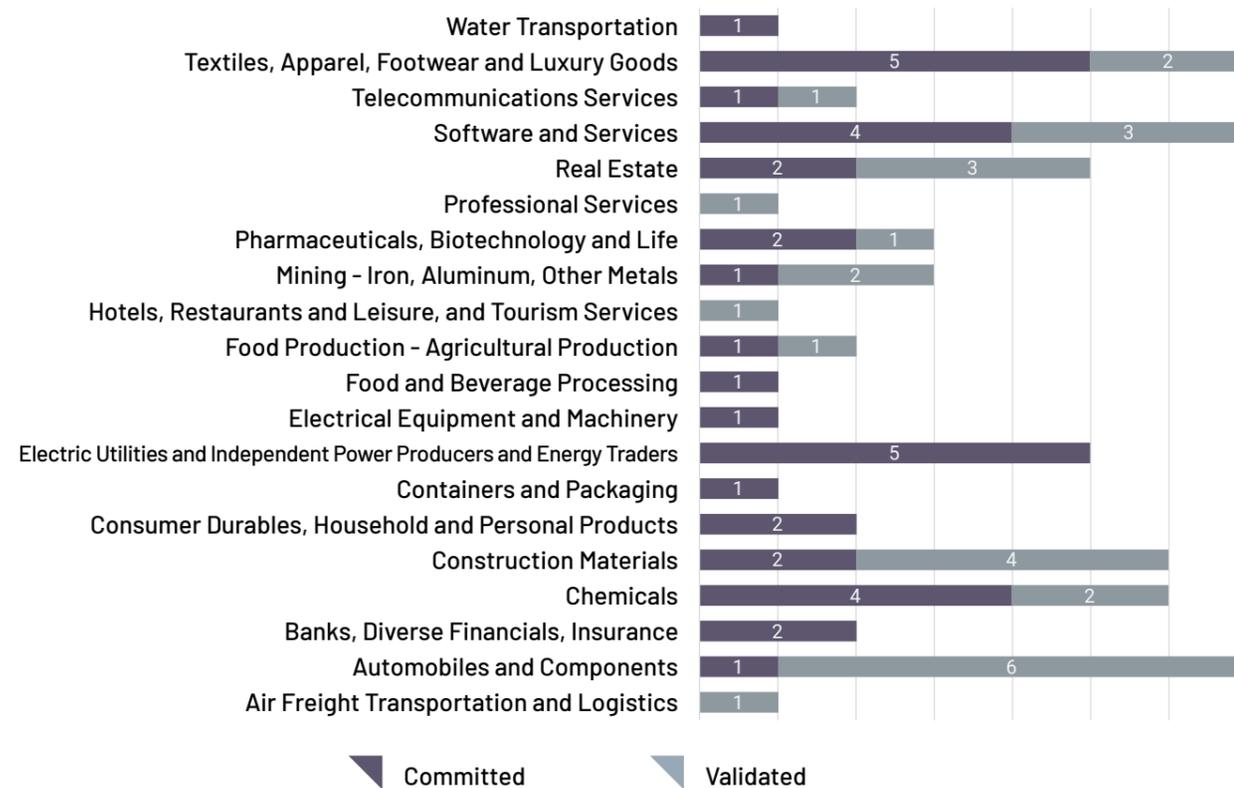


As per 2021 CDP disclosure data, 17 Indian companies (61% of Indian companies responding) set the most ambitious target in line with a 1.5-degree future. Corporate leaders are increasingly setting ambitious targets as part of their climate action plans and actively including these in their business policies. Wipro is the first Indian company to have validated SBTi net-zero targets among seven companies across countries and sectors.

Target Temperature Classification of Indian Companies with Approved SBTs (# of CDP reporting companies)



Sectoral Analysis of Indian SBTi companies



Towards 1.5°C and a Net-Zero Future

Table: The science behind the push for 1.5°C⁵⁵

	1.5°C	2.0°C	2°C Impacts
Global population exposed to severe heat at least once every 5 years	14%	37%	2.6x worse
Number of ice-free arctic summers	At least 1 every 100 years	At least 1 every 10 years	10x worse
Further decline in coral reefs	70-90%	99%	Up to 29% worse
Decline in marine fisheries	1.5M tonnes	3M tonnes	2x worse

55 Science Based Targets Initiative (SBTi)

Being the world's first net-zero standard for corporates, the SBTi's Corporate Net-Zero Standard gives business leaders clarity and confidence about their near and long-term targets being aligned with climate science - helping to ensure a habitable planet for all that is aligned with the ambitious Paris Agreement.



Indian corporates such as Tata, Reliance, Mahindra, ITC, ACC, Adani and Dalmia Cement have joined hands with the government to take India towards the path of lower greenhouse gas emissions. In this respect, as many as the top 24 companies of the country pledged to move towards carbon neutrality voluntarily and signed a declaration on climate change. The nine mitigation measures, listed by the companies in the declaration include promotion of renewable energy, enhanced energy efficiency, water efficient processes, green mobility, planned afforestation and waste management and recycling.⁵⁶

The Environment Ministry will also be receiving an annual report by all the signing companies, citing their qualitative and quantitative contributions for the year. Other companies that signed the joint declaration with the ministry of environment, forests and climate change (MoEFCC) include Ambuja Cements, Arcelor Mittal, Nippon Steel, Essar Oil & Gas Exploration & Production, JSW Group, Sun Pharma and Vedanta Ltd etc.⁵⁷

Business Ambition for 1.5°C and the Race to Zero

Launched in May 2019 by SBTi in partnership with UN Global Compact and We Mean Business (WMB), the Business Ambition for 1.5°C campaign is an urgent call to action for companies to set SBTs in line with a 1.5°C, net-zero future.

Companies joining the campaign automatically become part of the UNFCCC's Race to Zero coalition, which seeks to rally leadership and support from businesses, cities, regions and investors to reach net-zero by 2050. As of November 2021, 20 Indian companies committed to Business Ambition for 1.5°C.

- ▶ Eleven of these made a long-term net-zero commitment.
- ▶ Wipro is the first Indian company to have validated SBTi net-zero targets among seven companies across countries and sectors.

⁵⁶ <https://timesofindia.indiatimes.com/business/india-business/24-companies-including-tata-ril-pledge-to-be-carbon-neutral/articleshow/79072359.cms>

⁵⁷ <https://timesofindia.indiatimes.com/business/india-business/24-companies-including-tata-ril-pledge-to-be-carbon-neutral/articleshow/79072359.cms>



Wipro: The first Indian company with SBTi-validated net-zero targets

Wipro is a leading global Information Technology (IT) company, providing services across different segments enabling transformation towards the digital world through cognitive computing, hyper automation and analytics.

Wipro committed to net-zero GHG emissions across the value chain by FY2040⁵⁸ with the target boundary includes land-related emissions and removals from bioenergy feedstocks⁵⁹.

- ▼ **Near Term target:** Wipro commits to reduce absolute Scope 1 and 2 GHG emissions 59% by FY2030 from a FY2017 base year, and absolute Scope 3 GHG emissions 55% by FY2030 from a FY2020 base year
- ▼ **Long-Term Targets:** Wipro also commits to reduce absolute Scope 1 and 2 emissions 100% by FY2040 from a FY2017 base year, and absolute Scope 3 GHG emissions 100% by FY2040 from a FY2020 base year.

Wipro has conducted a comprehensive climate risk assessment for its operations as well as published an environmental footprint assessment (Environmental P&L) of its entire value chain for the last five years. Using the SBTi framework, a net-zero roadmap was formulated that shall be subject to continuous evaluation and quarterly reviews.

Progress to date:

- ▼ Scope 2 emissions reduced by 54% in 2021 from 2015 levels primarily driven by improving energy efficiency in its buildings⁶⁰, while augmenting its procurement criteria and engaging with trade associations, such as green building alliances.
- ▼ Renewable energy (RE) share in energy consumption increased by 40% through power purchase agreements (PPA) is expected to increase to 100% RE by 2030. Wipro has joined the Responsible Energy Initiative which is engaged in building a responsible energy sector.
- ▼ Engaging employees to further avoid and reduce Scope 3 emissions, especially in travel and commuting. Improved access to public transport, collaborating with multiple carpooling app services resulted in saving of 2100 tons of CO₂ equivalent.

For travel, Wipro is exploring behavioural nudges which could lead to avoidance, modal shifts and adoption of efficient airlines and itineraries.

Challenges:

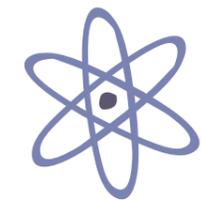
Being an IT company, Wipro's Scope 1, 2 and 3 emissions are relatively low as compared to companies in hard-to-abate sectors. Nonetheless implementation and operational challenges to achieve net-zero emissions exist – varying state specific renewable energy policies, ability of supply chain partners to adopt greener practices and technology maturity and scaling up (sustainable aviation fuel and battery storage are two such examples).

Outlook:

Wipro continues to remain focused on its five-year GHG mitigation plan that rests on three key pillars⁶¹ - reduce (energy efficiency), replace (renewable energy) and reduce and replace (business travel and commute choices) embracing their responsible business philosophy by stating “we can't be net-zero, until the world is net-zero.”

Call to action

As of November 2021, more than 2,100 companies worldwide are leading the zero-carbon transition by setting emissions reduction targets through the Science Based Targets initiative (SBTi). It is expected that more Indian companies will join their global peers in joining the call to climate action targets.



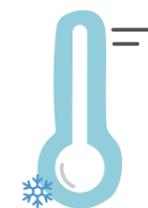
1012

with Science Based Targets



2139

companies taking action



1045

commitments to 1.5°C

58 Wipro's Net-Zero Commitment - Media release
 59 Companies taking action - SBTi
 60 TONZ-Transformation-Guide-Net-Zero-Goal-Setting-Nov-2021
 61 Wipro-Integrated-Report-2020-2021a

The target setting journey can be started by following the steps mentioned below:⁶²

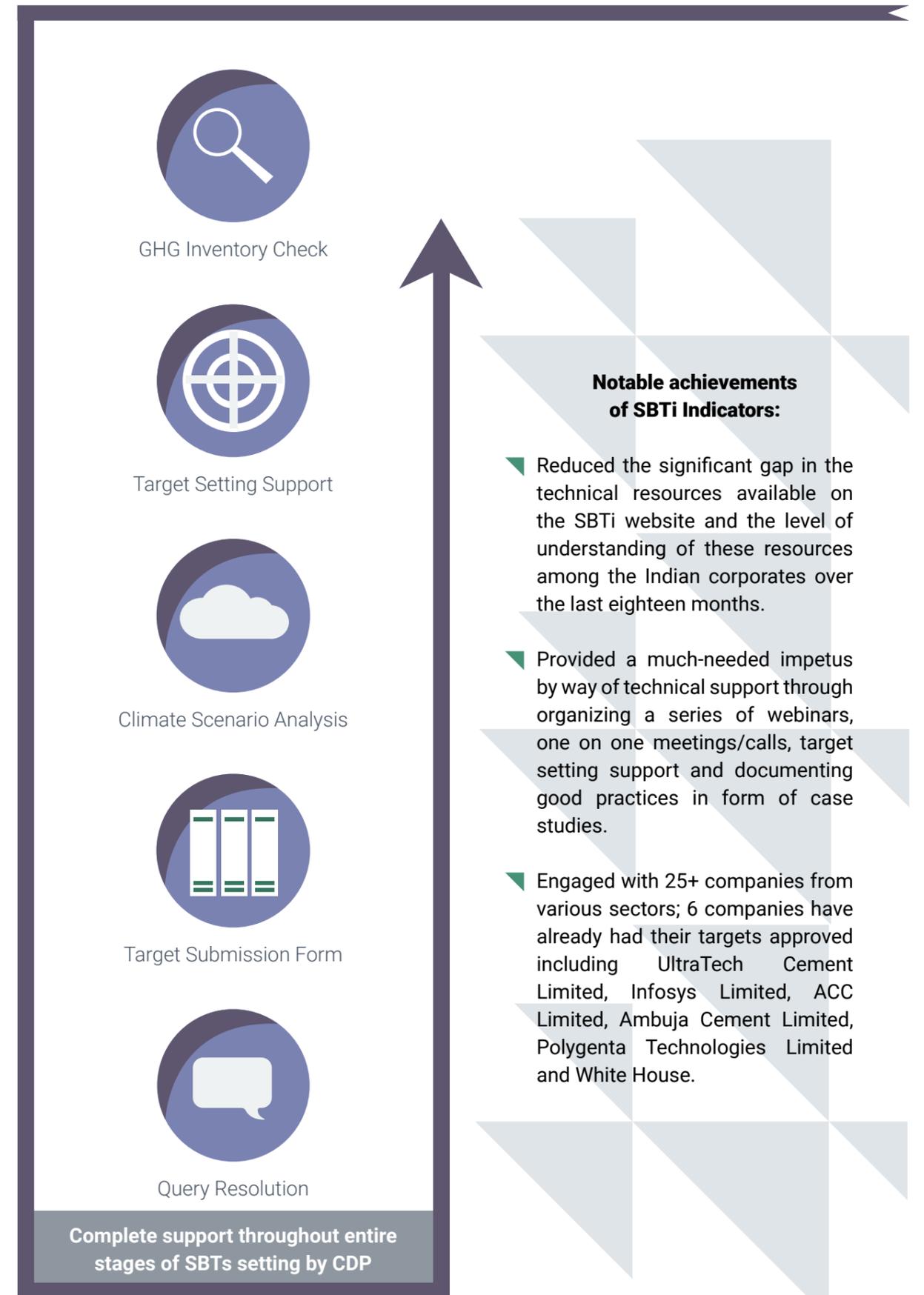


SBTi Incubator

Science Based Targets Initiative Incubator is a unique project of CDP India that was launched in April 2020, with support from the MacArthur Foundation and Shakti Sustainable Energy Foundation, in partnership with WWF India to provide technical support with the main objective of guiding and catapulting organization from the commitment stage to the target development stage of alignment with the Science Based Targets Initiative.

Value Proposition:

- ▼ Case studies of businesses with validated targets will be shared with the participating companies for peer-to-peer learning.
- ▼ Capacity building workshops and webinars based on recent developments and other operational aspects of the SBTi.
- ▼ In house trainings and one-on-one meetings with companies where CDP India will explain all stages of the SBTi and provide answers to technical queries.



62 Set a Target - Science Based Targets

The following companies are supported by SBTi services in India:



The SBTi helped Ambuja Cement with strengthening our commitment towards emission reduction as a mitigation effort for the rising risks from climate change.

Our partnership with SBTi Incubator acted as a bridge by curating paths and streamlining the sector specific approaches from several criteria and recommendations of SBTi. With this continuous support, the process of getting targets approved and validated through SBTi was smooth and hassle free. The inputs we received from the Incubator team combined with collaborative efforts resulted in enhancing our credibility and trust amongst our stakeholders. We would recommend companies who wish to initiate the SBTi journey to join hands with the SBTi Incubator program and accelerate their target setting journey.

SANJAY K SINGH
General Manager (Corporate Environment and Sustainability)
Ambuja Cements Limited

CDP's SBTi incubator has immensely benefitted AGEL to build our climate strategy and communicate the results in a clear language.

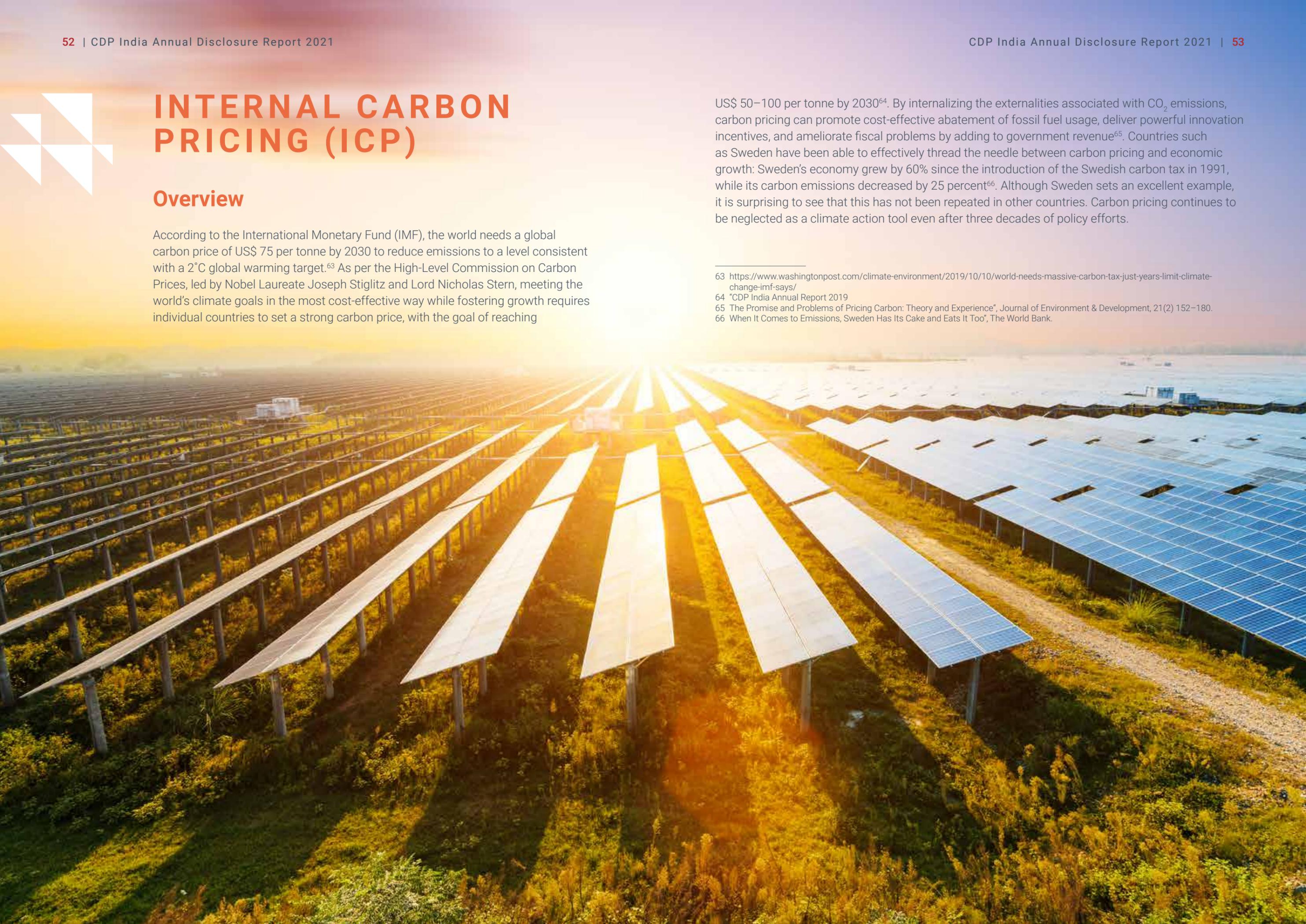
The assistance received from the team at every step of the target setting, right from choosing the industry classification, to GHG inventorization and preparation of documents for the target validation was greatly appreciable. The inputs received from this expert team also helped the company management in the internal approval of the targets to take it further for the inputs from the stakeholders. We recommend all companies who want to initiate the target setting to join this Incubator program and accelerate their target setting journey.

PRAVEEN ANANT
Head Sustainability, Adani Energy Vertical

At ACC, we have always been driven by the benchmark set by our parent organization Holcim group, who became one amongst the first seven companies across the globe to have its net-zero targets validated by SBTi in 2021. ACC's sustainability strategy is inspired by the Sustainable Development 2030 plan.

SBTi is one of our core objectives towards meeting our climate action goals and we are continuously working towards our SBTi net-zero commitment. This north star goal created momentum in the business, revealing a great willingness across the organization to contribute to the objective at hand. The collaborative efforts and dedicated support from the SBTi Incubator team, helped us in carving the way towards our climate goals aligned with the Science Based Targets setting. We would suggest all the peer companies to engage with the SBTi Incubator team to accelerate their Science Based Targets setting journey today.

