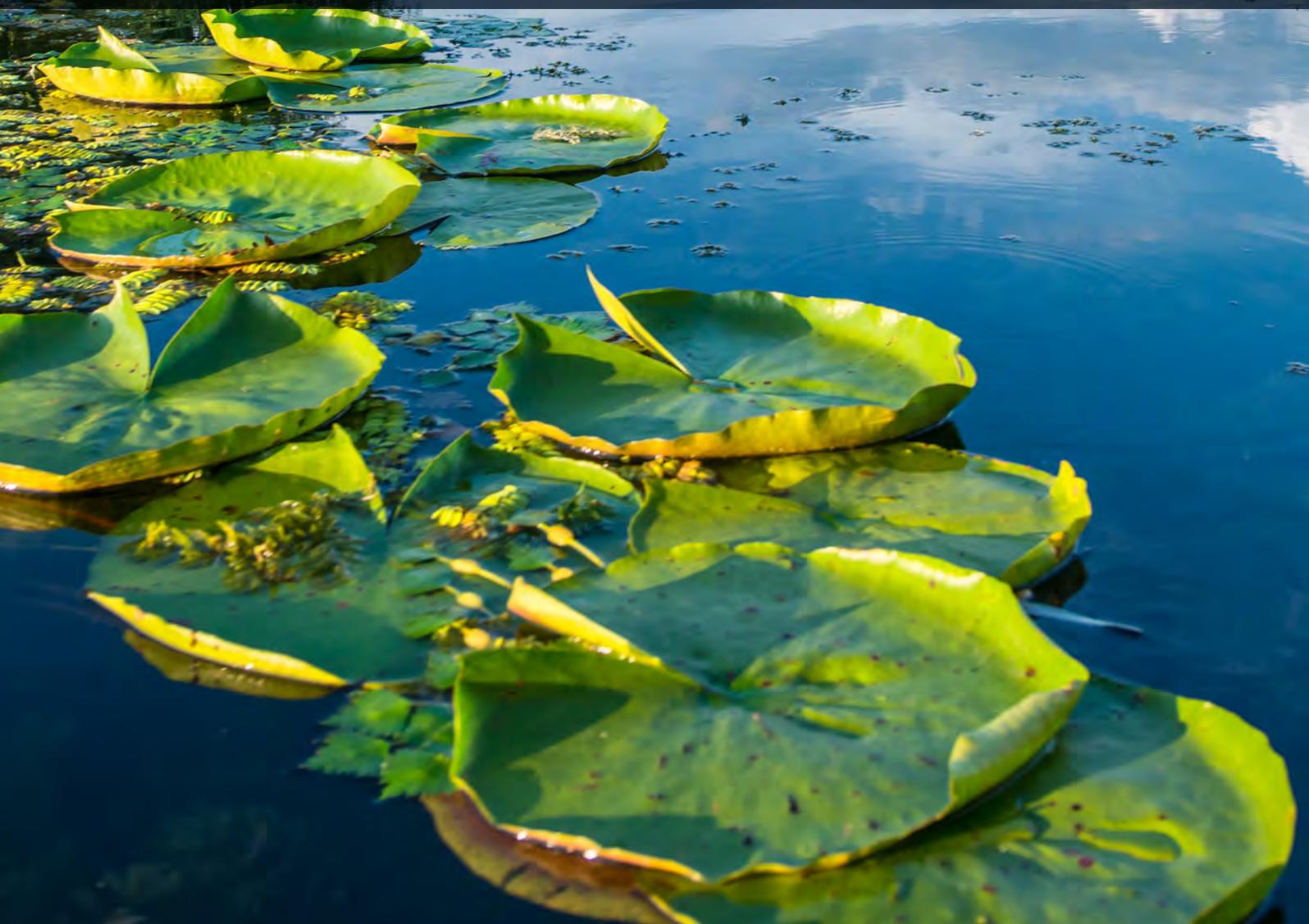


Decarbonizing India: Driving Climate Action through Disclosure

CDP India Disclosure Report 2022

Written on behalf of 680 investors representing
US\$130 trillion in assets

February 2023



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Director's Forward



Prarthana Borah
Director, CDP India

As 2022 drew to a close, we ended our global environmental reporting cycle to yet another encouraging year on climate disclosure and action. This report highlights CDP India's engagement with investors, corporates, and stakeholders, providing insight into India's decarbonization journey and the actions taken by the private sector, financial institutions, and subnational governments over the course of 2022.