P SREENIVASA RAJU
Senior General Manager – Environment & Sustainability
ACC Limited



INTERNAL CARBON PRICING (ICP)

Overview

According to the International Monetary Fund (IMF), the world needs a global carbon price of US\$ 75 per tonne by 2030 to reduce emissions to a level consistent with a 2°C global warming target.⁶³ As per the High-Level Commission on Carbon Prices, led by Nobel Laureate Joseph Stiglitz and Lord Nicholas Stern, meeting the world's climate goals in the most cost-effective way while fostering growth requires individual countries to set a strong carbon price, with the goal of reaching

US\$ 50–100 per tonne by 2030⁶⁴. By internalizing the externalities associated with CO₂ emissions, carbon pricing can promote cost-effective abatement of fossil fuel usage, deliver powerful innovation incentives, and ameliorate fiscal problems by adding to government revenue⁶⁵. Countries such as Sweden have been able to effectively thread the needle between carbon pricing and economic growth: Sweden's economy grew by 60% since the introduction of the Swedish carbon tax in 1991, while its carbon emissions decreased by 25 percent⁶⁶. Although Sweden sets an excellent example, it is surprising to see that this has not been repeated in other countries. Carbon pricing continues to be neglected as a climate action tool even after three decades of policy efforts.

63 <https://www.washingtonpost.com/climate-environment/2019/10/10/world-needs-massive-carbon-tax-just-years-limit-climate-change-imf-says/>

64 "CDP India Annual Report 2019"

65 "The Promise and Problems of Pricing Carbon: Theory and Experience", *Journal of Environment & Development*, 21(2) 152–180.

66 "When It Comes to Emissions, Sweden Has Its Cake and Eats It Too", *The World Bank*.

In 2021, 85 companies either use or are planning to use an ICP, a 50% increase from 2020. Less than 1% of global emissions are currently subject to a carbon pricing equal to even a low-end estimate of the social cost of carbon.

Corporations use ICP as a strategic planning tool to manage climate-related business risks and prepare for the transition to a low-carbon economy. According to TCFD, carbon pricing is one key metric for scenario analysis and when disclosing on ICP, the TCFD recommends that companies should disclose the following⁶⁷:

- ▶ What assumptions are made about how carbon price(s) would develop over time (within tax and/or emissions trading frameworks).
- ▶ Geographic scope of implementation.
- ▶ Whether the carbon price would apply only at the margin or as a base cost.
- ▶ Whether the price is applied to specific economic sectors or across the whole economy, and in what regions.
- ▶ Whether a common carbon price is used (at multiple points in time) or differentiated prices.
- ▶ Assumptions about scope and modality of a CO₂ price via tax or trading scheme.

TCFD defines an internal carbon price (ICP) as “an internally developed estimated cost of carbon emissions, which “can be used as a planning tool to help identify revenue opportunities and risks, as an incentive to drive energy efficiencies to reduce costs, and to guide capital investment decisions.”⁶⁸

Parties are encouraged to set prices consistent with Carbon Pricing Leadership Coalition’s (CPLC) high-level commission on carbon pricing which states that an explicit-price range of US\$50–100/tCO₂ by 2030 will be consistent with delivering the Paris Agreement.⁶⁹

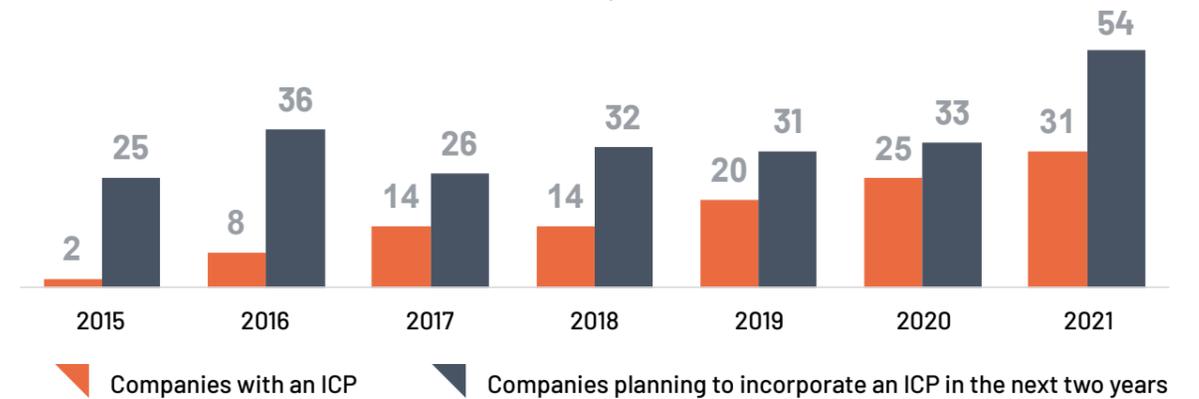
⁶⁷ <https://www.tcfhub.org/scenario-analysis/>
⁶⁸ Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures, The Taskforce on Climate related Financial Disclosures, June 2017, page 63
⁶⁹ <https://docs.wbcsd.org/2019/09/Carbon-Pricing-WBCSD-Policy-Paper-2019.pdf>

ICP disclosures

Key disclosure elements for ICP includes alignment with the ICP objectives and GHG emissions in scope, type of price, variance used, its impact and implications. CDP is the largest repository of information on how ICP or corporate exposure to carbon pricing regulations is used and viewed by companies all around the world, with data collected every year since 2014.

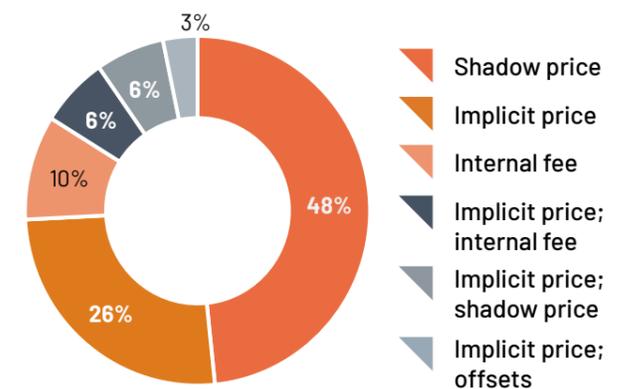
Although ICP is at a very early stage in India, as per CDP India data, 31 companies have incorporated ICP in 2021 as compared to 25 companies in 2020 (a 25% increase) and another 54 companies are planning adopt ICP in the next two years (increase of 63%). The total number of companies which already use or plan to adopt ICP in the next two years stood at 85, about 50% increase compared to 2020 numbers.

ICP Adoption Trends in India (# of companies)



Shadow pricing continues to be the most commonly used type of ICP, mainly because a shadow price allows companies to model or test how a range of carbon prices would affect their business and operations. Each type of price can be used to drive impact in an organization. For example, a shadow price mechanism can be used in investment decisions, but no actual financial flows are generated. A shadow price is most often used in CAPEX decisions but can also be used in R&D and procurement decisions. On the other hand, its degree of influence can range from being included qualitatively, embedded in cost calculations as a financial indicator, or being a criterion in business decisions, with the latter of course showing the strongest level of influence. A shadow price is the most commonly used internal pricing mechanism, helping to internalize the cost of

Type of ICP Adopted (# of companies N=31)



an organization’s GHG emissions, and can be applied to operational decisions. The revenue from the fee can then be used to establish a low-carbon fund or be re-distributed in the company.⁷⁰

⁷⁰ Putting A Price On Carbon – The state of internal carbon pricing by corporates globally, CDP, https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/005/651/original/CDP_Global_Carbon_Price_report_2021.pdf?1618938446

Shadow price refers to the hypothetical cost of carbon emissions. The most common form of ICP that helps organizations better understand the impacts of climate-related risks such as technological shifts or future regulations. It can help a company with both risk management and internal strategic planning, allowing them to model or test how a range of carbon prices affect their divisions, capital investments and other planned projects. In this sense, the use of ICPs is similar to forecasting with a range of energy prices.

A majority of CDP responding companies had at least three objectives for using ICP in their decision-making process.

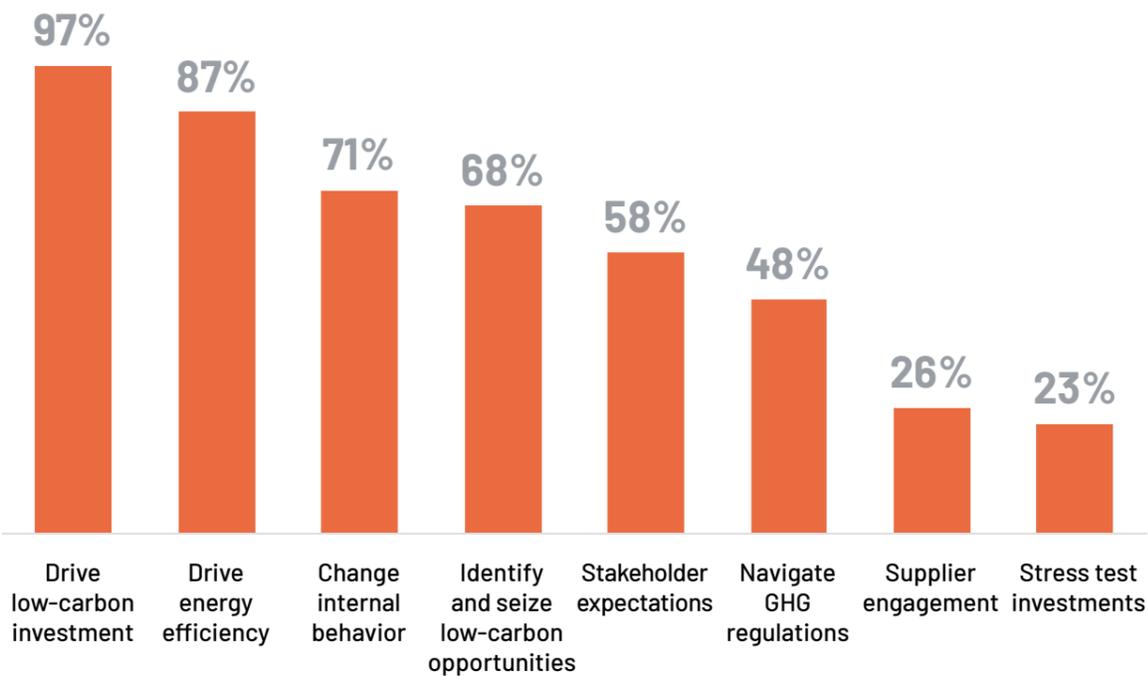
As per the adjacent graph, companies that use ICP are from high-intensive sectors namely cement and concrete, metal smelting, refining and forming, and the IT sector.

Interestingly, the top Indian sectors with SBT are also from similar sectors signifying that ICP is often used as a tool to further climate ambition and targets.

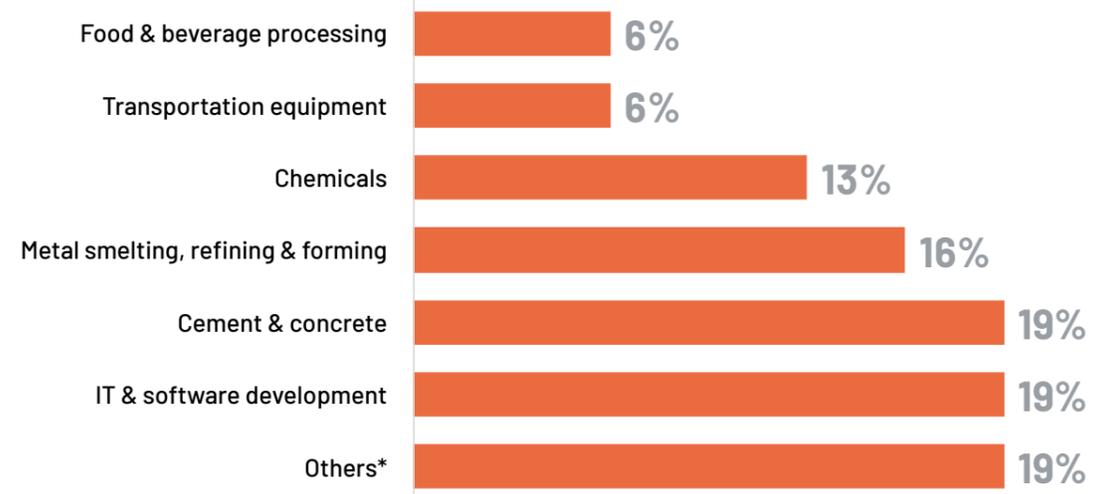
CDP data indicates a correlation between the companies putting a price on carbon and those taking other strategic actions to integrate climate change issues into their business strategy and reduce risk, such as by setting a SBT or sourcing more energy from renewables.

An ICP can be used by companies to achieve various objectives (see graph below), the dominant outcomes being driving low-carbon investment, driving energy efficiency, changing internal behaviour, and identifying and seizing low-carbon opportunities.

Objectives for using ICP (% of companies, N = 31)

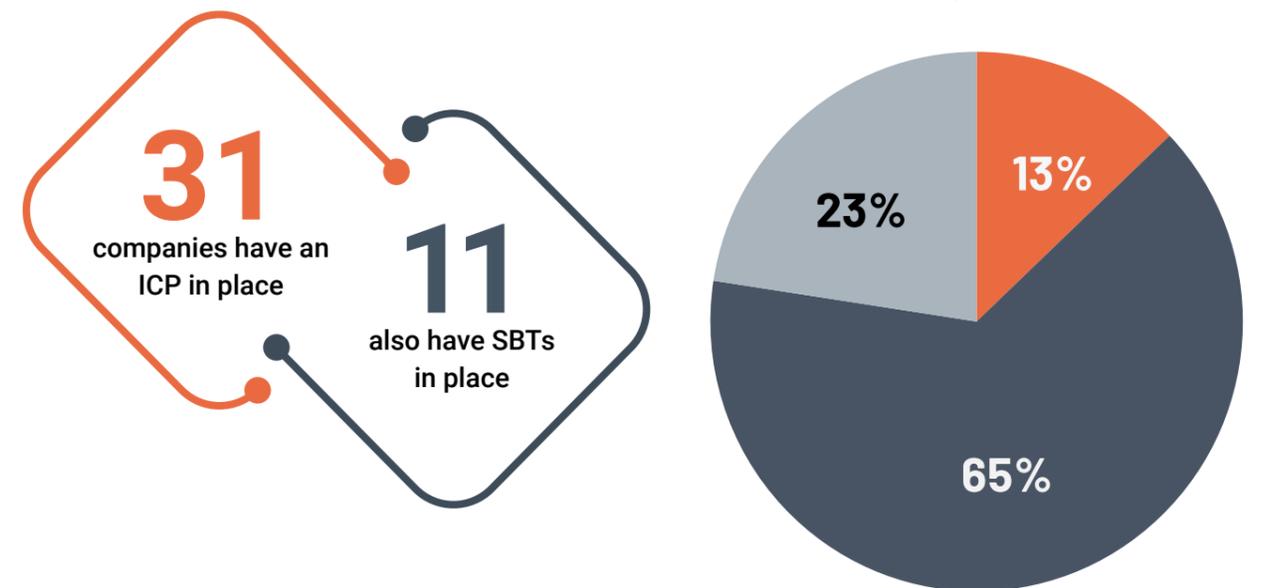


Sectoral Analysis of ICP Users (% of companies, N = 31)



* Others include textiles and fabric goods, biotech & pharma, thermal power generation, electrical & electronic equipment, renewable power generation and plastic product manufacturing sectors.

GHG Scope identified by companies for ICP (% of companies, N = 31)



CDP responses indicated that ICP users often included Scope 3 activities or the emissions from these categories. However, for the hard-to-abate sectors, the priority still lies with the Scope 1 and Scope 2 emissions.

- Scope 1
- Scope 1; Scope 2
- Scope 1; Scope 2; Scope 3

Carbon pricing as disclosed by Indian companies in 2021:

COMPANY	PRICE IN INR	PRICE IN USD (USING CDP CONVERSION RATE)	TYPE OF ICP USED
ACC	2545	33.1	Implicit price; Shadow price
Adani Green Energy	800	10.4	Shadow price
Ambuja Cements	2246	29.2	Implicit price
ARVIND Ltd	192.3	2.50	Shadow price
Creative Group of Industries	private	private	private
Dalmia Bharat Ltd	846	11.0	Shadow price
Dr. Reddy's Laboratories	937	12.2	Implicit price
Godrej Agrovet	740	9.6	Shadow price
Godrej Consumer Products Limited	750	9.8	Shadow price
Godrej Industries	745	9.7	Shadow price
HCL Technologies	2464	32.0	Implicit price
Hero Motocorp Ltd	private	private	private
Hindustan Zinc	1451	18.86	Implicit price
Infosys Limited	1096	14.25	Implicit price
JSW Cement Limited	1566	20.36	Shadow price
JSW Energy	750	9.75	Shadow price
JSW Steel Ltd.	1500	19.50	Shadow price
Mahindra & Mahindra	1509	19.62	Internal fee
Mahindra Sanyo Special Steel Pvt. Ltd	752	9.78	Implicit price
Mindtree Ltd	private	private	private
ORIENTAL AROMATICS LTD.	private	private	private
Shree Cement	3045	39.59	Shadow price
Tata Chemicals	1538	20.00	Shadow price
Tata Consultancy Services	1131	14.70	Implicit price; Shadow price
Tata Consumer Products Ltd	315	4.10	Implicit price; Offsets
Tata Metaliks Ltd	1154	15.00	Shadow price
Tata Power Co	1180	15.34	Internal fee
Tata Steel	975-2720	12.67 - 35.36	Implicit price; Shadow Price
Tech Mahindra	692	9.00	Implicit price; Internal fee
Ultratech Cement	750	9.75	Shadow price
Wipro	3855	50	Shadow price

* Disclaimer= CDP has used an average conversion rate for the 2020 calendar year of US\$0.013 to maintain consistency across all USD rates.

RENEWABLE ENERGY (RE)

Overview

The International Energy Agency estimates the global transformation to net-zero emissions will require renewables to rapidly expand from the current 29% to at least 90% of all electricity generation by 2050 globally.⁷¹ More and more Asian markets are heading the call on climate action by committing to raised renewable energy ambitions or even a net-zero pathway by 2050. According to an analysis by International Renewable Energy Agency (IRENA)⁷², it is estimated that the overall share of renewable energy in total electricity consumption globally needs to reach at least 85% by 2050 to deliver on the climate objectives set out in the Paris Agreement.⁷³

Renewable energy has zero-carbon intensity and can provide long-term energy security, thus making it an important player in the corporate value chain. The Glasgow summit (COP26) saw India making aspirational announcements to transition towards a net-zero future by 2070. Amongst this, the installation of non-fossil fuel electricity to the capacity of 500 GW by 2030, was the most conspicuous target by the Indian government. A decarbonized power sector, dominated by renewable supply sources aligned to corporate demand and targets for renewable energy is at the core of the transition to a sustainable energy future.

⁷¹ Net Zero by 2050 by IEA. Can be accessed at: <https://www.iea.org/reports/net-zero-by-2050>

⁷² <https://www.irena.org/>

⁷³ Corporate Sourcing of Renewables: Market and Industry Trends. Can be accessed at: https://irena.org/media/Files/IRENA/Agency/Publication/2018/May/IRENA_Corporate_sourcing_2018.pdf



India now stands at 4th Global Position for overall installed renewable energy capacity and renewable energy has a share of 26.53% in the total installed generation capacity in the country.⁷⁴ To further promote this initiative, India has been taking active steps in increasing investments, introducing new government policies and working toward increasing the market size of renewable energy.

According to the data released by Department for Promotion of Industry and Internal Trade (DPIIT), FDI inflow in the Indian non-conventional energy sector stood at US\$ 10.28 billion between April 2000 and June 2021. More than US\$ 42 billion has been invested in India's renewable energy sector since 2014. New investment in clean energy in the country reached US\$ 11.1 billion in 2018. According to the analytics firm British Business Energy, India ranked 3rd globally in terms of its renewable energy investments and plans in 2020.⁷⁵

The Union Cabinet approved the infusion of Rs 1,500 crore in the Indian Renewable Energy Development Agency (IREDA) in January 2022.

"This will enable IREDA to lend Rs. 12,000 crore to the renewable energy sector and create renewable energy capacity of 3,500 to 4,000MW" said Union Minister Anurag Thakur

RE100⁷⁶ is the global corporate renewable energy initiative bringing together hundreds of large and ambitious businesses committed to 100% renewable electricity. Led by the Climate Group in partnership with CDP, RE100's mission is to accelerate change towards zero carbon grids at scale.

There are 6 companies headquartered in India that have committed to the RE100 initiative - **Dalmia Bharat Ltd. Infosys Ltd., JSW Cement Limited, Mahindra Holidays & Resorts India Ltd., Mindspace Business Parks REIT and Tata Motors Ltd.**

For more details about India's initiatives, visit RE100.org and follow #RE100 on Twitter.

While significant progress has been made with the number of companies committed to go 100% RE through the RE100 campaign, progress is still modest compared to the scale of the challenge.

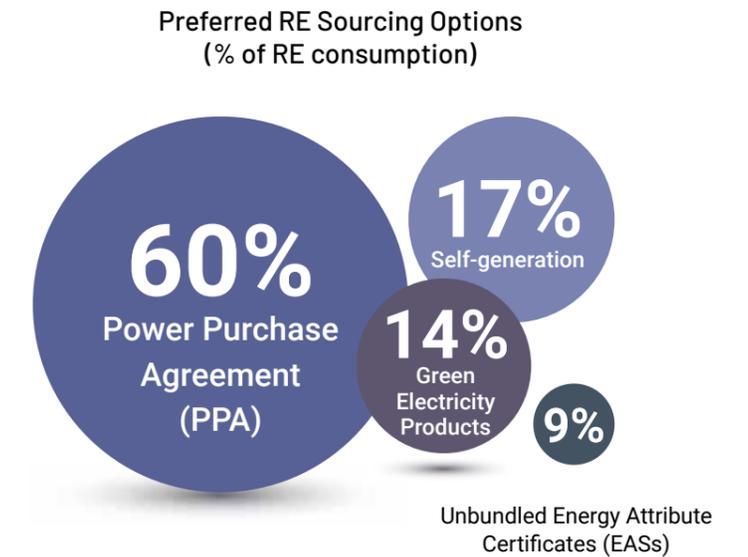
Renewable energy disclosures

In 2021, 85 companies headquartered in India have reported a total of 271 TWh electricity consumption. A massive 70% of this consumption is coming from intensive sectors like metal smelting, cement, and oil and gas processing. Of this, the total renewable electricity consumption is reported to be around **13 TWh renewable electricity which is only about 5% of the total electricity consumption reported in 2021.**

India is looking to transition to about 85% renewable energy by 2050, but as it is still a developing economy, it cannot completely do away with the use of fossil fuels to generate energy. As the economy grows, the electricity consumption is projected to reach 15,280 TWh in 2040 from 4,926 TWh in 2012.⁷⁷ As per the Central Electricity Authority (CEA) estimates, by 2029-30, the share of renewable energy generation would increase from 18% to 44%, while that of thermal is expected to reduce from 78% to 52%.⁷⁸

Besides renewable energy usage in direct operations, corporates are embracing renewable energy opportunities across the value chain, albeit on a small scale. A total of **47 companies** have identified transition opportunities towards low carbon energy usage in 2021 as compared to 34 companies in 2020. These opportunities are mainly identified in the direct operations of the companies.

According to the renewable energy disclosure by companies, a Power Purchase Agreement (PPA) with an onsite/offsite generator is the preferred sourcing option followed by electricity through self-generation and green electricity products, accounting for 17% and 14% respectively. Companies entering a PPA usually look at long-term consumption of renewable energy as a standard practice for their operations. Up to 60% of the total companies have reported 0.36 TWh of total renewable electricity consumption via PPA (on-grid and off-grid). With power demand bouncing back to pre-COVID levels it is expected that demand for corporate renewable PPAs will increase to meet the climate ambition and targets of businesses who have committed to SBTi and RE100 initiatives.



Note: Some companies reported renewable electricity consumption total, instead of breakdown details as per the sourcing method. Data for those companies is not included in the above chart.

74 <https://mnre.gov.in/>

75 <https://www.ibef.org/industry/renewable-energy.aspx>

76 <https://www.there100.org/>

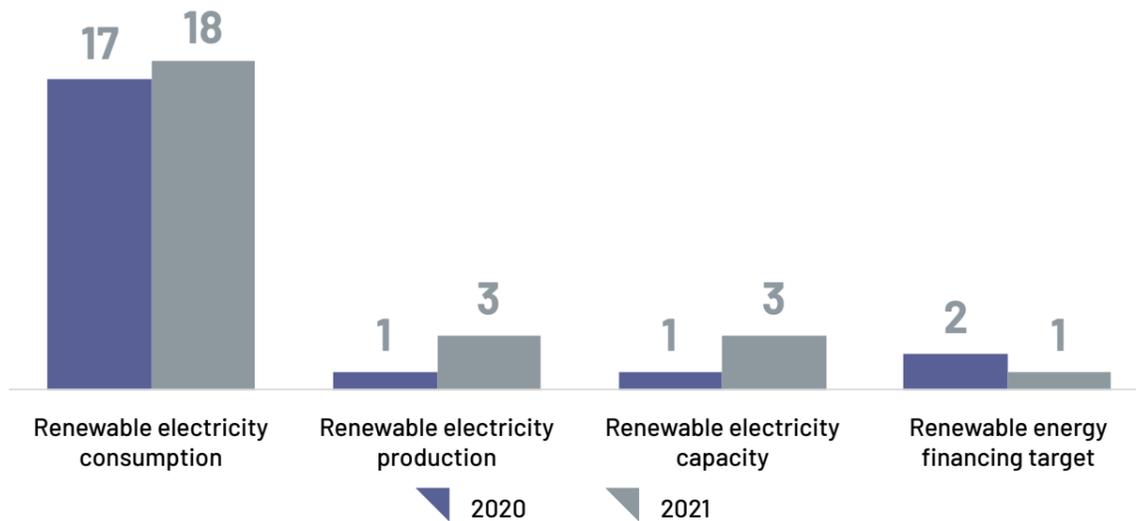
77 <https://www.ibef.org/industry/renewable-energy.aspx>

78 <https://www.ibef.org/industry/renewable-energy.aspx>

Growth in the share of renewable electricity consumption is due to multiple factors such as the increasing number of voluntary corporate GHG emission reduction targets, renewable energy targets, cost efficiency of renewable energy, and compliance targets such as Renewable Energy Purchase Obligations (RPOs).

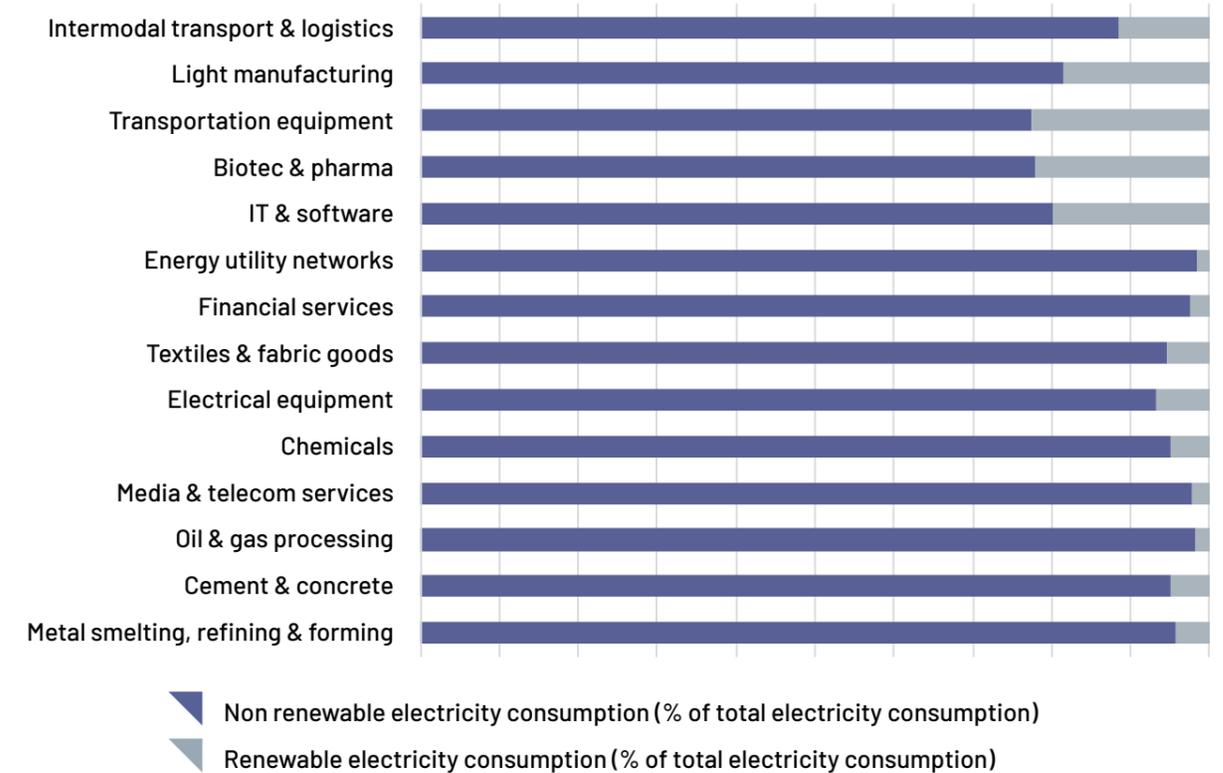
Although more than half of the analyzed companies' source renewable electricity and have RE share in their energy mix, 25 companies have reported various types of renewable energy targets, an increase from 21 companies as compared to 2020 – with some having more than one type of target. Renewable electricity consumption targets are still the preferred target by reporting companies. These 25 companies with renewable energy targets have reported 25.6 TWh of electricity consumption, of which 21% is from renewable energy sources.

**Renewable Energy Targets
(# of targets)**



Companies from different sectors are transitioning towards renewable electricity with a majority relying on self-generation and through PPAs. Oil and gas processing companies are torn between green transition goals and catering to the increased demand for fuel. The same is the case among the energy utility companies. These two sectors are crucial for the country's energy transition as India depends on the oil and gas sector for its power generation.

RE Consumption across Sectors



"We are working hard towards the Prime Minister's target of 500 GW from renewable energy by 2030. We had said we will do 40 per cent (energy from non-fossil fuel) by 2030. We will easily achieve the 50 percent target by 2030.⁷⁹

R.K.Singh,
Power and New & Renewable Energy Minister

⁷⁹ <https://economictimes.indiatimes.com/industry/renewables/india-to-achieve-50-clean-energy-share-500-gw-re-capacity-targets-before-2030-deadline-singh/articleshow/87604552.cms>



WATER SECURITY

Overview

Water is essential for production processes and service provisions. The deepening water crisis impacts production and investments in capacity thereby threatening livelihoods, fuelling inflationary trends and destabilizing the sustainable economic growth of nations. With industrial water requirements estimated to quadruple between 2005 and 2030 coupled with water efficiency challenges resulting in industries drawing three times more water

than consumption⁸⁰, corporates are feeling the pressure to integrate water issues into their strategies.

Water is critical for the functioning of sectors like agriculture, textiles, construction, chemicals, pharmaceuticals, health and medicine, mining and many more. Even service sectors like finance, trade and transportation are huge consumers of water as a resource. In this scenario, it becomes essential to use this resource responsibly and efficiently. And this is where corporate water disclosure becomes important.

80 http://social.niti.gov.in/uploads/sample/water_index_report2.pdf

What is corporate water disclosure?

Corporate water disclosure is the act of reporting to stakeholders information related to the current state of a company's water management, the implications of that state for the business and its stakeholders, and how the company develops and implements strategic responses.

Disclosure helps companies:

- ▶ Improve their internal understanding of water-related risks, opportunities, and impacts;
- ▶ Demonstrate good practice to stakeholders;
- ▶ Establish dialogue with stakeholders and strengthen trust and accountability;

Water Security – Leaders

Company Name	Score
Ambuja Cements	A
Mahindra & Mahindra	A
Tech Mahindra	A
Dr. Reddy's Laboratories	A-
Hindustan Zinc	A-
Ultratech Cement	A-
ITC Limited	A-

The CDP Water Security Questionnaire gathers corporate data on companies' current and future water-related risks and opportunities. Along with CDP's Water Scoring Methodology, the Water Security Questionnaire helps companies to drive improvements in water management and enables benchmarking against best practices.

In 2021, **37** Indian companies responded to CDP's water questionnaire compared to 28 companies in 2020, representing an encouraging jump of 32%. With an increasing number of companies responding to CDP's Water Security Questionnaire, companies like Hindustan Zinc, Ultratech Cement and Dr. Reddy's Laboratories have joined the ranks in becoming water security leaders with the likes of **Ambuja Cements, Mahindra & Mahindra, and Tech Mahindra.**

Water security disclosures

Water security at the core of corporate climate action

Ever changing water usage patterns due to population and economic growth are adding pressure on water resources and intensifying water scarcity. Global water consumption has increased by six times over the past hundred years and is continuing to mount⁸¹. It is estimated that the global demand for water will increase by 20%-30% by 2050 compared to the current level until and unless there is a dramatic shift in consumption patterns⁸². 2.3 billion people live in water stressed countries of which 733 million live in high and critically water stressed countries.⁸³ And as per the UN, 107 countries are not on track to have sustainably managed water resources by 2030. Globally the current rate of progress needs to be doubled.⁸⁴

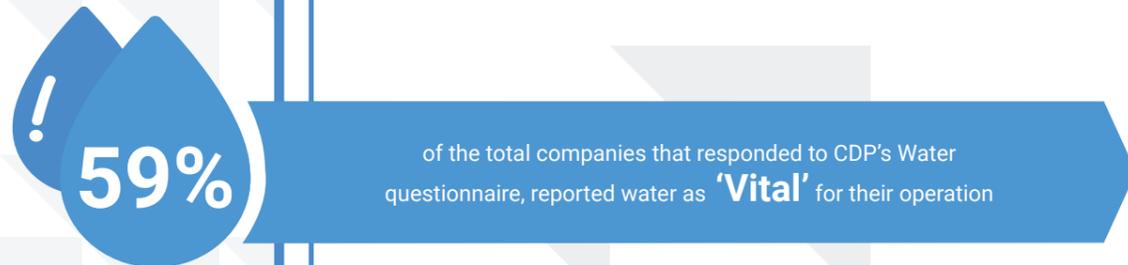
India's available water supply is expected to meet only half of the projected water demand by 2030, implying severe water scarcity for hundreds of millions of people and an eventual loss in the country's GDP by 6%.⁸⁵

At present, India is following the National Water Policy of 2012, but as of December 2021, the Ministry of Jal Shakti released a statement⁸⁶ citing the revision of this policy to address the water challenges of the sector. Amongst other recommendations, the Ministry of Jal Shakti launched Jal Shakti Abhiyan-I (JSA-I), a campaign for water conservation and water security, in covering 256 water-stressed districts of the country. The JSA-I, proposes to address the water issues of these water-stressed districts of the country through promotion of water conservation and water resource management focusing on an accelerated implementation of five target interventions, namely, water conservation and rainwater harvesting, renovation of traditional and other water bodies/tanks, reuse and recharge of bore wells, water shed development and intensive afforestation.

81 CDP's Non-Disclosure Campaign Report-2020
 82 United Nations - UN World Water Development Report 2019
 83 https://www.unwater.org/app/uploads/2021/08/PGA_brief_Infographic-scaled.jpg
 84 https://www.unwater.org/app/uploads/2021/08/PGA_brief_Infographic-scaled.jpg
 85 Niti Ayog- Water Index report-2018
 86 <https://pib.gov.in/Pressreleaseshare.aspx?PRID=178228>



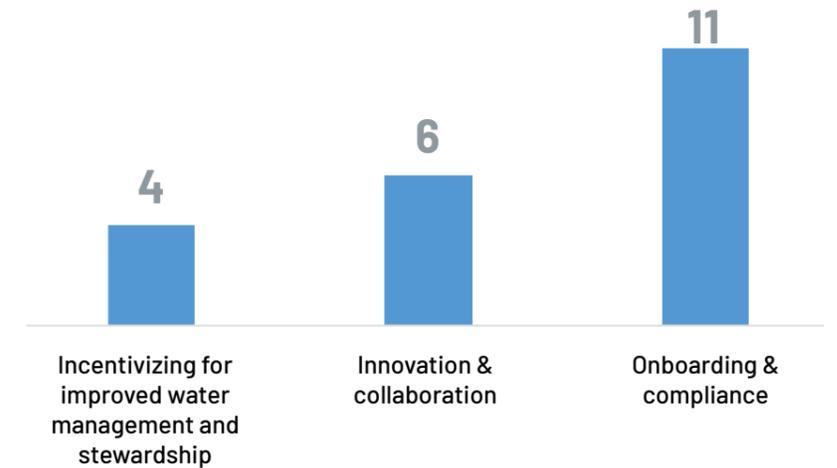
Businesses are a major player in managing water stress for the country and can contribute by managing their water consumption more responsibly as unavailability of water impacts business operations and performance particularly in water-intensive sectors such as textiles, chemicals and pharmaceuticals industries. Corporations can take the lead by adopting proactive steps to promote water security internally as well as with their value chain partners, thereby limiting not only their own risk, but also the risk of the stakeholders that rely on these systems. Implementing water measurement and reporting practices within the company as well as making water use as one of the annual performance criteria can help them to identify and eliminate their operational water challenges.



About 73% of water responding companies, (27 of 37), reported that they withdrew water from water-stressed areas and categorized water as a material risk. 59% of companies responding to CDP's Water Questionnaire categorized water as "Vital" to their operations; chemicals, cement and concrete were among the topmost sectors dependent upon brackish surface water/seawater for their operations.

19 out of the 37 CDP Water responding companies engaged with their value chain suppliers and customers on water-related parameters through one or more means. Amongst the various supplier engagement initiatives, developing an onboarding and compliance process for suppliers was the most common option (11 responding companies) followed by innovation and collaboration through conducting training for suppliers. Also, companies incentivized their supply chain partners through awards and recognition for best practices.

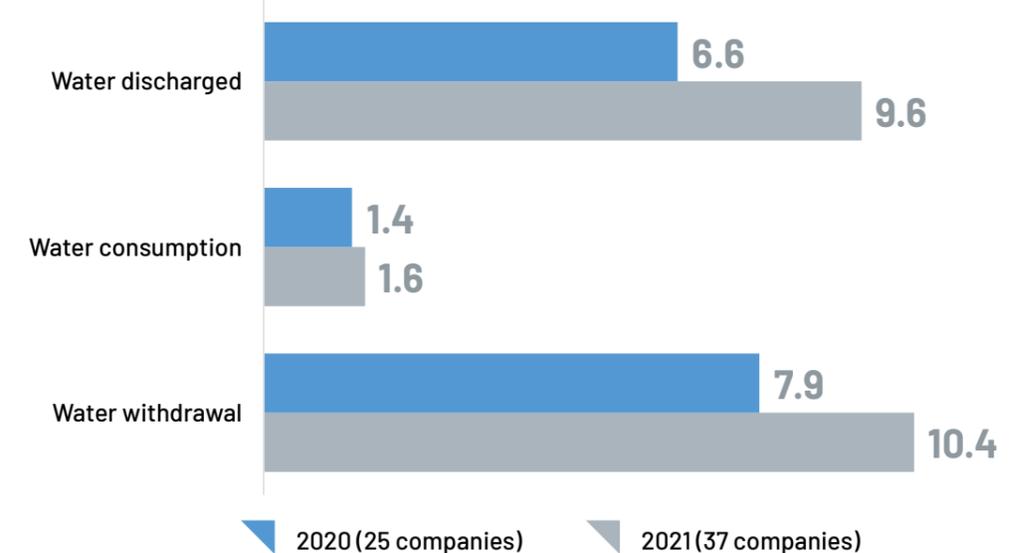
Supplier Engagement on Water-related Issues (# of companies, N=37)



Measurement & verification

In 2021, 37 companies responding to CDP's Water questionnaire withdrew, consumed, and discharged 10.4 million, 1.6 million, and 9.6 million megalitres of water, respectively. In 2020, these figures stood at 7.9 million, 1.4 million and 6.6 million megalitres, respectively (for 25 companies). While the number of disclosing companies rose by 48%, the volume of water consumption rose by 15% by corporates and as indicated by companies many companies are recycling or reusing water at site levels.

Total Water Usage by Companies (Million Megalitres)





Verifiable measurement of water withdrawal, consumption and discharge and related disclosures is essential for efficient water usage and management. Water accounting at the facility level was the most common verified data point as confirmed by companies responding to CDP. In addition, 46% of companies reported verified data on their current state of water affairs and 30% have disclosed verified water-related targets. The most widely adopted verification standard was ISAE 3000⁸⁷ (11 responding companies), followed by AA1000AS⁸⁸ (5 responding companies); other standards used were Higgs Index Verification⁸⁹ and ERM Limited Internal Standard⁹⁰.