Globally, 2022 has been a year of great significance for climate disclosure. It witnessed record-breaking disclosures – 18,700+

companies representing half of global market capitalization and more than 1,100 cities, states and regions disclosed data through CDP on climate change, deforestation, and water security. Representing a 233% increase since the Paris Agreement was signed in 2015, CDP saw the highest number of corporate disclosers since its inception over two decades ago. The report provides best practice and data insights that can also help governments in their policymaking.

The net-zero transition is under way across the economy, but with only seven years left to halve emissions, all actors need to ensure they are fully committed to their transition journey. Disclosure is the bedrock of action, but it is just the first step of this journey. All governments, companies, cities, states, and regions should set ambitious environmental targets and take bold, transformative actions to achieve them.

Given this overall macro context, this year's sustainability report presents a unique platform to understand how Indian corporates view the challenge of driving green growth while minimizing environmental impact, thereby supporting the Government's efforts to accelerate India's decarbonization journey. Indian companies have once again beaten previous year's disclosure numbers; 250+ Indian companies disclosed their environmental data via CDP in India, the highest since CDP India's inception. Sectors such as Chemicals, Biotech & Pharma, as well as Financial Services, are leading the way with the highest number of corporate disclosures.

In 2022 alone, CDP in India has seen a 40% increase in environmental disclosures across CDP's three themes – climate change, water security and forests by corporates in response to the request to do so from our investors. This is an impressive increase against the 28% growth reported in 2021. Apart from the upward

trend of overall disclosures, several other key trends identified have shown an upward trend: increased target setting (and ambition), growing board level oversight on environmental related issues and overall climate transition plan disclosure, setting meaningful climate, forests, and water security targets. Six Indian corporates are leading the way in environmental transparency this year – Infosys, JSW Steel, Hindustan Zinc, Mahindra Lifespace Developers Limited, Tech Mahindra and Wipro.

When it comes to translating climate commitments into quantifiable targets – through the Science-Based Target initiative – there has been an exponential growth of 59% of Indian companies taking on new SBTi commitments. This has also been reinforced by the increase of reporting on Scope 3 emissions, without which industrial decarbonization would simply not be possible.

I am therefore happy to announce that CDP India launched its Supply Chain (SC) programme this year with three Indian corporates joining us as our Supply Chain members - Wipro, Adani Green Energy and Adani Transmission, and participation from **164 value chain companies**. This reflects the growing importance of environmental reporting in the value chain given the majority of the suppliers are SMEs.

Zooming out, we look at the larger ecosystems in which industries operate such as cities, states, and regions, which are crucial to tap into to accelerate India's decarbonization journey.

In this context, we are also celebrating the city of Mumbai, which through its systematic and strategic approach towards climate change planning has become the first South Asian city to make it to the A List, based on assessment of climate data disclosed to CDP-ICLEI Track¹.

Against this backdrop, India must overcome major roadblocks to meet its own climate goals. India is the world's third largest energy consuming country where more than 80% of its demand is met through coal and oil. In the latest Emissions Gap Report, the UN Environment Programme (UNEP) acknowledged there is 'no credible pathway to 1.5°C in place.' Indeed, current policies point to a world where temperatures rise 2.8°C, and national commitments (even if fulfilled) would only reduce this to 2.4–2.6°C. India ranks among the top 7 emitters yet remains far below the world average at 2.4 tCO₂e. Home to 18% of global population, India's emission reduction rate will play a major role in determining whether global emissions can reach net-zero by mid-century.

The transition to net-zero should therefore be driven by an interoperability of different drivers and technologies. CDP's analysis shows that the benefits of a well-planned accelerated transition led by the private sector and supported by the government can overcome the downsides, given India's climate ambition. In this regard, CDP is committed to facilitating India's transition to a sustainable future by engaging with Indian corporates and financial sector driving climate action through a science-based disclosure process that is data driven and provides them with insights on their environmental impact and setting ambitious targets within their business models.

Finally, I express my gratitude for the immense support we receive from all our associates, investors, companies, cities, and national and regional governments throughout our journey. We're thrilled to have your support in building a climate-safe world and we look forward to continued engagement in 2023.