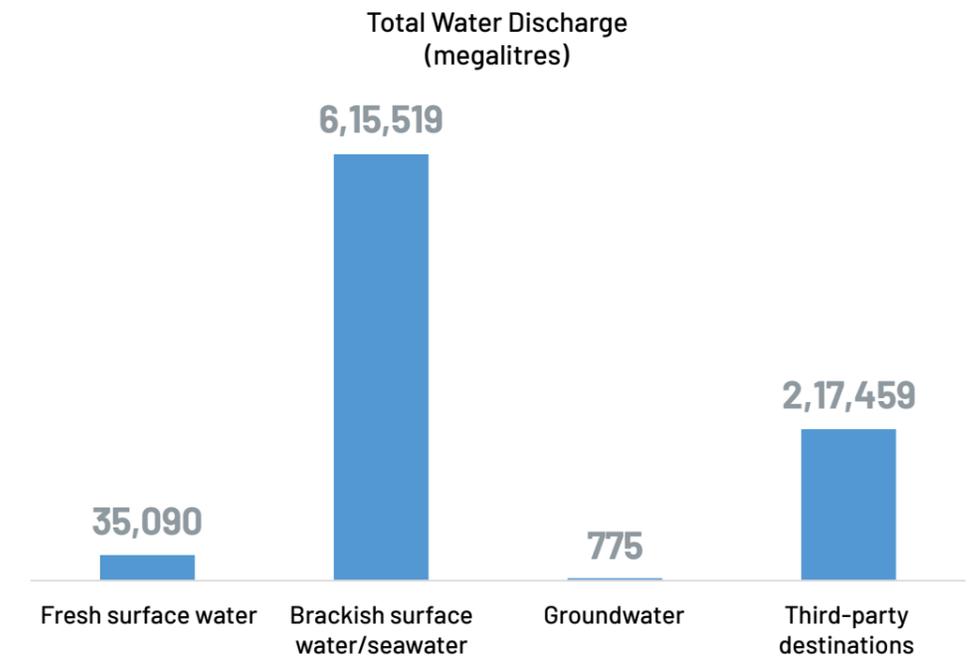
Mahindra & Mahindra (M&M)

- ▶ 20 of M&M's facilities comply with Zero Liquid Discharge (ZLD), a strategic wastewater management system where all wastewater is recycled or recovered for reuse at the facility-level.
- ▶ With ZLD, no water crosses the boundary of the site except through rainwater recharging (injecting to deep aquifers through specially created pits) and treated water used for gardening (through irrigation).
- ▶ During FY 2020-21, 791.24 megalitres of rainwater was recharged in a deep aquifer through dedicated rainwater harvesting pits and 241.02 megalitres of treated wastewater was used for gardening.



As the adjacent graph shows, brackish surface water/seawater is the highest water discharged destination by corporates, similar to the findings of 2020. This means an increased amount of salinity in the water which does not bode well for cultivation of most crops or even for flora and fauna as they do not have a very high level of tolerance for salinity, thus rendering the water unusable for a number of activities. With such high levels of brackish surface water/seawater discharge, companies increasingly need to desalinate plants, whilst setting targets to decrease this discharge. A positive finding of responses in 2021 was the marked decrease in the total amount of water discharge by companies due to the increased investment in water recycling

projects. Corporates are increasingly tracking water withdrawal and water discharge at each facility level with key drivers being "reducing environmental impact as confirmed by 38% of water responding companies and for "mitigating risks" as reported by 23%.



Targets and monitoring



Target setting plays a vital role in water management as it ensures not only financial gains but also helps to keep track of a company's annual progress. This exercise also helps the company to calculate their achievements, gaps and potential areas of improvements more accurately. A multi stakeholder approach in setting these targets is always advisable for capacity building. This will also inculcate a culture of awareness and continuous proactive engagement can lead to transitioning of policies that promote water security.

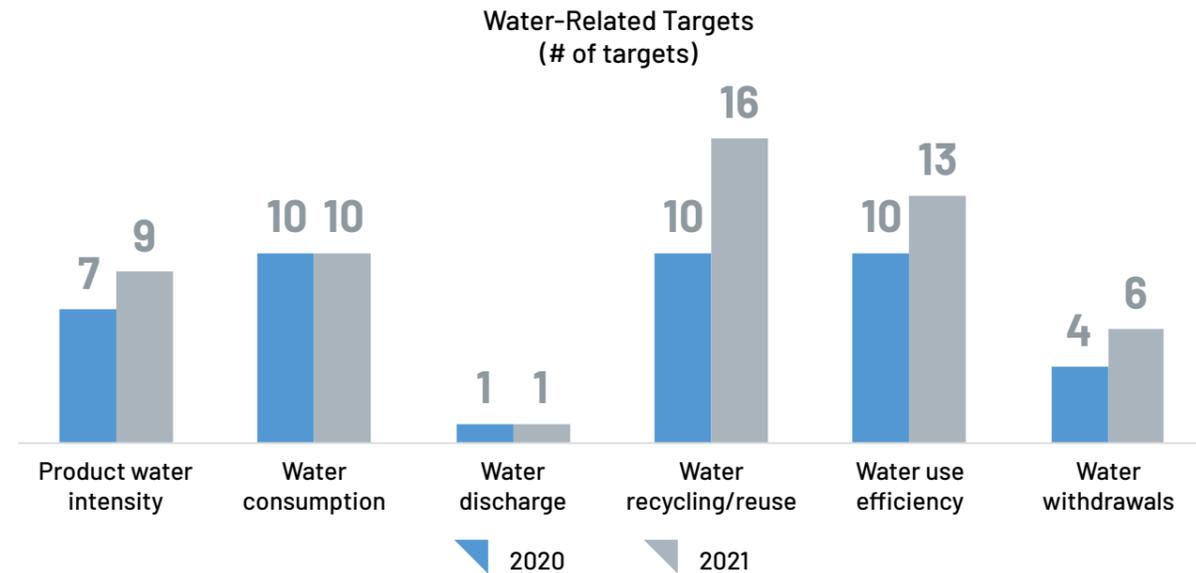
87 INTERNATIONAL STANDARD ON ASSURANCE ENGAGEMENTS (ISAE) 3000 - A standard used for assurance over non-financial information

88 AA1000 Assurance Standard - one of the common methodologies used by sustainability professionals for sustainability-related assurance engagements

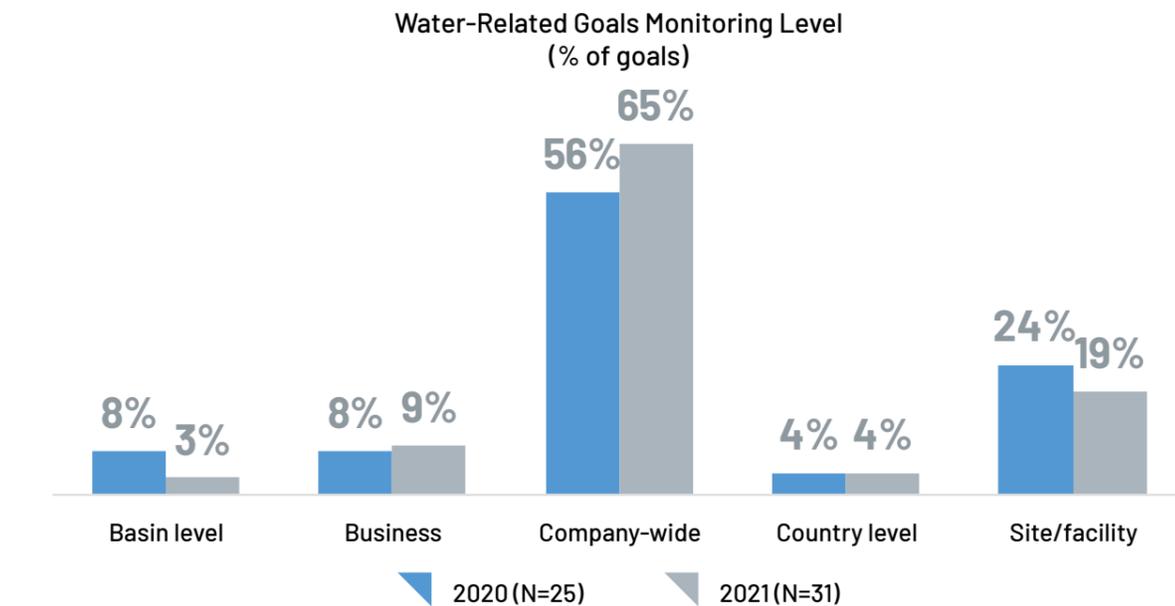
89 A facility-level sustainability impact assessment tool

90 <https://www.erm.com/service/capabilities/water-resources/>

In 2021 **95% of companies responding to CDP's Water questionnaire** (35 out of 37 companies) disclosed their water targets as compared to 86% of the 28 water responding companies in 2020. Of these, 32 companies monitored their targets at different levels: (i) **65% monitored their targets at a company-wide level** (ii) **19% at a site/ facility level** and (iii) **6% at a business level**.



For the year 2021, 22 of 37 companies disclosed their water goals in place. Corporates are setting net-zero targets and being water positive⁹¹ and minimizing their dependency on freshwater withdrawals by recycling or reusing the water and installing zero liquid discharge⁹² units at facility levels. Dr. Reddy's Laboratories is the only company responding to CDP that has committed to a 100% water neutrality by 2025, from the base year 2017-2018 and have successfully achieved 74% of their target so far.



⁹¹ A company is water positive when it puts more water back into the environment than it consumes
⁹² Zero liquid discharge (ZLD) is a strategic wastewater management system that ensures that there will be no discharge of industrial wastewater into the environment.

CDP & BRSR Connect

There are 13 BRSR questions aligned to the water theme and thus overlaps with the CDP Water Questionnaire. These questions include:

Section C:

- ▶ **PRINCIPLE 1:** Businesses should conduct and govern themselves with integrity, and in a manner that is ethical, transparent and accountable.
 - ▶ Fines/penalties/punishments/award/fees in proceedings with regulators and enforcement agencies/judicial institutions – details.
 - ▶ Awareness programmes conducted for value chain partners on any of the principles.
- ▶ **PRINCIPLE 2:** Businesses should provide goods and services in a manner that is sustainable and safe.
 - ▶ Percentage of R&D and capex investments in specific technologies to improve environmental and social impacts of product and processes to total R&D and capex investments.
- ▶ **PRINCIPLE 3:** Businesses should respect and promote the well-being of all employees, including those in their value chains.
 - ▶ Details of performance and career development reviews of employees and workers.
- ▶ **PRINCIPLE 6:** Businesses should respect and make efforts to protect and restore the environment.

- ▶ Details on water withdrawal by source, total withdrawal, total volume of water consumption, water intensity per rupee of turnover and water intensity.
- ▶ Environmental clearances in and around ecologically sensitive areas.
- ▶ Details of environmental impact assessments of the projects undertaken by entity based on applicable laws.
- ▶ Compliance with environmental laws in India; such as the Water Act, Air, Act, Environment Protection Act.
- ▶ Water discharged by destination and treatment level - Surface, ground, sea water, sent to third parties, others.
- ▶ Water withdrawal, consumption and discharge in water stress areas - Area, nature of operation, water withdrawal. Water withdrawal by source. Water discharged by destination.
- ▶ Does the entity have a business continuity and disaster management plan?
- ▶ Disclose any significant adverse impact to the environment, arising from the value chain of the entity. What mitigation or adaptation measures have been taken.
- ▶ **PRINCIPLE 7:** Businesses, when engaging in influencing public and regulatory policy, should do so in a manner that is responsible and transparent.
 - ▶ Details of public policy positions advocated by the entity.

Water-related risks and opportunities

Water scarcity due to climate change presents multi-dimensional challenges and one of the more profound impacts is the social issue of inadequate access to safe drinking water.

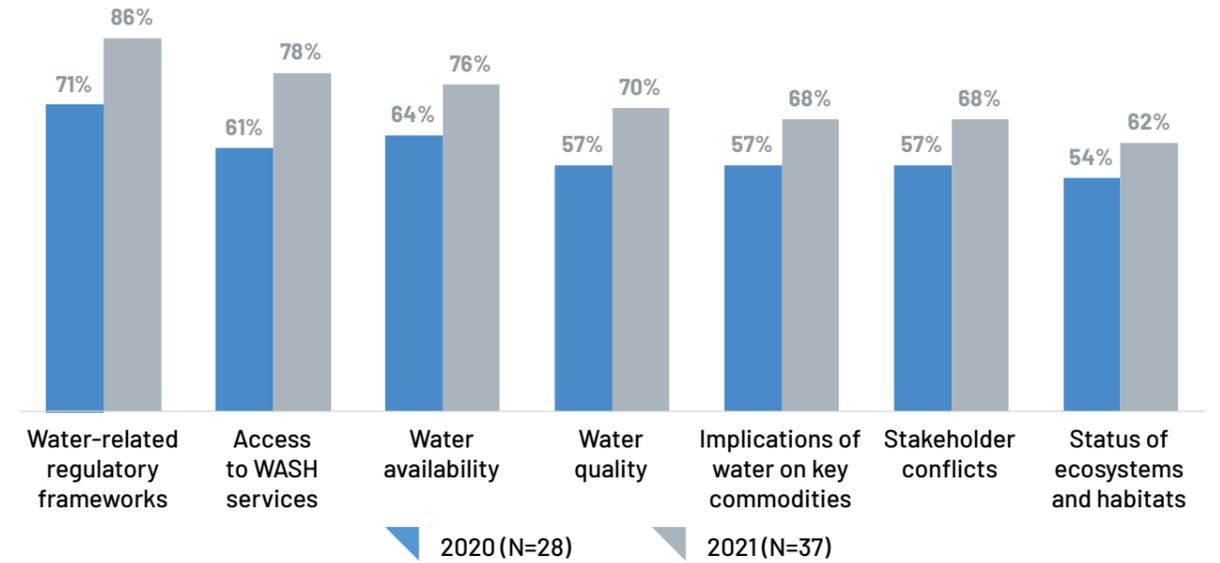
According to a report by NITI Aayog, the Government of India's think tank, nearly half the population of India faces extreme water stress with 75% of the country's rural households experiencing shortage of potable water and relying on contaminated sources that pose a major health hazard⁹³. Industries and corporates have a major role to play in reducing this water stress faced by India by becoming more responsible and accountable for their actions.

WATER-RELATED RISKS

Water stress is a risk multiplier. Alone, it is a powerful risk with the potential to upend socioeconomic and ecological systems. When compounded with other risks, such as those related to food and energy systems, politics, and infrastructure, it becomes detrimental.⁹⁴

Corporate efforts in making India water resilient are encouraging as they are prioritizing water stewardship which is not only relevant for the business but their stakeholders as well. Among the various issues that were considered by businesses in the year 2021, water regulatory frameworks received the greatest attention, with 32 out of the 37 companies always including it in their risk assessment to ensure compliance as seen in the graph. Other important issues included access to WASH⁹⁵ services, water availability, and water quality. The key findings indicate a positive trend towards higher levels of integration of water-related risks in the daily functioning of companies in 2021, as compared to the previous year.

Contextual Issues Considered in Water Risk Assessment (% of companies)



Inaction costs 12x more than action

Indian businesses disclosing water-induced risks through CDP indicate that the potential financial impacts of water risks are far greater than the costs of addressing them. Based on reported financial impact.



Total water-related risk:
INR 4,527 million.



Total cost of response to risk:
INR 365 million.

Water scarcity has been identified as one of the three systemic risks of highest concern by World Economic Forum. This manifested itself in the form of dwindling groundwater tables, decreased river flows, heavy pollution, and rising costs of treatment and supply as well as conflicts over use⁹⁶. According to the book "Watershed: How We Destroyed India's Water and How We Can Save It", India is facing its worst water crisis ever recorded, and some believe that by 2030 it will fail to meet half its water demand. Water availability per person in India has been decreasing for decades, leaving parts of the country in a cruel Day Zero situation, shuttering factories and pushing farmers over the brink. As the climate heats up, it is likely that swathes of land will be submerged, water-related extremes will reshape industry and famine will revisit the country⁹⁷.

93 <https://www.indiatoday.in/magazine/cover-story/story/20210329-the-great-indian-thirst-1781280-2021-03-20>
 94 <https://www.mckinsey.com/business-functions/sustainability/our-insights/water-a-human-and-business-priority>
 95 Water, Sanitation and Hygiene (WASH)

96 <https://waterfootprint.org/en/about-us/news/news/water-scarcity-challenges-business/>
 97 <https://www.amazon.in/Watershed-Destroyed-Indias-Water-Save/dp/9391028683>

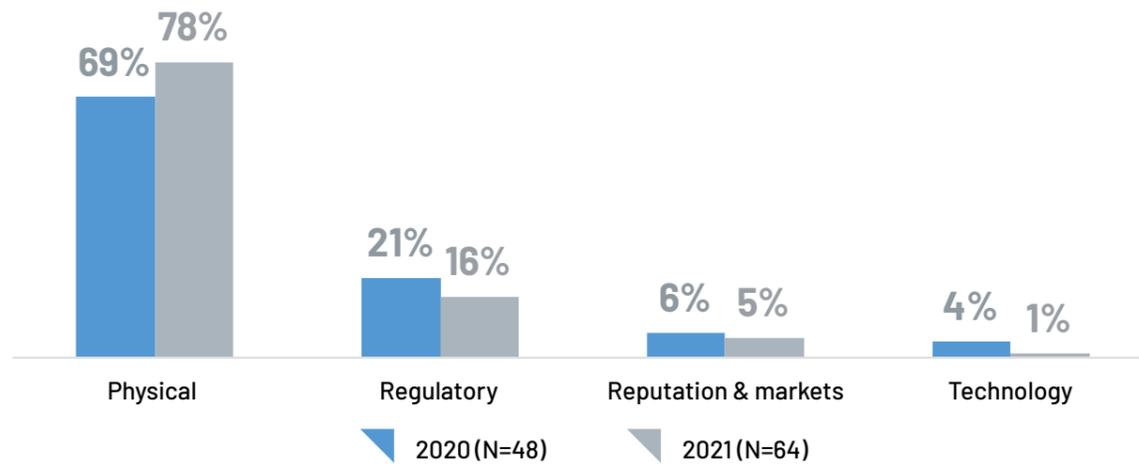
In this new world, the evolving preferences of customers, investors and the government make mainstreaming water in one's business strategy a source of competitive advantage.⁹⁸

rank highest in terms of water threats followed by regulatory risks (e.g. higher water prices and statutory water withdrawal limits).

As the graph below shows, physical risks (such as floods, drought and increased water stress)

This indicates a direct link between increasing water risks and rise in the Earth's surface temperature across the globe.

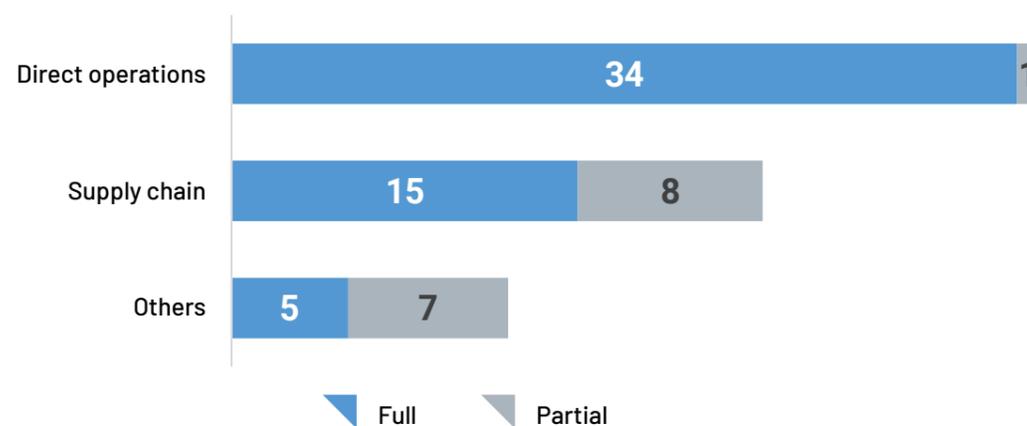
Water-related risks identified by companies (% to total risks)



Corporates are cognizant of the importance of managing the impacts of water-related risks to their business. This is evident from the fact that 95% (35 out of 37) responding companies undertake a water-risk assessment internally. The assessment encompasses a company's direct operations, supply chain and other stages of the value chain. Direct operation is the most

sought-after business area for risk assessment and 92% of reporting entities gave a complete account of this. This is a clear indication that business leaders are getting more serious about water issues as water vulnerability can potentially disrupt critical activities and affect the financial bottom line of companies.

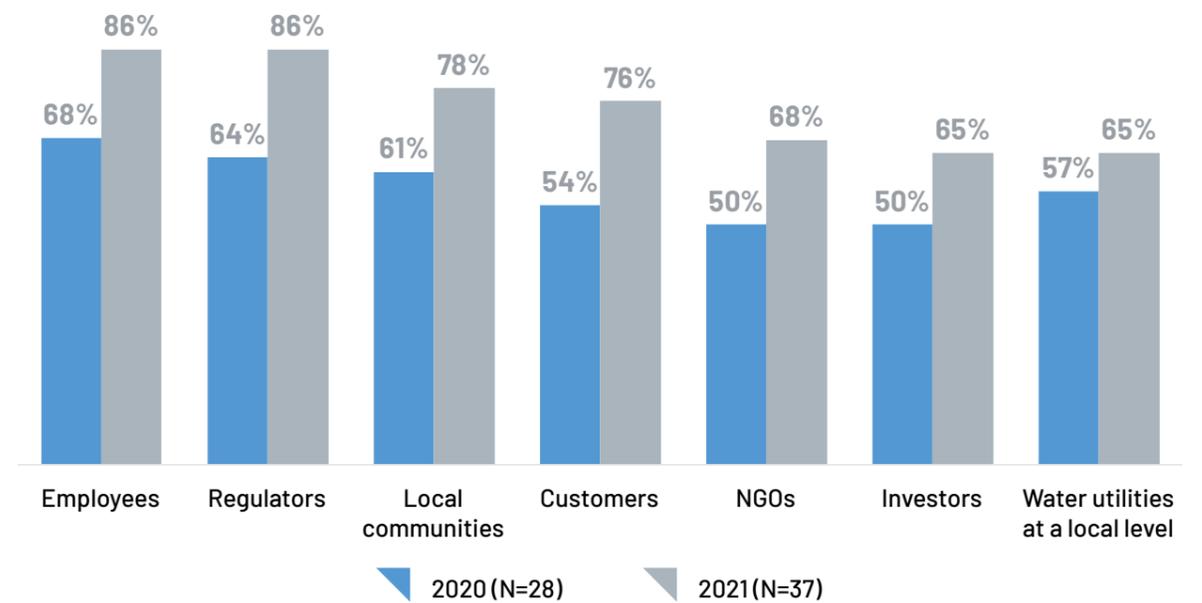
Water-Related Risk Assessment Coverage (# of companies, N=37)



Companies understand that stakeholder engagement is an effective strategic approach to achieve water policy outcomes in terms of efficiency and equity, and will also help prevent conflicts, manage trade-offs, and raise awareness around sustainability⁹⁹. In 2021,

a greater share of companies reported engaging with stakeholder groups than in 2020 with employees and regulators representing the most actively involved stakeholders followed by local communities and customers, as can be seen in the figure below.

Stakeholders considered in Water Risk Assessment (% of companies)



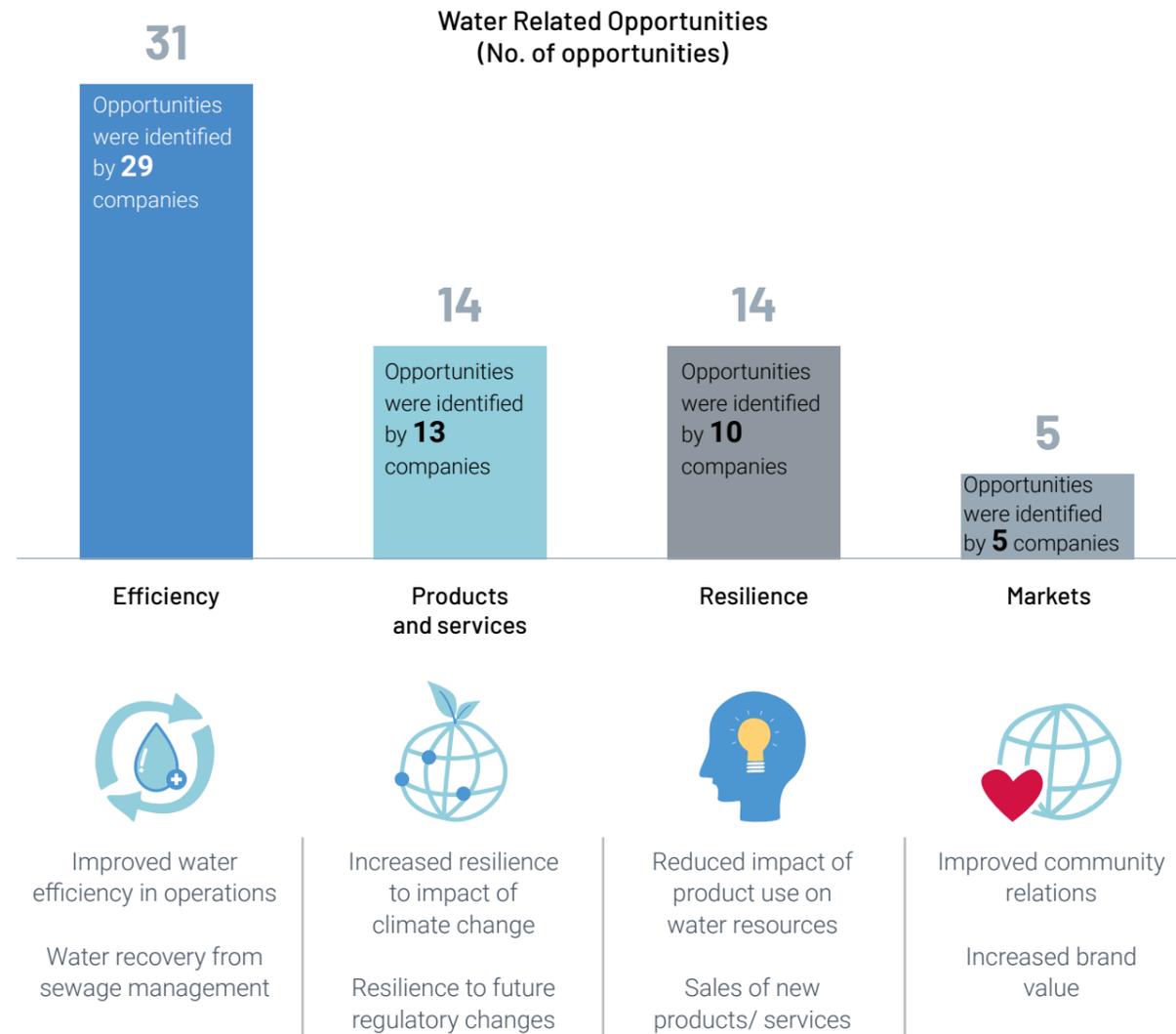
WATER-RELATED OPPORTUNITIES

Corporates have also become aware and accepting of the benefits that water conservation presents. Increasingly business leaders understand how they can become more sustainable and resilient to the shocks of erratic water supply. 95% of companies reporting through CDP identified opportunities which can be leveraged. Efficiency has been prioritized by 78% organizations prompting measures such as improved water efficiency

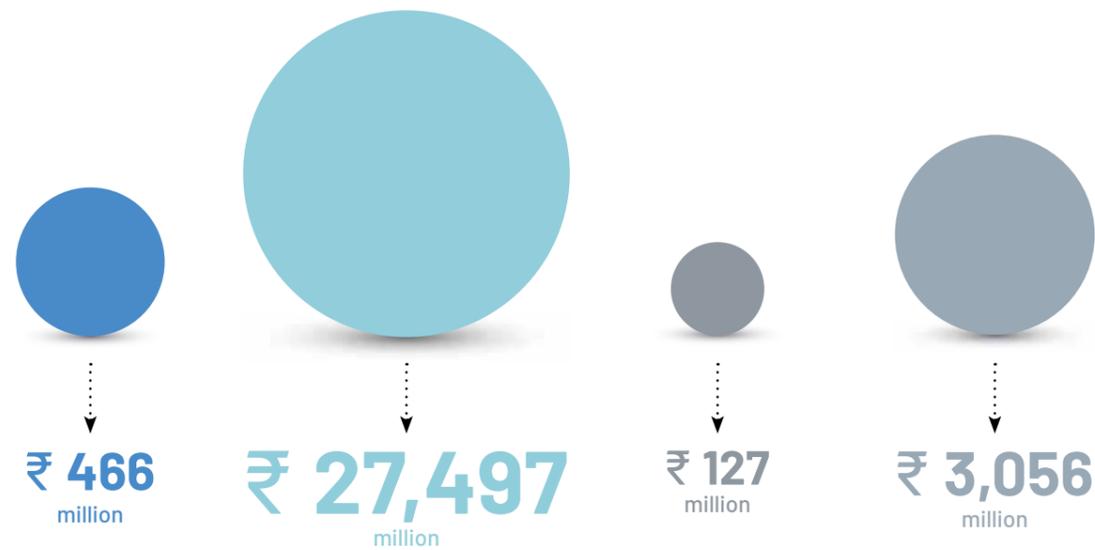
in operations and water recovery from sewage management whereas products and services have been determined by 35% responders and 27% enterprises consider opportunities related to resilience for reducing the impact of product use on water resources. In 2020, 75% companies had identified efficiency and 32% sought to benefit from opportunities in products and services, thus indicating that a greater share of business entities are now aware of the advantages of working in these areas.

⁹⁸ https://www.business-standard.com/article/pti-stories/by-2030-india-may-not-meet-half-of-its-water-demand-book-121121000855_1.html

⁹⁹ https://www.riob.org/IMG/pdf/OECD_WGI_WG1_Stakeholder_Engagement___scoping_note_FINAL-3.pdf



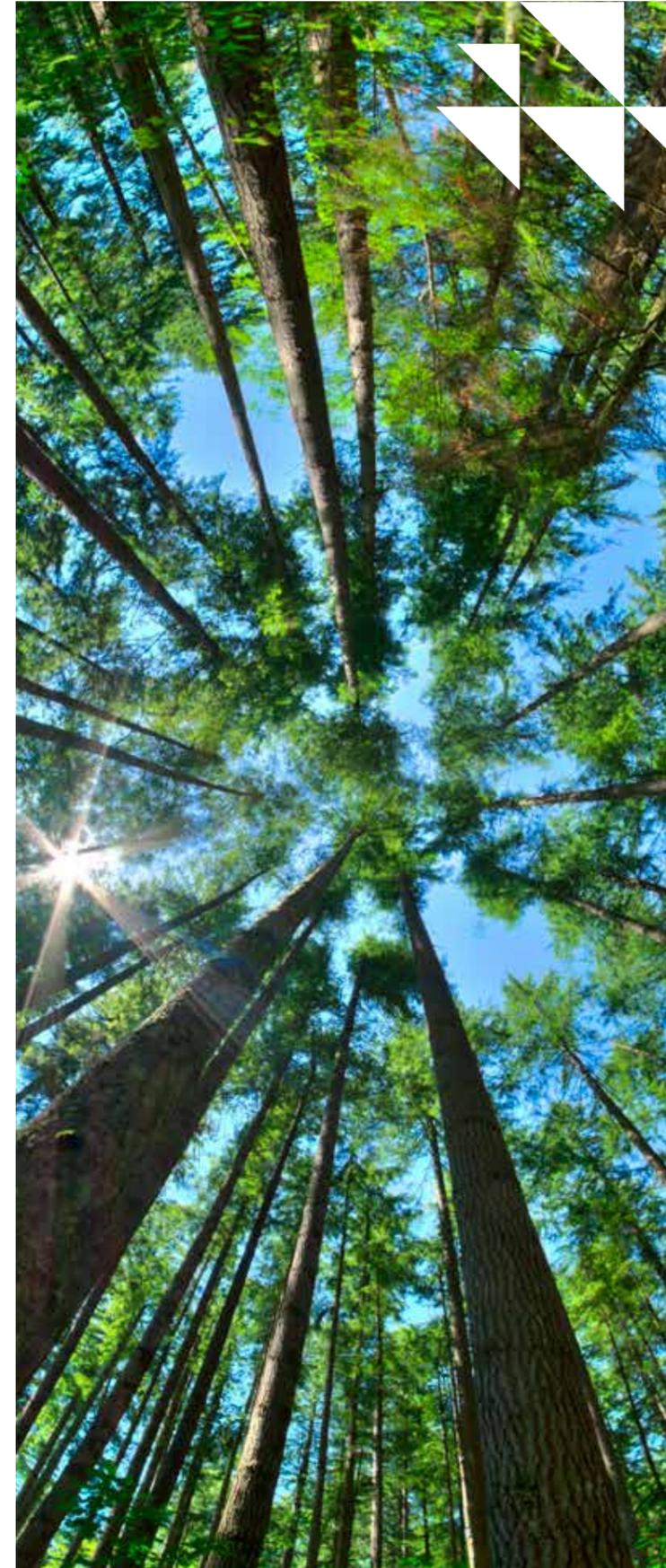
Estimated Financial Impact (INR Billion)



COLLECTIVE ACTION TO PROTECT FORESTS

Ignoring deforestation will cost businesses far more than taking definitive action

The COVID-19 pandemic disrupted lives and livelihoods around the world, and the global economy shrank by around 3.5% in 2020¹⁰⁰. Despite this, the loss of primary tropical forests went up by 12% in 2021 compared to 2019¹⁰¹, continuing the upward trend of deforestation. The world has steadily seen an increase in forest fires, and even wetlands have not been spared from this disaster. Rising temperatures and the steady loss of forest cover have created drier and warmer conditions, increasing the risk of further forest fires and increasing the carbon emissions, subsequently contributing to yet more rises in temperature... the vicious circle continues.¹⁰²



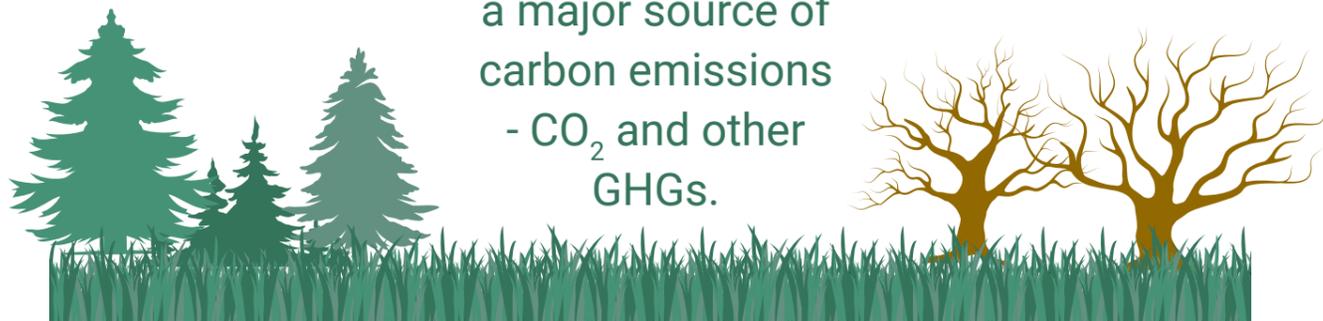
100 International Monetary Fund. (2021). World Economic Outlook Update- <https://www.imf.org/en/Publications/WEO/Issues/2021/01/26/2021-world-economic-outlook-update>
 101 WRI (2021). 2021 Must Be a Turning Point for Forests. <https://www.wri.org/insights/2021-must-be-turning-point-forests-2020-data-shows-us-why>
 102 (<https://www.wri.org/insights/2021-must-be-turning-point-forests-2020-data-shows-us-why>)



Forests absorb 7.6 billion tonnes of carbon dioxide each year, 1.5 times more carbon than the United States emits annual, making them climate regulators¹⁰³. Therefore, limiting deforestation is a critical tool to achieve the Paris Agreement and Sustainable Development Goals. For the world to be aligned to 1.5°C, no further deforestation can occur from 2030 onwards¹⁰⁴. There is no 1.5 degree future without forests.

Forests hold the largest share of terrestrial carbon on earth and therefore, when they are destroyed by burning or cutting or by any other means, they become

a major source of carbon emissions - CO₂ and other GHGs.



Forest disclosures

India submitted its Nationally Determined Contribution (NDC) to the UNFCCC in October 2015, which cites the various climate action efforts that are being undertaken by India post 2020. Out of the many commitments, one of them is that India should create an additional carbon sink of 2.5 to 3 billion tonnes of CO₂ equivalent through additional forest and tree cover by 2030.



103 <https://www.wri.org/insights/forests-absorb-twice-much-carbon-they-emit-each-year>
104 Rogelj, J., et al. (2018). Mitigation pathways compatible with 1.5°C in the context of sustainable development. <https://www.ipcc.ch/sr15/chapter/chapter-2/>

Financial opportunities, impact & risks

As is the case globally, in India too, all economic and industrial operations have either a direct and/ or indirect impact on their environment. Thus, it is imperative for companies to be more conscious of the environmental impact that they are leaving behind. Adopting the policy of mandatory sustainability disclosures is a good way for companies and businesses to keep a check on the extent of their carbon footprint with regards to forest security.



Companies identified financial opportunities

worth **1.94 billion** (INR) in palm oil commodities

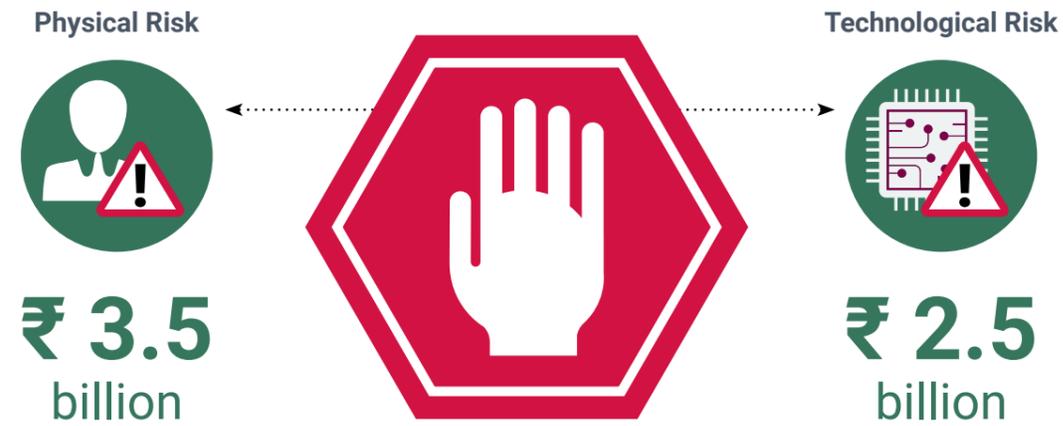
Findings presented by the disclosure policy will aid companies in taking more accountability and becoming more responsible about their usage of forest and forest-related products as a resource as well as rethinking their strategies around consumption. Setting targets and assessing the risks and opportunities associated with protecting forests will create new opportunities and promote inventions that can help in reducing deforestation.



3 companies integrated forest-related issues into long-term strategic business with emphasis on greater traceability and increased sustainable sourcing

As per CDP 2021 disclosure data, three in five companies reported an estimated financial impact of INR 6.1 billion due to forest risk commodity – this in all cases relating to palm oil, and in two to food and beverage and another in chemicals or materials.

Forest-related financial impacts reported by companies



A significant portion of the total palm oil utilized by these companies is obtained from Malaysia and Indonesia. These countries witnessed extreme weather conditions (physical risk) in the past year and thus caused a disruption in the supply chain, resulting in a loss of INR 3.5 billion. Another INR 2.5 billion loss is attributed to technological risks like loss of crop as drought resistant variety of crops are still non-existent. Apart from these, regulatory risks, caused by central and state policies of tariff and price impacts operations and farming policies.



2 of the participating companies had incentive systems in place - monetary rewards and performance linked targets for key personnel within the company for achieving targets and non-monetary incentives for supply chain partners



On different relevant touch points for increased awareness, producing sustainable products and regulating supplier activities.



Four companies reported measurable and time bound forward-looking targets for increasing sustainable production and/or consumption of palm oil. These included the use of sustainable sources, employing traceability and monitoring systems to track the product cycle at all points of production – and these companies are well on track in achieving their aims. One of the disclosing companies – Godrej Agrovet has been proactive in adopting a carbon sequestration soil condition improvement and water conservation initiative. Facts disclosed by the participating companies also indicate that they are paying attention to their forest policies, public commitments and making reporting an inclusive part of their operations.



Safe forest initiatives by disclosing companies



GODREJ AGROVET

Godrej Agrovet has board-level oversight of forest-related issues within their organization and has a sustainable palm oil policy and pledge to use 100% sustainable PO/PKO derivatives by end of 2025 latest, by means of mass balance approach. Their palm oil business is already using more than 99% energy from renewable sources. Godrej Agrovet is also part of the Roundtable on Sustainable Palm Oil (RSPO).



GODREJ INDUSTRIES

The company has a well-documented forest-related policy committing to eliminate conversion of natural ecosystems and committing to no deforestation, no planting on peatlands and no exploitation (NDPE) and has applied this policy to their operations as well as to their suppliers. As a part of the Sustainable Palm Oil Policy, Godrej Industries have pledged to use 100% palm oil/palm kernel oil derivative by the end of 2025.



DABUR

The Chief Operating Officer, along with the Bio-Diversity Development team, are responsible for sustainability-related issues at Dabur. Dabur has also partnered with local NGOs across the country and provides special training programmes for farmers, villagers, and tribal communities across the country on environment-friendly cultivation processes.