¹ CDP-ICLEI Track is the world's leading climate reporting platform and progress accountability mechanism for cities. Tracking over 1,100 cities' climate action in 2021

Related Ds – Disclosure and Decarbonization



Green growth and decarbonization will mark the coming decade. Not only does it refer to the reduction of greenhouse gas emissions, but it also centres around the transition to low-carbon growth. Hence, we are looking at advancing and accelerating actions and measures of governments, corporates, investors, states, and cities alike to reach net-zero.

India’s announcement at COP26 to strive to reach net-zero by 2070 was encouraging and showcased ambition to take the lead in mitigating climate risk. Additionally, the ‘long-term strategy for low-carbon development’ (LT-LEDS)² released at COP27 reiterates India’s commitment aligned with its decarbonization targets. It does so by outlining a clear blueprint for key industries such as electricity, industry, transport, and finance on how to reach net-zero. As a result, we see India moving into a decisive decade of measures, actions, and solutions which is why the decarbonization journey is currently high on the agenda.

Crucial here will be enabling policies that would steer all stakeholders into the much-needed direction. Key policy initiatives, like green hydrogen policy, offshore wind policy, promotion of electric vehicles, introduction of a green day-ahead market, and easing terms for open access to procure green energy, are some of the examples of the Indian Government’s determination towards decarbonization.

Five nectar elements (Panchamrit) of India’s climate action

- ▼ Reach 500GW Non-fossil energy capacity by 2030.
- ▼ 50% of its energy requirements from renewable energy by 2030.
- ▼ Reduction of total projected carbon emissions by one billion tonnes from now to 2030.
- ▼ Reduction of the carbon intensity of the economy by 45% by 2030, over 2005 levels.
- ▼ Achieving the target of net-zero emissions by 2070.

Source: pib.gov.in



Steering decarbonization through disclosure

CDP in India is very aware of these developments and keeping in tune with these policies and initiatives taken by the Indian government, we adapt and constantly evolve our processes of disclosures. While disclosure supports and drives companies, financial institutions (FIs), cities, states, and regions to measure and manage their risks and opportunities on climate change, water security and deforestation, it simultaneously gives them the understanding of the topic of decarbonization. Reporting also informs management and enables them to take strategic decisions integrating sustainability and decarbonization. Our data gives insights that can be used not only to set examples but also to influence policies.

Indian corporates are at different stages and levels of advancement, ranging from disclosure, to assessing their risk profile, to setting targets and finally achieving them across their direct operations and supply chains.

As companies progress along this journey, they work to become more prepared for the low-carbon economy. There has been an encouraging growth in companies disclosing to CDP in India. This has led to FIs gaining access to more transparent and environmental conscious data and looking at India as a potential economy for investments. More so, FIs not only use our data on which to base their lending decisions but also disclose to us on their respective environmental performance.

Cities are also part of the decarbonization journey. CDP provides a platform for measuring and tracking risks, hazards, emissions, sector data (such as transport, water, and waste), finance and benefits/opportunities (such as improved urban health, biodiversity and social equity). Science-based targets (SBTs) are one of the most important tools that companies can use to reduce emissions and a popular method for companies to achieve their science-based targets is through Internal Carbon Pricing (ICP) that can help them in advancing low carbon transition.

New initiatives by CDP to enhance its disclosure programs

Inclusion of a new set of questions related to plastic pollution in order to provide more detailed data that can help in finding solutions to this problem.	Introduction of new questions on biodiversity for the 2023 disclosure cycle.	Launch of a new government dashboard, an interactive tool providing policymakers with direct access to corporate and subnational action.	Announcement to incorporate the International Sustainability Standards Board (ISSB) ³ Climate-related Disclosures Standard into its global environmental disclosure platform.
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These new initiatives will not only improve the consistency of climate-related information, but also reduce the disclosure burden on entities through an alignment of requirements.

2 India LT-LEDS (unfccc.int)

3 CDP to incorporate ISSB climate-related disclosure standard into global environmental disclosure platform - CDP

Executive Summary



The following section contains the key highlights and trends of the entire report. The analysis in the report is based on the disclosures from companies under the CDP Investor request program.

This word is LiFE, which means 'Lifestyle for Environment'. Today, there is a need for all of us to come together and take Lifestyle for Environment forward as a campaign. This can become a mass movement towards an environmentally conscious lifestyle.