HINDUSTAN ZINC LIMITED (HZL)

HZL has board-level oversight of all the biodiversity - related issues with the CEO responsible for all the decisions. The use of Integrated Biodiversity Assessment Tool (IBAT mapping tool) mapping tool is utilized for its biodiversity risk screening process. The company also has strong engagement ties with communities and NGOs like BAIF Institute of Sustainable Livelihood Development And with 'Samadhan', HZL's flagship program for on-farm sustainable livelihood, reaching out to 13,835 farmers through agriculture interventions and 15,000 families through livestock interventions.



GODREJ CONSUMER PRODUCTS LIMITED (GCPL)

GCPL has a sustainability committee in place responsible for forest-related issues which is headed by the Chairperson of the Board. Their 2025 vision is to achieve 50% of palm oil to be sourced from sustainable sources. They are also a part of the Roundtable on Sustainable Palm Oil (RSPO). The company tracks the sourcing of palm oil within India used in their operations and for timber products it tracks the commodity up to their first importer for its packaging operations and paper coming from recycled sources. GCPL engages with its direct suppliers for both timber and palm oil through capacity building workshops to support and improve their ability to comply with the company's forest-related policies and commitments.



CITIES AND CLIMATE ACTION

Overview

In a rapidly urbanizing world, cities are both the major contributors and the receptors of the detrimental impacts of climate change. With India's urban population growing at an alarming rate of 2.3% annually and urbanization spreading at 34.9% annually, the city-based impacts of climate change are affecting all of us individually and as a community. Cities are crumbling under the pressures of population density and demands on their limited resources. With imbalanced economic opportunities between rural and urban areas, and a shift in the

youth's choice of occupations, cities become a favoured destination for all kinds of workers and migration is at a high. Thus, cities are a major source of income for economies and a hub for people in search of opportunities.

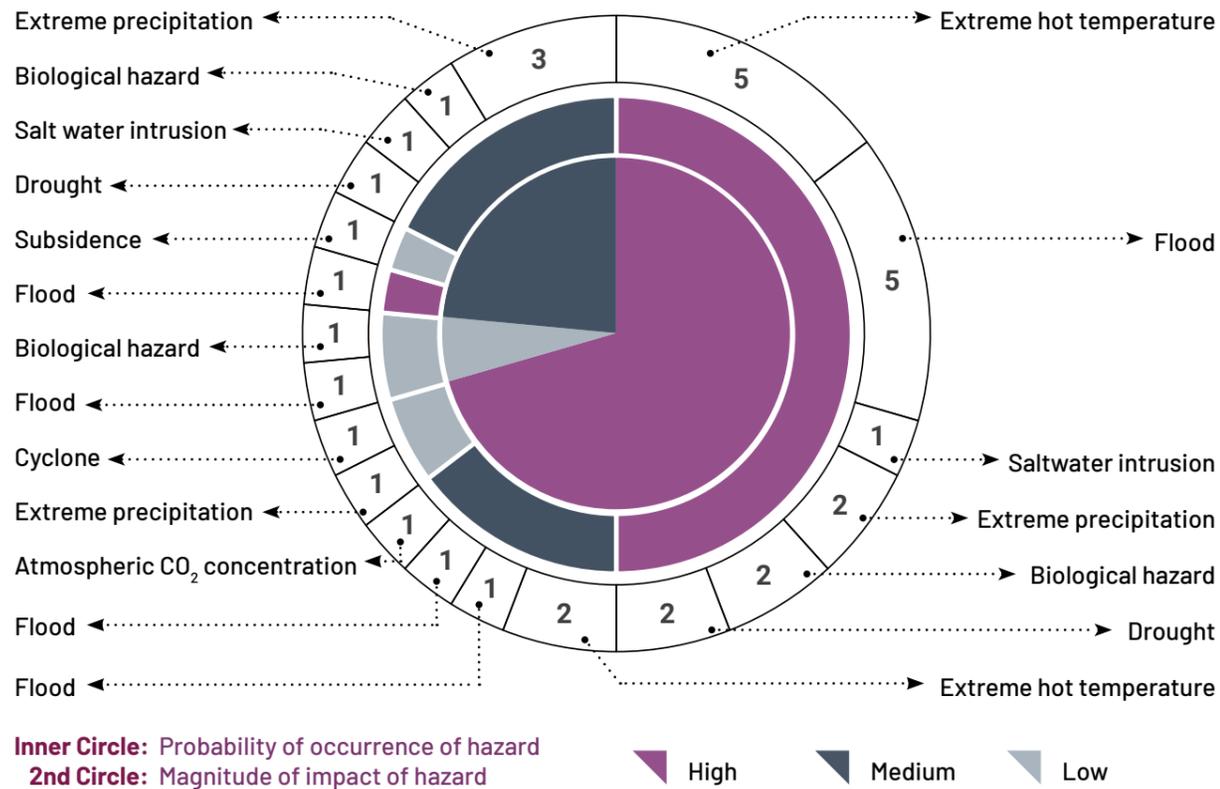
Under these circumstances, cities must become even more responsible in how they respond to climate change and the use of natural resources. Collectively, cities need to commit to tackling climate change to create more sustainable and resilient places for people to live in and work.

Climate hazard, vulnerability and adaptation

Climate hazards and extreme weather conditions are no longer strangers to any city, state or region. They are becoming very common and the frequency of occurrence is also increasing. Any region that suffers a climate related event faces huge economic and infrastructural repercussions, along with the loss of human lives and livelihoods. To rectify this situation, it is important for a cities to identify the areas most vulnerable to climate change and develop ways of adapting to this change. According to the cities hazard events data

reported through CDP in 2021, a total of 34 potential climate hazard events were reported by 14 cities in India. They further added the probability of occurrence and the magnitude of their impact on cities categorized as high, medium, and low as shown in the figure below. Cities were also asked to predict future scenarios with respect to change in frequency and intensity of these climate hazards. Extreme hot temperatures and floods emerged as the most predicted climate hazard with higher probability and higher magnitude of impact, putting people and infrastructure at risk. Another common prediction was the likelihood of increase in the frequency and intensity of global warming and floods in the future.

Climate hazard probability and impact on cities (Probability & Magnitude for 14 reporting Cities)



Considering the probability and consequence of these hazards, as well as the expected future change in frequency and intensity, cities have reported social impacts such as increased demand for public services including healthcare

services; increased risk to already vulnerable populations; fluctuating socio-economic conditions; population displacement; increased incidence and prevalence of disease and illness and loss of traditional livelihood.



9

Total number of cities that conducted the climate risk and vulnerability assessment



8

Total number of cities that published plans on climate change adaptation and resilience building

Some of the commonly reported adaptation actions include: projects and policies targeted at those areas most vulnerable prone to hazards, soil retention strategies, flood defenses and flood mapping; and retrofitting of existing buildings.

Most reporting cities are taking initiatives to conduct city level climate risk and vulnerability assessments (CRVAs) to adapt climate actions.



Challenges in adapting to climate change

Adapting to any change is always a challenge and making modification to the functioning of a whole city with multiple ecosystems is not an easy task. When asked whether the reporting cities faced any challenges that are inhibiting adaptation to climate change and resilience building of communities, seven cities came forward to make disclosures. The findings are listed in the table below:

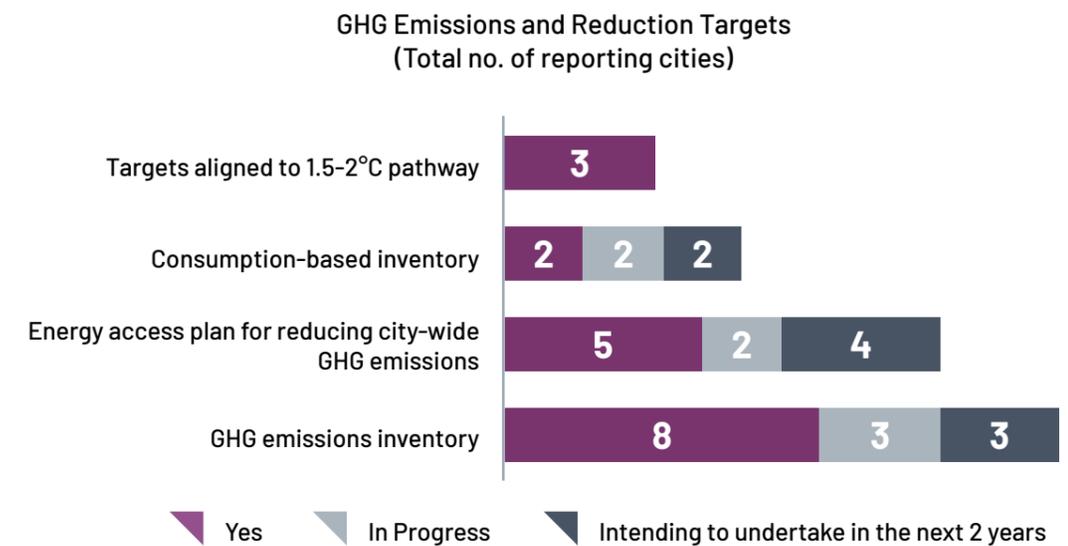
Adaptation challenges identified by seven reporting cities												
Cities	Rapid urbanization	Infrastructure	Access to basic services	Environmental conditions	Migration	Access to healthcare	Economic diversity	Poverty	Political stability	Land use planning	Cost of living	Access to quality / relevant data
Bangalore			Yes									
New Town Kolkata	Yes											
Kochi	Yes			Yes						Yes		Yes
Surat	Yes		Yes	Yes	Yes			Yes	Yes			
Rajkot	Yes	Yes	Yes				Yes					Yes
Bhopal						Yes						
Indore		Yes	Yes		Yes							

Rapid urbanization emerged as a roadblock while adapting to climate change, as did access to basic services like drinking water, sanitation facilities, power and housing. These real time challenges are huge problems within themselves and require attention in their own right. Therefore, adapting to climate change becomes a herculean task for any city and needs to accommodate all possible socio-economic considerations at the planning stage.

GHG emissions and reduction

As much as cities are at risk from climate change, they are also at the centre of activities that cause climate change. A GHG emissions inventory enables cities to measure their overall city-wide emissions, as well as helps to understand the emissions contribution of different activities within the city.

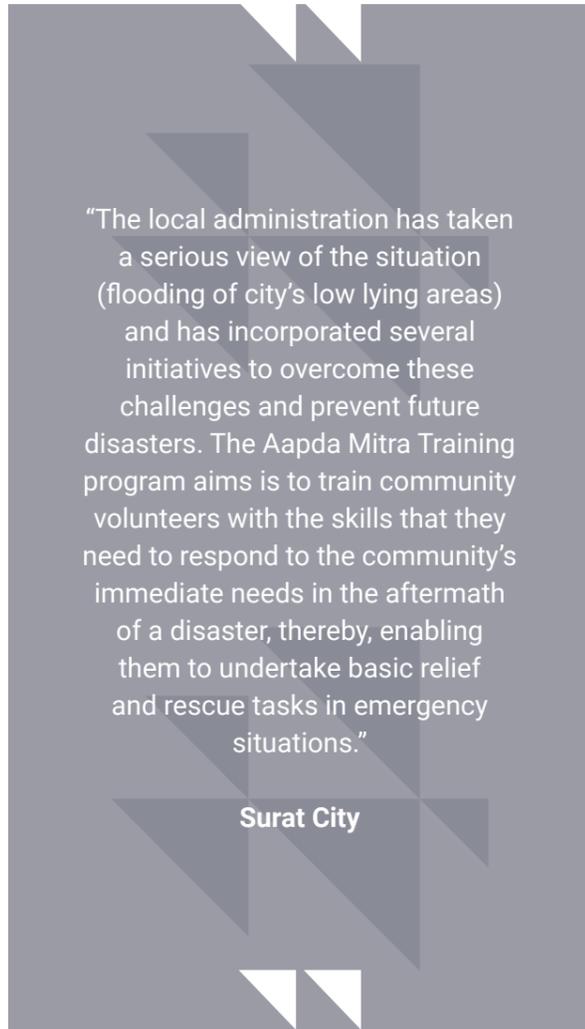
Eight cities (Mumbai, Kolkata, Chennai, Pune, Surat, Rajkot, Indore and Kochi) reported to have city-wide emissions inventory and seven of them (excluding Indore) also set city-wide base year emission reduction targets. CH₄, CO₂, and N₂O are the most common reported gases included in the inventory. Five reporting cities (Delhi, Chennai, Surat, Hyderabad and Rajkot) have taken action to prepare their climate change mitigation or energy access plan for reducing city-wide GHG emissions.



* Not all reporting cities have responded to all questions on GHG emissions and reduction targets. Therefore, the numbers on each bar do not add up to 14.

Consumption-based inventories help cities to track their emissions from production and consumption of goods and services by the city residents. Pune and Surat are the two cities reported to be developing their city-level consumption-based inventories.

Measuring GHG emission is the first step. Cities must then set emissions reduction targets aligned with the 1.5 - 2°C pathway set out in the Paris Agreement. Three Indian cities are at the forefront of setting these targets. Chennai and Surat have set their emissions reduction targets in line with the Paris Agreement. Chennai has signed for the D2020 programme and is planning to create a City Climate Action plan over the next two quarters. Likewise, Surat has set an ambitious target of lowering the emission intensity of its GDP by 40% against National NDC targets of 33% to 35%. Cities have also started implementing actions in various sectors such as transport, waste and wastewater and energy to achieve overall emission reduction targets by 2030.



“The local administration has taken a serious view of the situation (flooding of city’s low lying areas) and has incorporated several initiatives to overcome these challenges and prevent future disasters. The Aapda Mitra Training program aims is to train community volunteers with the skills that they need to respond to the community’s immediate needs in the aftermath of a disaster, thereby, enabling them to undertake basic relief and rescue tasks in emergency situations.”

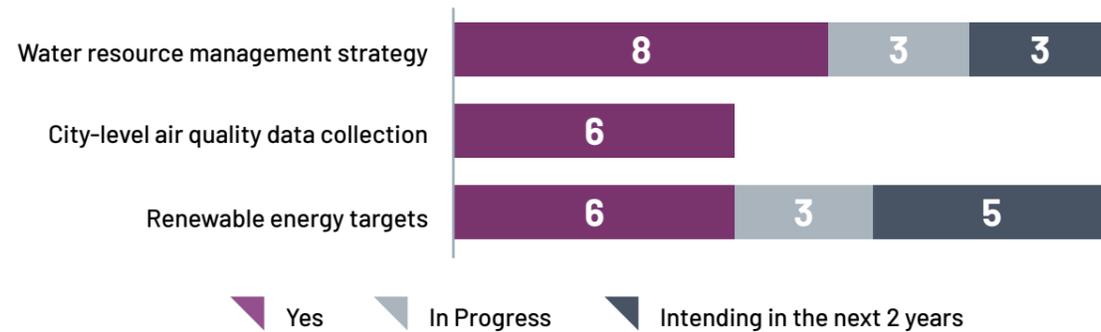
Surat City

Resource use and management by cities

Cities are stepping forward towards transitioning to clean energy and resource management within limits. Indian cities have started setting and delivering renewable energy targets, signaling to individuals and businesses that they are ready to seize the opportunities offered by low-carbon transition. Six reporting cities including Delhi, Chennai, Surat, Rajkot, Indore and Rourkela have set city-wide renewable energy targets. Of these six cities, three have also reported their progress in achieving their targeted renewable energy consumption levels.

Chennai is leading with 70% achievement of its renewable energy target followed by Surat at 45% and Delhi at 15%. Out of the total number of reporting cities, 9 cities reported to have installed 4427 MW of cumulative capacity of renewable energy out of which 99% of the installed capacity uses solar PV as a source of energy. Out of the total number of reporting cities, nine cities reported to have installed 4427 MW of cumulative capacity of renewable energy, out of which 99% uses solar as a source of energy.

Resource Use, Target Setting and Management (# of reporting cities)



Air quality in Indian cities is a big concern. Rapid urbanization, vehicular growth and inefficient infrastructure facilities are some of the most common factors degrading the city air quality. Delhi, Mumbai, Bangalore, Kolkata, Chennai and Kochi have reported to collect city-level air quality data. PM_{2.5} is an air pollutant that

affects the human health if it is present in high concentration in air. In the last three years, there has been an average concentration of PM_{2.5} (1 year (annual mean) of 40.8 ug/m³ in Mumbai, Kolkata, and Chennai, which can cause discomfort when breathing in asthma patients, elderly people and children.



9 out of 14 cities have reported to have a substantive risk of water security at present which may aggravate in future. Increased water scarcity and water demand due to expanding cities are the most common reported risk drivers with estimated high probability of impact.

Climate change mitigation action plan

A mitigation action plan is very important for cities to fight climate hazards as well as adapt their cities to the ever changing climate impacts. Specific actions, customized plans and activities and processes need to be laid out to reduce the long-term risks of climate change.

The table below highlights the common mitigation actions taken by the cities.

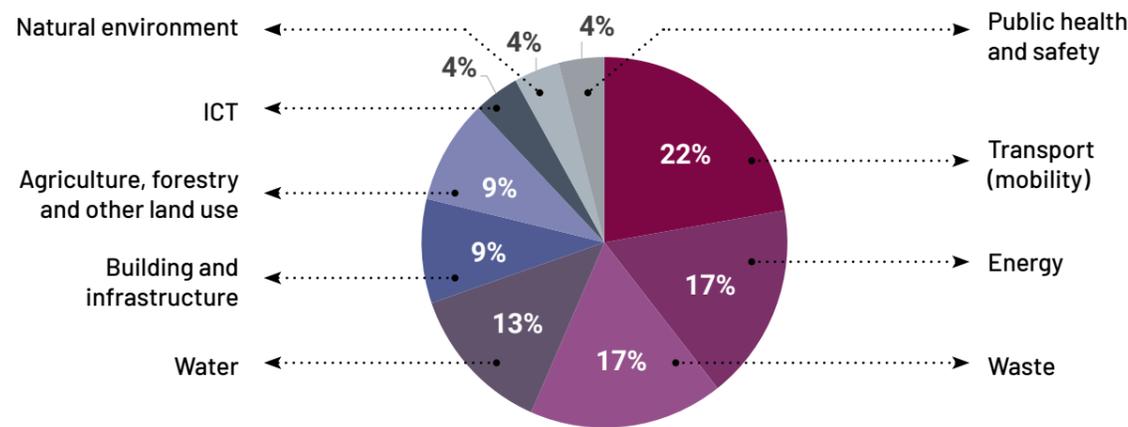
Mitigation action by reporting cities								
Migration actions/ cities	Waste prevention	Recycling and landfill	Energy efficiency/ retrofitting	Improving fuel economy	Water efficiency	Performance rating and reporting	Green spaces/ biodiversity	Bus infrastructure services
Surat	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Rajkot		Yes	Yes	Yes	Yes			
Kochi						Yes	Yes	Yes
Delhi				Yes	Yes			Yes
Bhopal		Yes						
Indore		Yes						
Pune						Yes		

Urban transportation is a key emission source and thus plays a critical role in planning mitigation steps across cities. Only three out of 14 cities have set up a low or zero emissions zone and to achieve this, have adopted the policy of placing restrictions on high polluting vehicles in a significant area of their city. Energy efficiency is a more common initiative taken up by reporting cities with six out of fourteen cities having targeted to increase energy efficiency in the future.

Investment opportunities

As previously mentioned, rapidly expanding urban cities provide huge opportunities for investment. Given a conducive and well adapted green ecosystem, business opportunities become more lucrative and inviting for companies as well as city governments. An increasing number of investors are looking to collaborate with partners offering development projects, which consciously maintain sustainability and climate action at the core of their work.

CDP data revealed that nine cities have identified 80+ climate projects that required financing.



A total of 9 cities out of the reporting 14 cities have collaborated with businesses and industries on sustainability projects. As seen in the figure above, transport (22%), energy (17%) and waste (17%) are the most common sectors for collaboration with businesses.