- Narendra Modi
Prime Minister of India

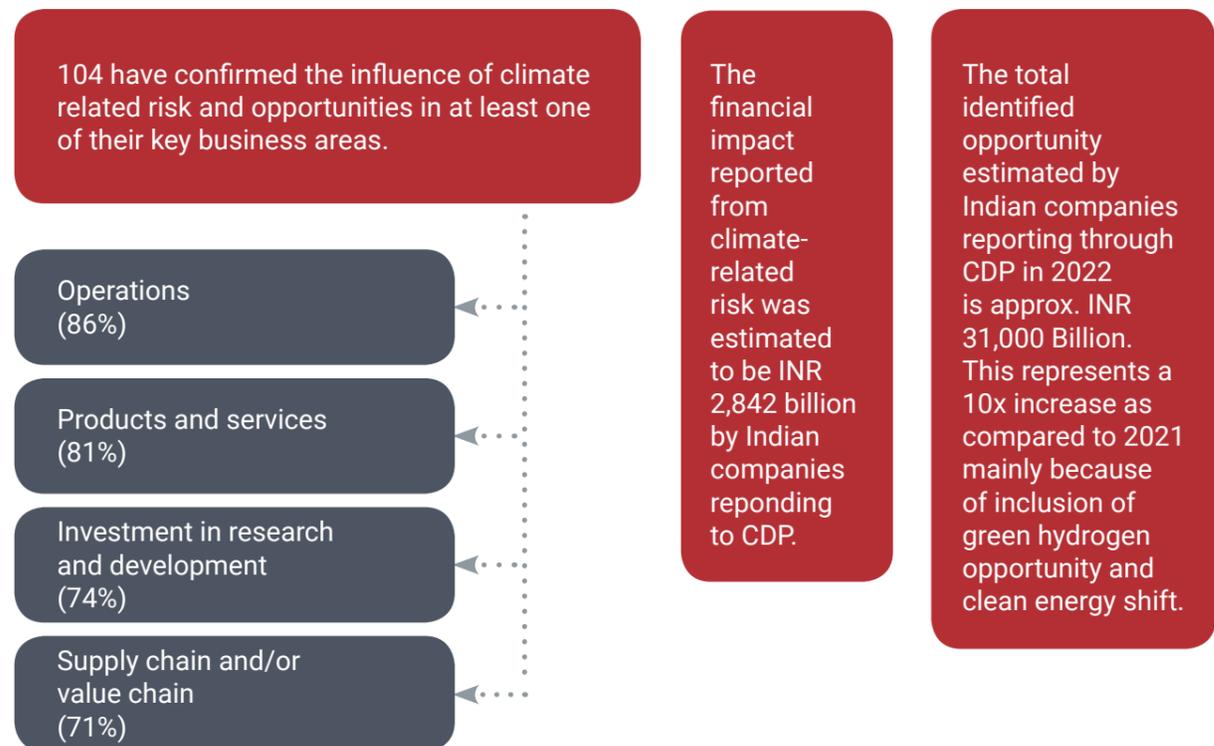
Climate Change

Governance and strategy

- In 2022, out of 122 companies reporting through CDP India, 97% have board level oversight of climate related issues (an increase of 35 companies as compared to 2021) and 80% have the inclusion of at least one board member with competence on climate-related issues.
- As many as 82% of the companies are presenting a quarterly report to the board on climate-related issues.
- In 2022, 58% of the companies responding to CDP India used a scenario analysis to inform their strategy while 52% have a transition plan aligned⁴ with a 1.5°C⁵ world.

Risks and opportunities

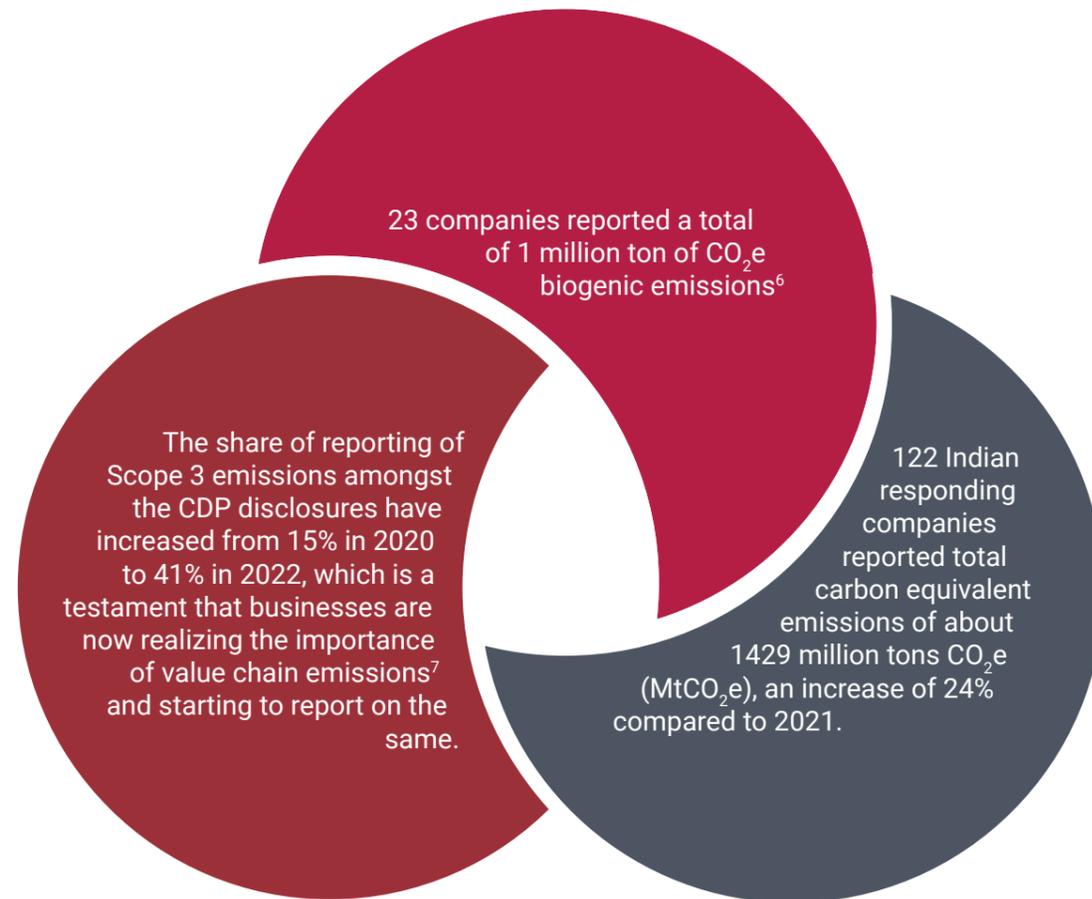
A total of 122 Indian companies responded to CDP's Climate Change Questionnaire in 2022



⁴ Transition plans are a vital tool to demonstrate to investors and stakeholders that an organization is committed to achieving a 1.5-degree pathway, and that its business model will remain relevant (i.e., profitable) in a net-zero carbon economy.

⁵ Holding warming to within 1.5°C above preindustrial levels

Emissions – trends and verification



6 The ultimate chemical composition of and fundamental combustion process for biomass fuels are similar to that of fossil fuels. However, the origin of the carbon in the two types of fuels is different. The carbon in biomass is of a biogenic origin—meaning that it was recently contained in living and breathing tissues—while the carbon in fossil fuels has been trapped in geologic formations for millennia. Because of their biogenic origin, CO₂ emissions from biomass fuels are treated differently from fossil fuel combustion emissions.
 7 A company's scope 1, 2, and 3 emissions as defined by the GHG Protocol accounting standard.

Targets and performance

- ▼ Amongst the 122 companies that disclosed through CDP around 37% companies have intensity-based emission reduction targets followed with 34% having absolute targets and around 9% companies having both the targets.
- ▼ There is a 3x increase in committing to net-zero targets⁸ this year as compared to 12 companies in 2021 that indicated a long-term net-zero absolute/ intensity targets for them.
- ▼ Dedicated energy efficiency budget, compliance with regulatory requirements/ standards and employee engagement, remain the top emission reduction levers⁹ for companies.

8 Setting corporate net-zero targets aligned with meeting societal climate goals means (1) achieving a scale of value chain emissions reductions consistent with the depth of abatement at the point of reaching global net-zero in 1.5°C pathways and (2) neutralizing the impact of any residual emissions by permanently removing an equivalent volume of CO₂.
 9 Emission reduction levers signifies the initiatives or key areas which companies improve or act on to reduce their carbon emissions for example, replacing old parts with energy efficient devices or less carbon intensive devices or sources like renewable energy.