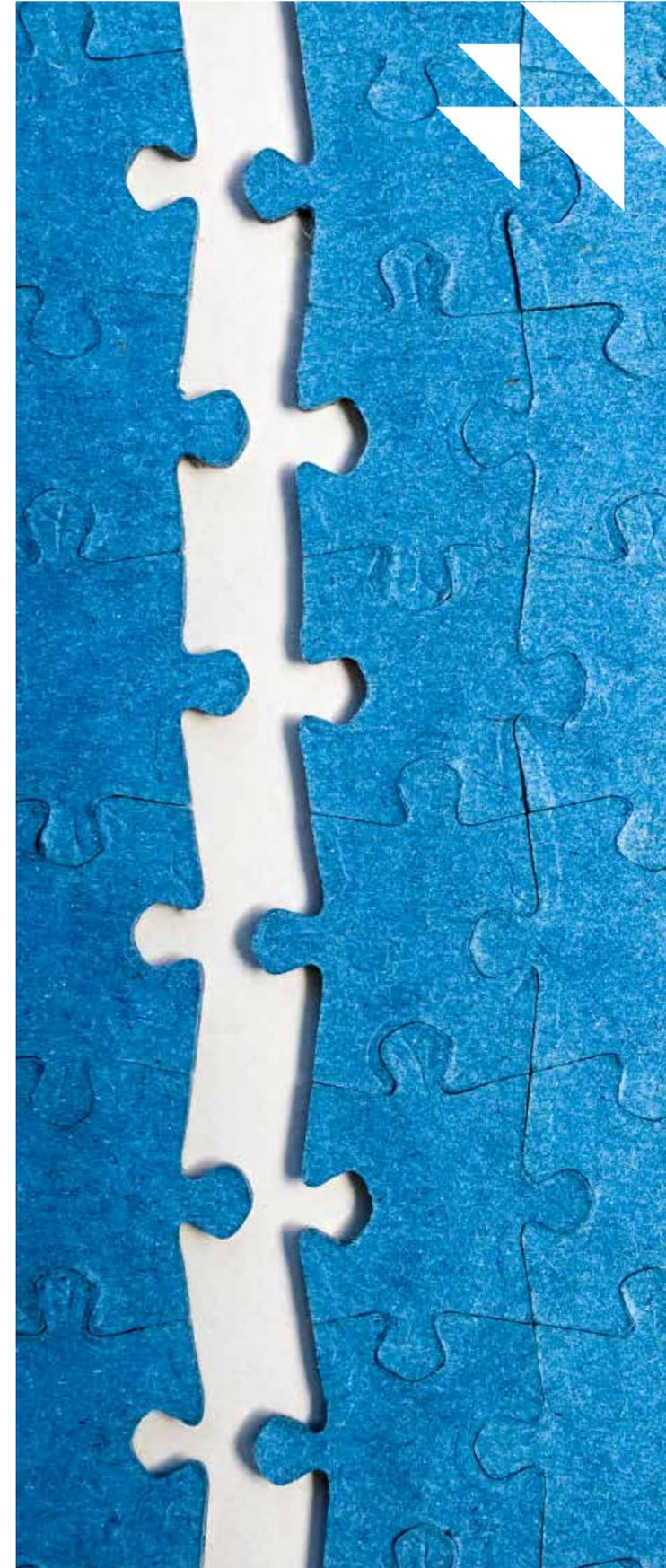
The data also revealed that the top areas where cities are seeking financial support are the waste management sector (11% of projects), sustainable transport sector (8%), circular economy models and businesses (8%), public health (6%), and water security (6%). This shows how incumbent it is upon cities to acknowledge climate change and address the issue by adopting climate action initiatives.

CONCLUSION

India's commitments to net-zero targets require more companies to come forward and set climate goals supported by adequate disclosures for transparency and accountability. Businesses are a very important part of climate action efforts and need to emerge as active collaborators in this conversation. Progress is visible, but the pace is very slow and thus the targets are at risk of being too ambitious and not being achieved in the given timeframe.

The effects of climate change can already be seen in the form of rising prices of commodities, scarcity of resources and unprecedented climate events that cause loss of life and millions of dollars' worth of damage globally. Companies need to pick up the pace and learn from the leading A List businesses who are making their mark in transforming the climate and economic landscape. Indian companies must adopt climate friendly policies and global climate targets or else risk their survival in the coming years.

Climate resilience is not just restricted to any one region, but applies to all companies, countries, cities, states and regions. Aligning with disclosure policies such as the mandatory BRSR and the CDP disclosure framework is an important step for corporates to mainstream ESG reporting. These provide a valuable support system for companies in maintaining transparency and helping them to course correct with respect to climate change mitigation for the future. It is encouraging to see a rise in the number of companies that are choosing to disclose information about ESG voluntarily, but more companies need to share this collective responsibility for climate change mitigation to accelerate the common goal of transitioning towards a green economy. Collaborative efforts with all relevant stakeholders are vital for successful implementation and achievement of sustainable climate action targets.





Appendix I: Table of emissions, scores, and sector by company

Primary sector	Organization	Final score	2021 Permission status	Scope 1 emissions	Total Scope 2 (Location based + market based)	Scope 3 emissions	Number of Scope 3 categories reported
Bars, hotels & restaurants	Indian Hotels Co. Ltd.	D	Public	27613.52	116988.78	5358.09	2
Biotech & pharma	Biocon	B	Public	54488	76500	24855	2
	Dr. Reddy's Laboratories	B	Public	349974.24	177456.96	471579.65	8
	Glenmark Pharmaceuticals	C	Non-Public	Private	Private	Private	Private
	Jubilant Pharmova Limited	B-	Non-Public	Private	Private	Private	Private
	ZCL Chemicals	D	Public	7217	Not Provided	7217	1

Primary sector	Organization	Final score	2021 Permission status	Scope 1 emissions	Total Scope 2 (Location based + market based)	Scope 3 emissions	Number of Scope 3 categories reported
Cement & concrete	ACC	A	Public	13855753	628996	1639454	6
	Ambuja Cements	A-	Public	13405629	537403	1755910	7
	Dalmia Bharat Ltd	B-	Public	11275305	458687	1341722	7
	JK Cement Ltd	D	Public	7206969	203639	1022396	3
	JSW Cement Limited	B	Public	1519220	654715	559666	5
	Shree Cement	C	Public	15465414	240833	248017	6
	Ultratech Cement	B	Public	56588600	1416250	10966960	4
	Aarav Frances & Flavors Private Limited	D-	Public	Not Provided	Not Provided	Not Provided	Not Provided
Chemicals	Aarti Industries Ltd	B	Public	547729	79871	2566050.18	10
	Godrej Consumer Products Limited	B	Public	34164	29786	1627219	7
	Godrej Industries	B	Public	31388	41874	50286.207	5
	Gujarat Fluorochemicals	D	Non-Public	Private	Private	Private	Private
	Jubilant Ingrevia Limited	C	Non-Public	Private	Private	Private	Private
	Kansai Nerolac Paints Limited	C	Non-Public	Private	Private	Private	Private
	Mamta Polycoats	Not scored	Public	87655.54	546.261	104.908	2
	Oriental Aromatics Ltd.	B-	Non-Public	Private	Private	Private	Private
	Oriental Carbon & Chemicals Ltd	D	Non-Public	Private	Private	Private	Private
	Tata Chemicals	B	Public	4062112.41	63295.21	146533.28	5
Commercial & consumer services	Quess Corp Ltd	Private	Public	3050	11963	2853	3
Construction	Azure Power	C	Public	323	310	1046	3
	Sterlite Technologies Limited	C	Public	4002	156795	12642	5
Electrical & electronic equipment	Tata Power Co	C	Public	34500277	31178	2961	1
	Voltas	Not scored	Non-Public	Private	Private	Private	Private

Primary sector	Organization	Final score	2021 Permission status	Scope 1 emissions	Total Scope 2 (Location based + market based)	Scope 3 emissions	Number of Scope 3 categories reported
Energy utility networks	Adani Transmission Ltd	D	Public	2598971	614281	68925.23	3
	GAIL	C	Public	3295317.67	429546.54	1479	1
Financial services	Axis Bank	B-	Public	5559	195884	16423.83	3
	HDFC Bank Ltd	B	Public	5825.7	300141.03	9174.3	3
	Housing Development Finance Corporation	C	Non-Public	Private	Private	Private	Private
	IndusInd Bank	B	Public	6698.02	58290.04	17039.278	4
	Kotak Mahindra Bank	C	Public	1214	57484	224.19	3
	L&T Finance Holdings Limited	D	Public	13.77	3715.07	176.84	3
	Mahindra & Mahindra Financial Services	B-	Public	1523.3	13858.73	19838.87	Not Provided
	Piramal Pharma Limited	D	Public	63908.03	95938.71	0	3
	State Bank of India	C	Public	553	1169146	194602.17	5
	YES BANK Limited	B	Public	3138.21	37428.5	73474.36	3
Food & beverage processing	Foods and Inns Limited	B-	Public	3283.54	6065.48	2352.22	2
	Marico	B	Public	472.5	8772	516146	9
	Tata Consumer Products Ltd	B	Public	13328	39394.76	3370203.859	11
	Varun Beverages Ltd	Not scored	Non-Public	Private	Private	Private	Private
Intermodal transport & logistics	Adani Ports & Special Economic Zone	B	Non-Public	Private	Private	Private	Private
IT & software development	HCL Technologies	B	Public	22591	181825	76135	2
	Infosys Limited	A	Public	8678	68673	213514	7
	Larsen & Toubro Infotech Ltd	D	Public	153.2	11463.3	1395.28	3
	Mindtree Ltd	A-	Non-Public	Private	Private	Private	Private

Primary sector	Organization	Final score	2021 Permission status	Scope 1 emissions	Total Scope 2 (Location based + market based)	Scope 3 emissions	Number of Scope 3 categories reported
IT & software development	Tata Consultancy Services	B	Public	16284	419163	234614	7
	Tech Mahindra	A	Public	7930.24	66418.66	16996.52	6
	Wipro	A	Public	10885	86463	314106	7
Land & property ownership & development	Godrej Properties Limited	C	Public	Not Provided	Not Provided	245822	7
	Mahindra Lifespace Developer Limited	A-	Public	340.63	2697.13	432285.85	8
Light manufacturing	Apollo Tyres Ltd	D	Public	312633	333943	89291	3
	JK Tyres & Industries	B-	Public	271186.95	139406.06	53875.6	6
Media, telecommunications & data center services	Bharti Airtel	C	Non-Public	Private	Private	Private	Private
	Reliance Jio Infocomm Limited	A-	Public	493761	6213848	3425541.28	6
	Tata Communications	B	Public	5561	98453	38931.768	6
Metal products manufacturing	AIA Engineering Ltd.	C	Non-Public	Private	Private	Private	Private
	Hindustan Zinc	B	Public	4489443	307068	4285442.339	10
Metal smelting, refining & forming	JSW Steel Ltd.	A-	Public	35615150	1907922	4014466.849	8
	Mahindra Sanyo Special Steel Pvt. Ltd	B	Public	36880	224470	139385	8
	Tata Metaliks Ltd	D	Public	930495	16630	Not Provided	Not Provided
	Tata Steel	B	Public	56893314	4517658	20486524	11
	Vedanta Ltd	B	Public	58936130	1314933	Not Provided	Not Provided
Metallic mineral mining	NMDC	D	Public	32563	61488	1716	1
Oil & gas processing	Bharat Petroleum Corporation	B-	Public	3505950	426320	11167510	2
	Indian Oil Corporation	C	Non-Public	Private	Private	Private	Private
Other materials	PGP Glass Private Limited	C	Non-Public	Private	Private	Private	Private

Primary sector	Organization	Final score	2021 Permission status	Scope 1 emissions	Total Scope 2 (Location based + market based)	Scope 3 emissions	Number of Scope 3 categories reported
Powered machinery	Escorts Ltd	D	Public	39068.95	38911.45	Not Provided	Not Provided
Renewable power generation	Adani Green Energy	B	Public	1317	14656	363555	5
	ReNew Power Private Limited	Not scored	Public	3755	1164	Not Provided	Not Provided
Specialized professional services	Larsen & Toubro	D	Non-Public	Private	Private	Private	Private
	Vakrangee Limited	C	Public	30.903	291.589	1022.013	1
Textiles & fabric goods	ARVIND Ltd	B-	Public	270659.57	191642.64	Not Provided	Not Provided
	Grasim Industries	Private	Public	4139807.51	1115152.23	Not Provided	Not Provided
Thermal power generation	Adani Power Ltd	C	Public	54435315	43671.737	583772.46	1
	JSW Energy	A-	Public	14481410.36	30183.89	1819444	8
	NTPC Ltd	D	Public	263900000	21872.22	561135.58	3
Tobacco	ITC Limited	A-	Public	1171553	335377	235994.46	5
Transportation equipment	Hero Motocorp Ltd	D	Non-Public	Private	Private	Private	Private
	Mahindra & Mahindra	A	Public	38113.459	368904.556	63684304	11
	Tata Motors	C	Public	41882	243125	4406580	9

Note: 'Not Scored'- Companies who have submitted the minimum version questionnaire



Appendix II: List of companies invited to respond to CDP

CLIMATE CHANGE – INVESTOR REQUESTED¹⁰⁶

CDP Activity group	Company name	Response status
Air transport	InterGlobe Aviation Ltd	Not submitted
	Jet Airways (India) Ltd.	Not submitted
Apparel design	Page Industries Ltd	Not submitted
	Relaxo Footwears Ltd	Not submitted
Bars, hotels & restaurants	Indian Hotels Co. Ltd.	Submitted
	Jubilant Foodworks Ltd	Not submitted
Biotech & pharma	Ajanta Pharma Ltd.	Not submitted
	Alkem Laboratories Ltd	Not submitted
	Aurobindo Pharma	Not submitted
	Biocon	Submitted
	Cadila Healthcare	Not submitted
	Cipla	Not submitted
	Divi's Laboratories	Not submitted
	Dr. Reddy's Laboratories	Submitted
	GlaxoSmithKline Pharmaceuticals	Not submitted
	Glenmark Pharmaceuticals	Submitted
	Ipca Laboratories Ltd	Not submitted
	Jubilant Pharmova Limited	Submitted
	Lupin	Not submitted
	Natco Pharma Ltd	Not submitted
	Sun Pharma Advanced Research Company Ltd	Not submitted
	Sun Pharmaceutical Industries	Not submitted
	Torrent Pharmaceuticals	Not submitted
	Wockhardt	Not submitted
	ZCL Chemicals	Submitted
	Cement & concrete	Ultratech Cement
The Ramco Cements Ltd		Not submitted
Shree Cement		Submitted
Orient Cement Limited		Not submitted

¹⁰⁶ These include companies from the BSE Top 200 list, CDP's Fixed Income sample, FAIRR sample, Emerging markets sample, Environmental sample and Continuity climate change sample. For further details visit https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/comfy/cms/files/files/000/003/423/original/CDP_Climate_Change_Sample_Investor_Request_2020.pdf

CDP Activity group	Company name	Response status
Cement & concrete	Lucky Cement	Not submitted
	JSW Cement Limited	Submitted
	JK Cement Ltd	Submitted
	India Cements	Not submitted
	Dalmia Bharat Ltd	Submitted
	Ambuja Cements	Submitted
	ACC	Submitted
	SRF Ltd.	Not submitted
	Pidilite Industries Ltd	Not submitted
Chemicals	Kansai Nerolac Paints Limited	Submitted
	Castrol India	Not submitted
	Berger Paints India Ltd	Not submitted
	Asian Paints	Not submitted
	Aarav Frances & Flavors Private Limited	Submitted
	Godrej Consumer Products Limited	Submitted
	Emami Ltd.	Not submitted
	Dabur India	Not submitted
	Tata Chemicals	Submitted
	Godrej Industries	Submitted
	Aarti Industries Ltd	Submitted
	Mangalore Refinery and Petrochemicals	Not submitted
	EnGro Corporation Limited	Not submitted
	Coromandel International	Not submitted
	GHCL LIMITED	Not submitted
	Gujarat Fluorochemicals	Submitted
	UPL Limited	Not submitted
PI Industries Ltd	Not submitted	
Coal mining	Reliance Power	Not submitted
	NLC India Ltd	Not submitted
	KSK Energy Ventures Limited	Not submitted
	Gujarat Mineral Devp. Corpn.	Not submitted
	Coal India	Not submitted
Commercial & consumer services	Adani Enterprises	Not submitted
	Quess Corp Ltd	Submitted
Construction	Bharti Infratel Limited	Not submitted
	Azure Power	Submitted
	GVK Power & Infrastructure	Not submitted

CDP Activity group	Company name	Response status
Convenience retail	Avenue Supermarts Ltd	Not submitted
	Future Retail Ltd	Not submitted
Discretionary retail	Trent Ltd.	Not submitted
	Aditya Birla Fashion and Retail Ltd	Not submitted
Electrical & electronic equipment	Bharat Heavy Electricals	Not submitted
	Crompton Greaves Consumer Electricals Ltd	Not submitted
	Voltas	Submitted
	Havells India	Not submitted
	Tata Power Co	Submitted
	Graphite India Ltd.	Not submitted
	Bharat Electronics	Not submitted
	Amara Raja Batteries Ltd	Not submitted
	Indraprastha Gas Ltd	Not submitted
	Gujarat State Petronet	Not submitted
Energy utility networks	GAIL	Submitted
	Adani Gas Ltd	Not submitted
	Torrent Power	Not submitted
	Test-CSC21-8	Not submitted
	Reliance Infrastructure	Not submitted
	Power Grid Corpn. of India	Not submitted
	K-Electric Ltd	Not submitted
	CESC Ltd	Not submitted
	Adani Transmission Ltd	Submitted
	Financial services	Oracle Financial Services
The New India Assurance Company Ltd		Not submitted
SBI Life Insurance Company Ltd		Not submitted
Max Financial Services		Not submitted
ICICI Prudential Life Insurance Company Ltd		Not submitted
ICICI Lombard General Insurance Company Ltd		Not submitted
HDFC Life Insurance Company Ltd		Not submitted
General Insurance Corporation of India		Not submitted
Bajaj Finserv		Not submitted
Aditya Birla Capital		Not submitted
YES BANK Limited		Submitted
United Bank Ltd		Not submitted
Union Bank of India		Not submitted
State Bank of India		Submitted

CDP Activity group	Company name	Response status
Financial services	SBI Cards and Payment Services Limited	Not submitted
	REC Ltd	Not submitted
	RBL Bank Ltd	Not submitted
	Punjab National Bank	Not submitted
	Power Finance Corporation	Not submitted
	Piramal Pharma Limited	Submitted
	Muthoot Finance Limited	Not submitted
	Mcb Bank Limited	Not submitted
	Mahindra & Mahindra Financial Services	Submitted
	LIC Housing Finance	Not submitted
	Kotak Mahindra Bank	Submitted
	IndusInd Bank	Submitted
	Indiabulls Housing Finance Ltd	Not submitted
	IDFC First Bank Ltd	Not submitted
	IDBI Bank Ltd	Not submitted
	ICICI Bank Limited	Not submitted
	Housing Development Finance Corporation	Submitted
	HDFC Bank Ltd	Submitted
	Habib Bank Ltd	Not submitted
	Federal Bank	Not submitted
City Union Bank Ltd.	Not submitted	
Cholamandalam Investment and Finance Company Ltd	Not submitted	
Canara Bank	Not submitted	
Bank of India	Not submitted	
Bank of Baroda	Not submitted	
Bandhan Bank	Not submitted	
Bajaj Finance Limited	Not submitted	
Axis Bank	Submitted	
AU Small Finance Bank Ltd	Not submitted	
Reliance Nippon Life Asset Management Ltd	Not submitted	
Motilal Oswal Financial Services Ltd	Not submitted	
L&T Finance Holdings Limited	Submitted	
Hdfc Asset Management	Not submitted	
Food & beverage processing	Avenue Supermarts Ltd	Not submitted
	Marico	Submitted
	Varun Beverages Ltd	Submitted
	Tata Consumer Products Ltd	Submitted

CDP Activity group	Company name	Response status
Food & beverage processing	Jubilant Foodworks Ltd	Not submitted
	Britannia Industries	Not submitted
	Venky's India Ltd	Not submitted
	United Spirits	Not submitted
	United Breweries	Not submitted
Health care provision	Apollo Hospitals Enterprises	Not submitted
Industrial support services	GMR Infrastructure Limited	Not submitted
Intermodal transport & logistics	Container Corporation of India	Not submitted
	Adani Ports & Special Economic Zone	Submitted
IT & software development	Oracle Financial Services	Not submitted
	Wipro	Submitted
	Tech Mahindra	Submitted
	Tata Consultancy Services	Submitted
	Mindtree Ltd	Submitted
	Larsen & Toubro Infotech Ltd	Submitted
	Infosys Limited	Submitted
	HCL Technologies	Submitted
Land & property ownership & development	Oberoi Realty	Not submitted
	Housing Development & Infrastructure	Not submitted
	DLF	Not submitted
Leisure & home manufacturing	Welspun India Ltd	Not submitted
	Titan Company Limited	Not submitted
	Rajesh Exports Ltd	Not submitted
	JK Tyres & Industries	Submitted
	Ceat Ltd	Not submitted
	Balkrishna Industries Ltd	Not submitted
	Apollo Tyres Ltd.	Submitted
Media, telecommunications & data center services	Vodafone Idea Ltd	Not submitted
	Reliance Jio Infocomm Limited	Submitted
	Bharti Airtel	Submitted
	Tata Communications	Submitted
	Zee Entertainment Enterprises	Not submitted
	Sun TV Network	Not submitted
Metal products manufacturing	Bharat Forge Ltd.	Not submitted
	Polycab India Ltd	Not submitted

CDP Activity group	Company name	Response status
Metal products manufacturing	Motherson Sumi Systems	Not submitted
	Gillette India	Not submitted
	Endurance Technologies Ltd	Not submitted
	AIA Engineering Ltd.	Submitted
	3M India Ltd	Not submitted
Metal smelting, refining & forming	Hindustan Zinc	Submitted
	Bharat Forge Ltd.	Not submitted
	Tata Steel	Submitted
	Tata Metaliks Ltd	Submitted
	Steel Authority of India	Not submitted
	Mahindra Sanyo Special Steel Pvt. Ltd	Submitted
	JSW Steel Ltd.	Submitted
	Jindal Steel & Power	Not submitted
	Jindal Stainless Ltd	Not submitted
	Essar Steel Limited	Not submitted
Metallic mineral mining	Vedanta Ltd	Submitted
	Hindalco Industries	Not submitted
	NMDC	Submitted
Oil & gas extraction & production	Vedanta Resources PLC	Not submitted
	National Aluminium Co.	Not submitted
	Pakistan Petroleum Limited	Not submitted
	Pakistan Oilfields Limited	Not submitted
	Oil India Ltd.	Not submitted
Oil & gas processing	Gujarat Gas Company Limited	Not submitted
	Oil & Gas Development	Not submitted
	Reliance Industries	Not submitted
	Oil & Natural Gas Corporation	Not submitted
	Nayara Energy Limited	Not submitted
	Mangalore Refinery and Petrochemicals	Not submitted
	Indian Oil Corporation	Submitted
	Hindustan Petroleum Corporation	Not submitted
Chennai Petroleum Corporation	Not submitted	
Oil & gas storage & transportation	Bharat Petroleum Corporation	Submitted
	Attock Refinery Ltd	Not submitted
	Petronet LNG	Not submitted

CDP Activity group	Company name	Response status
Other materials	PGP Glass Private Limited	Submitted
	Escorts Ltd	Submitted
Powered machinery	Thermax	Not submitted
	Bharat Heavy Electricals	Not submitted
Real estate owners & developers	Godrej Properties Limited	Submitted
	Mahindra Lifespace Developer Limited	Submitted
Renewable power generation	Adani Green Energy	Submitted
	ReNew Power Private Limited	Submitted
	SJVN Ltd	Not submitted
Specialized professional services	National Hydroelectric Power Corporation Ltd (NHPC)	Not submitted
	Vakrangee Limited	Submitted
	Larsen & Toubro	Submitted
	Bajaj Holdings & Invst. (BHIL)	Not submitted
Textiles & fabric goods	L&T Technology Services Ltd	Not submitted
	Sapphire Textile Mills Limited	Submitted
	Grasim Industries	Submitted
	Arvind Ltd.	Submitted
	Relaxo Footwears Ltd	Not submitted
Thermal power generation	Page Industries Ltd	Not submitted
	Hub Power Company Ltd	Not submitted
	Reliance Power	Not submitted
	NTPC Ltd	Submitted
	NLC India Ltd	Not submitted
	KSK Energy Ventures Limited	Not submitted
	JSW Energy	Submitted
Tobacco	Adani Power Ltd	Submitted
	Kot Addu Power Co Ltd	Not submitted
	ITC Limited	Submitted
	TVS Motor Company Ltd	Not submitted
Transportation equipment	Tata Motors	Submitted
	Maruti Suzuki India	Not submitted
	Mahindra & Mahindra	Submitted
	Hero Motocorp Ltd	Submitted
	Eicher Motors Ltd	Not submitted
	Bajaj Auto	Not submitted
	Ashok Leyland	Not submitted
Web & marketing services	Info Edge (India) Ltd.	Not submitted

CLIMATE CHANGE – SELF SELECTED COMPANIES

CDP Activity group	Company name	Response status
Chemicals	Mamta Polycoats	Submitted
	Jubilant Ingrevia Limited	Submitted
	Oriental Aromatics Ltd.	Submitted
	Oriental Carbon & Chemicals Ltd	Submitted
Electrical & electronic equipment	Sterlite Technologies Limited	Submitted
Food & beverage processing	Foods and Inns Limited	Submitted

WATER SECURITY – INVESTOR REQUESTED COMPANIES¹⁰⁷

CDP Activity group	Company name	Response status
Bars, hotels & restaurants	Indian Hotels Co. Ltd.	Submitted
	Ajanta Pharma Ltd.	Not submitted
	Alkem Laboratories Ltd	Not submitted
	Aurobindo Pharma	Not submitted
	Biocon	Submitted
	Cadila Healthcare	Not submitted
	Cipla	Not submitted
	Divi's Laboratories	Not submitted
	Dr. Reddy's Laboratories	Submitted
	GlaxoSmithKline Pharmaceuticals	Not submitted
Biotech & pharma	Glenmark Pharmaceuticals	Not submitted
	Ipca Laboratories Ltd	Not submitted
	Jubilant Pharmova Limited	Submitted
	Lupin	Not submitted
	Natco Pharma Ltd	Not submitted
	Sun Pharmaceutical Industries	Not submitted
	Torrent Pharmaceuticals	Not submitted
	ZCL Chemicals	Submitted
	ACC	Submitted
	Cement & concrete	Ambuja Cements
Dalmia Bharat Ltd		Not submitted
India Cements		Not submitted

¹⁰⁷ These include companies from the Water Global sample and Continuity water security sample. For further details visit https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/comfy/cms/files/files/000/003/422/original/CDP_Water_Security_Sample_Investor_Request_2020.pdf

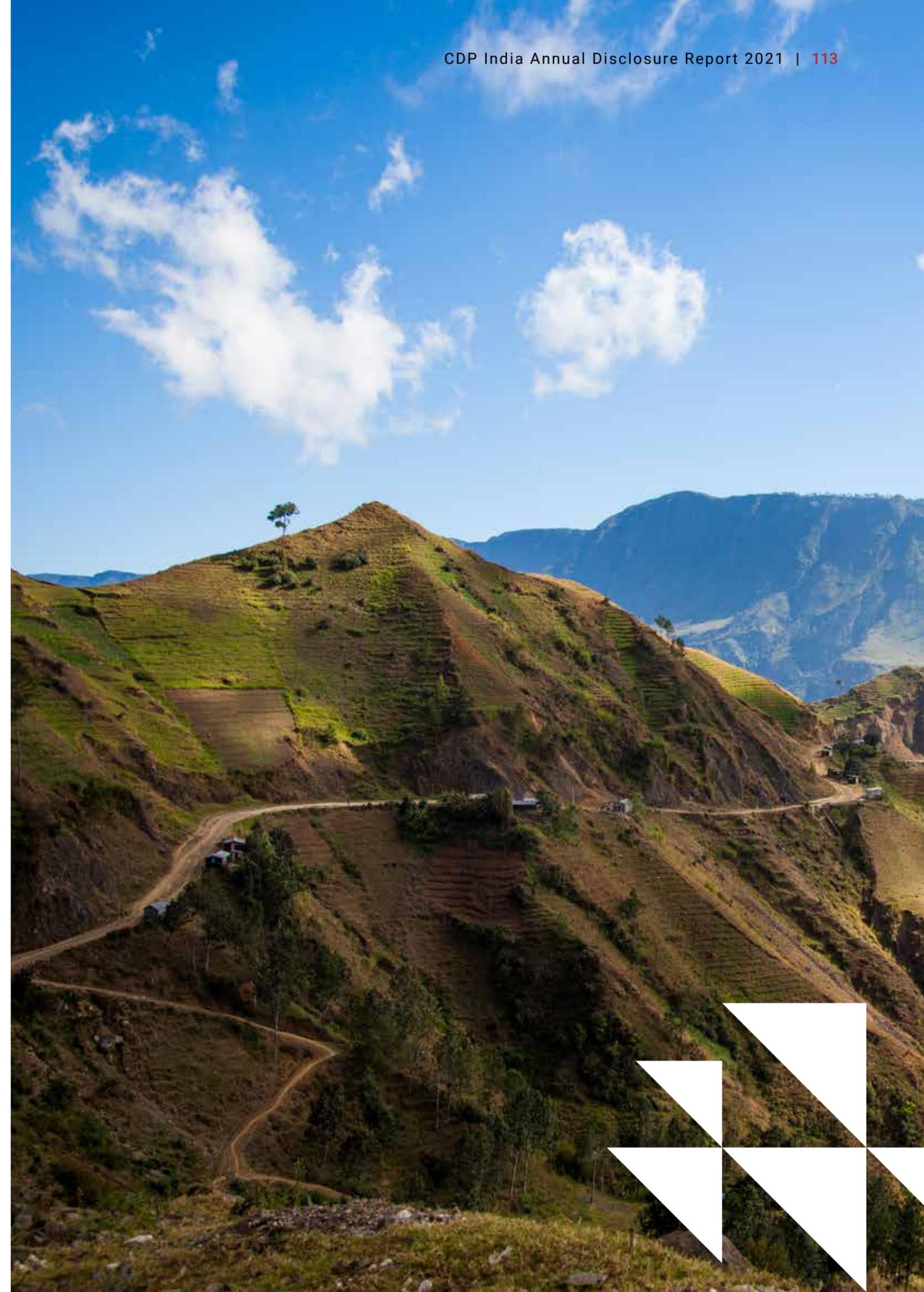
CDP Activity group	Company name	Response status
Cement & concrete	JK Cement Ltd	Submitted
	Lucky Cement	Not submitted
	Orient Cement Limited	Not submitted
	Shree Cement	Not submitted
	The Ramco Cements Ltd	Not submitted
	Ultratech Cement	Submitted
Clothing & Textile Manufacturing	Arvind Ltd	Submitted
Chemicals	Aarav Frances & Flavors Private Limited	Submitted
	Aarti Industries Ltd	Not submitted
	Asian Paints	Not submitted
	Berger Paints India Ltd	Not submitted
	Castrol India	Not submitted
	Coromandel International	Not submitted
	Dabur India	Submitted
	Emami Ltd.	Not submitted
	EnGro Corporation Limited	Not submitted
	GHCL Limited	Not submitted
	Godrej Consumer Products Limited	Submitted
	Godrej Industries	Submitted
	Gujarat Fluorochemicals	Submitted
	Kansai Nerolac Paints Limited	Submitted
	Jubilant Ingrevia Limited	Submitted
	Mangalore Refinery and Petrochemicals	Not submitted
	PI Industries Ltd	Not submitted
	Pidilite Industries Ltd	Not submitted
	SRF Ltd.	Not submitted
	Tata Chemicals	Submitted
	UPL Limited	Not submitted
	VVF Ltd	Not submitted
	Coal mining	Adani Enterprises
	Coal India	Not submitted
Construction	Escorts Ltd	Submitted
	Jain Irrigation Systems	Not submitted

CDP Activity group	Company name	Response status
Discretionary retail	Aditya Birla Fashion and Retail Ltd	Not submitted
Electrical & electronic equipment	Amara Raja Batteries Ltd	Not submitted
	Havells India	Not submitted
	Tata Power Co	Submitted
Energy utility networks	GAIL	Not submitted
	Gujarat State Petronet	Not submitted
	Power Grid Corpn. of India	Not submitted
Financial services	Piramal Pharma Limited	Submitted
Food & beverage processing	Tata Consumer Products Ltd	Submitted
	Marico	Submitted
IT & software development	HCL Technologies	Not submitted
	Tech Mahindra	Submitted
	Wipro	Submitted
Light manufacturing	Apollo Tyres Ltd	Not submitted
	JK Tyres & Industries	Submitted
	MRF Ltd	Not submitted
Logistics services	Adani Ports & Special Economic Zone	Submitted
Media, telecommunications & data centre services	Reliance Jio Infocomm Limited	Not submitted
	Tata Communications	Not submitted
Metal smelting, refining & forming	Bharat Forge Ltd.	Not submitted
	Essar Steel Limited	Not submitted
	Hindalco Industries	Not submitted
	Hindustan Zinc	Submitted
	Jindal Steel & Power	Not submitted
	JSW Steel Ltd.	Not submitted
	Mahindra Sanyo Special Steel Pvt. Ltd	Not submitted
	Steel Authority of India	Not submitted
Tata Steel	Submitted	
Metallic mineral mining	National Aluminium Co.	Not submitted
	NMDC	Not submitted
Other materials	PGP Glass Private Limited	Submitted
Oil & gas extraction & production	Gujarat Gas Company Limited	Not submitted
	Oil & Gas Development	Not submitted

CDP Activity group	Company name	Response status
Oil & gas extraction & production	Oil India Ltd.	Not submitted
	Pakistan Oilfields Limited	Not submitted
	Pakistan Petroleum Limited	Not submitted
Oil & gas processing	Attock Refinery Ltd	Not submitted
	Bharat Petroleum Corporation	Not submitted
	Chennai Petroleum Corporation	Not submitted
	Hindustan Petroleum Corporation	Not submitted
	Indian Oil Corporation	Not submitted
	Mangalore Refinery and Petrochemicals	Not submitted
	Nayara Energy Limited	Not submitted
Oil & gas storage & transportation	Oil & Natural Gas Corporation	Not submitted
	Reliance Industries	Not submitted
Specialized professional services	Petronet LNG	Not submitted
Textiles & fabric goods	Larsen & Toubro	Submitted
	Grasim Industries	Not submitted
	Page Industries Ltd	Not submitted
Thermal power generation	Relaxo Footwears Ltd	Not submitted
	Adani Power Ltd	Submitted
	JSW Energy	Submitted
Tobacco	NTPC Ltd	Submitted
	ITC Limited	Submitted
Transportation equipment	Ashok Leyland	Not submitted
	Bajaj Auto	Not submitted
	Hero Motocorp Ltd	Not submitted
	Mahindra & Mahindra	Submitted
	Maruti Suzuki India	Not submitted
	Tata Motors	Not submitted

WATER SECURITY – SELF SELECTED COMPANIES

CDP Activity group	Company name	Response status
Non-energy utilities	VA Tech Wabag Ltd	Submitted



Appendix III: Indian companies committed to action

SCIENCE-BASED TARGET INITIATIVE (SBTI)

Net-Zero:

Wipro

Approved 1.5°C

Bharti Airtel Limited
Dr. Reddy's Laboratories Ltd.
Gromax Agri Equipment Limited*
Kings International Ltd*
Mahindra Accelo*
Mahindra EPC Irrigation Limited*
Mahindra Heavy Engines Ltd*
Mahindra Holidays and Resorts India Limited*

Mahindra Lifespaces Developers Limited
Mahindra Logistics Ltd*
Mahindra World City (Jaipur) Ltd*
Mahindra World City Developers Ltd*
MITCON Consultancy & Engineering Services Limited*
Polygenta Technologies Limited*
Swaraj Engines Limited*
White House*

Approved well-below 2°C

ACC Limited
Ambuja Cement Ltd
Infosys Limited
Mahindra & Mahindra Limited

Mahindra Electric Mobility Ltd*
Mahindra First Choice Services Ltd*
Tata Chemicals Limited
UltraTech Cement Limited

Approved 2°C

Tech Mahindra
Mahindra Sanyo Special Steel

Shree Cement Ltd.

SBTi Committed

Adani Green Energy Ltd.
Adani Ports and Special Economic Zone Limited
Alchem International Private Limited*
Apraava Energy Private Limited*
Dalmia Bharat Limited
Eastman Exports Global Clothing Pvt Ltd*
EPL Ltd*
Galaxy Surfactants Limited*
Glenmark Pharmaceuticals Limited
Godrej & Boyce Mfg. Co. Ltd*
Godrej Agrovet Limited*
Godrej Consumer Products Limited
Godrej Industries
Godrej Properties Limited
Gujarat Fluorochemicals Ltd (GFL)
Havells India Limited*
HCL Technologies
Hindustan Zinc Limited

Indo Count*
J.K. Cement Ltd
JK Tyre & Industries Ltd
JSW Energy Limited
L&T Technology Services Limited (LTTS)
Larsen & Toubro Infotech Ltd
Macrotech Developers Limited*
Mahindra & Mahindra Financial Services Limited
Nahar Industrial Enterprises Limited*
Radnik Exports*
Reliance Jio Infocomm Limited
ReNew Power Private Limited
SCM Garments Pvt Limited*
Tata Global Beverages Ltd*
The Tata Power Company Limited
UPL Limited*
Vakrangee Limited
YES Bank

* SBTi companies not in CDP Sample

RE100

Dalmia Bharat Ltd
Infosys Ltd
JSW Cement Limited

Mahindra Holidays & Resorts India Ltd#
Mindspace Business Parks REIT#
Tata Motors Ltd

INTERNAL CARBON PRICING (ICP)

Pricing carbon in 2021

ACC
Adani Green Energy
Ambuja Cements
Arvind Ltd
Creative Group of Industries
Dalmia Bharat Ltd
Dr. Reddy's Laboratories
Godrej Agrovet
Godrej Consumer Products Limited
Godrej Industries
HCL Technologies
Hero Motocorp Ltd
Hindustan Zinc
Infosys Limited
JSW Cement Limited
JSW Energy

JSW Steel Ltd.
Mahindra & Mahindra
Mahindra Sanyo Special Steel Pvt. Ltd
Mindtree Ltd
Oriental Aromatics Ltd
Shree Cement
Tata Chemicals
Tata Consultancy Services
Tata Consumer Products Ltd
Tata Metaliks Ltd
Tata Power Co
Tata Steel
Tech Mahindra
Ultratech Cement
Wipro

Planning to price in the next two years

Aarti Industries Ltd
Adani Ports & Special Economic Zone
Apollo Tyres Ltd
Atlas Export Enterprises
Bharat Petroleum Corporation
Bharti Airtel
Biocon
Cyient DLM Private Limited
Divi's Laboratories
Essel Propack Limited
EXLSERVICE Holdings
Foods and Inns Limited
GAIL
Godrej Interio Division-Godrej & Boyce Mfg. Co. Ltd
Grasim Industries
H.R. International
HDFC Bank Ltd
Impress Containers Co.
Indfrag Ltd (Group)
Indian Hotels Co. Ltd
Indo Count Industries Ltd
Indo US-MIM Tec Pvt.Ltd
ITAL Plastic Compounds Pvt Ltd
ITC Limited
JK Cement Ltd
JK Tyres & Industries
Jubilant Ingrevia Limited

Jubilant Pharmova Limited
Kansai Nerolac Paints Limited
Larsen & Toubro
Larsen & Toubro Infotech Ltd
Lifelong India Ltd
Mahindra & Mahindra Financial Services
Mahindra Lifespace Developer Limited
Marico
Nelamangala
NTPC Ltd
Parksons Packaging Limited Chakan
Persistent Systems Ltd
PGP Glass Private Limited
Piramal Pharma Limited
Quent Chem
Radiaant Expovision Pvt. Ltd
Reliance Jio Infocomm Limited
Shahi Exports Pvt. Ltd
Shiv Forgings
Svarn Infratel
Tata Communications
Tata Motors
Trontek Electronics Pvt Ltd
Uflex Limited
Vakrangee Limited
Vedanta Ltd
YES Bank Limited

RE100 companies not in CDP Sample

ABOUT CDP

CDP is a not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts by running a global environmental disclosure system. Each year CDP supports thousands of companies, cities, states and regions to measure and manage their risks and opportunities on climate change, water security and deforestation. We do so at the request of their investors, purchasers and city stakeholders. Over the last two decades we have created a system that has resulted in unparalleled engagement on environmental issues worldwide. In 2021, over 13,000 companies worth over 64% of global market capitalization and over 1,000 cities, states, and regions disclosed their environmental data through CDP.

CDP India

CDP has been present in India since 2012, working on disclosure and driving climate action. It serves as a source of knowledge for hundreds of Indian corporations, from those that are just beginning on the road to corporate environmental disclosure, through to those looking to improve sustainability and make commitments to reduce environmental impact. It is the only NGO to be named in India's INDC submission to the UNFCCC owing to its corporate environmental data repository and tracking of emissions and mitigation data from the Indian Industry. CDP India also actively participated in Government of India's Ministry of Environment, Forests & Climate Change (MoEFCC) work on future carbon market mechanisms. In addition to our work on disclosure, CDP India is actively engaged in other initiatives including Internal Carbon Pricing (ICP), Science-based targets (SBT) and Sustainable Finance.



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