Value chain engagement

Key Trends

More Indian corporates are working on climate issues with their value chain partners compared to last year both in absolute and relative terms.

- ▼ 109 in 2022 vis-à-vis 72 in 2021.
- ▼ 89% in 2022 vis-à-vis 85% in 2021.



Science Based Targets (SBT¹⁰)

Among the 106 SBT¹¹ committed companies in India, around 50% companies disclosed their environmental data through CDP in 2022.

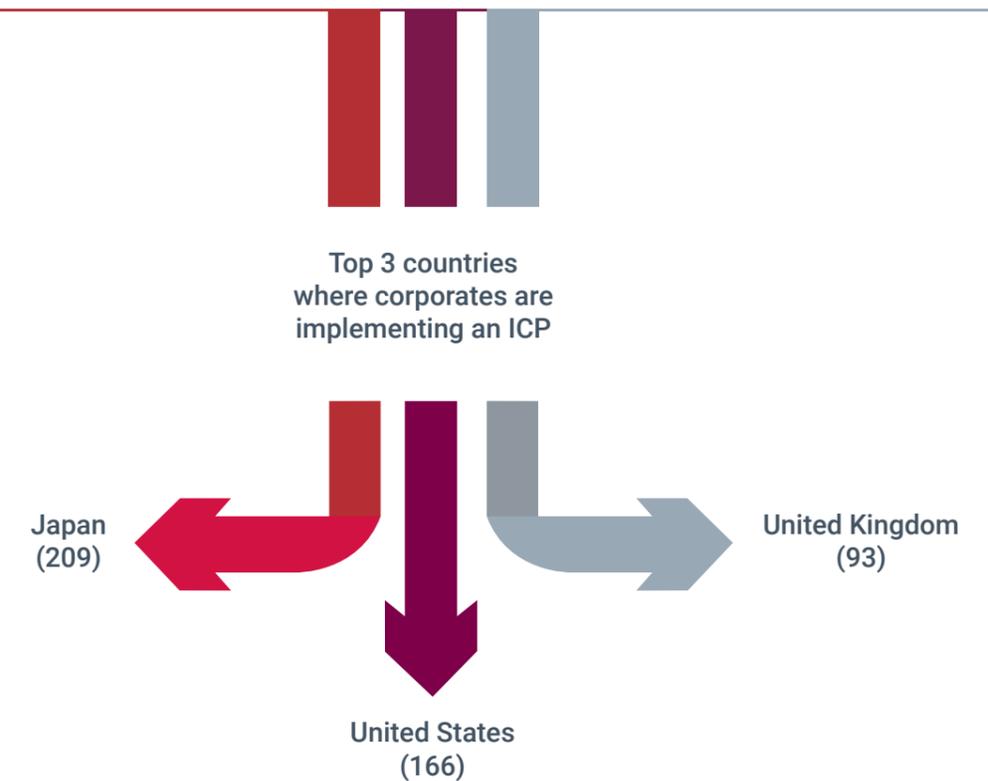


About 35% companies of the 122 companies reported to CDP have the 1.5 degree aligned SBTi validated targets in place and the rest have their targets in line with the WB2DS¹²/2DS¹³ target ambition, which needs a stronger action in order to stay aligned with the urgent requirement for aligning to Paris Agreement 2015 goals¹⁴.

10 Emission reduction targets in line with the guidance & recommendations by SBTi (Science Based Targets initiative).
 11 The Science Based Targets initiative (SBTi) is a global body enabling businesses to set ambitious emissions reduction targets in line with the latest climate science.
 12 The well below 2 degree scenario is a target for limiting global warming to well below 2 degrees Celsius above pre-industrial levels, as agreed upon by the international community at the United Nations Framework Convention on Climate Change (UNFCCC) in 2015.
 13 The 2 degree scenario, also known as the "2 degree target" or "2 degree goal," refers to the internationally agreed-upon target to limit global warming to 2 degrees Celsius above pre-industrial levels.
 14 The Paris Agreement is an international treaty signed under the United Nations Framework Convention on Climate Change (UNFCCC) that aims to combat climate change and its negative impacts. The goal of the Paris Agreement is to hold the increase in the global average temperature to well below 2 degrees Celsius above pre-industrial levels, and to pursue efforts to limit the temperature increase to 1.5 degrees Celsius.

Internal Carbon Pricing (ICP)¹⁵

The use of ICP is reported by 1418 companies globally in 2022

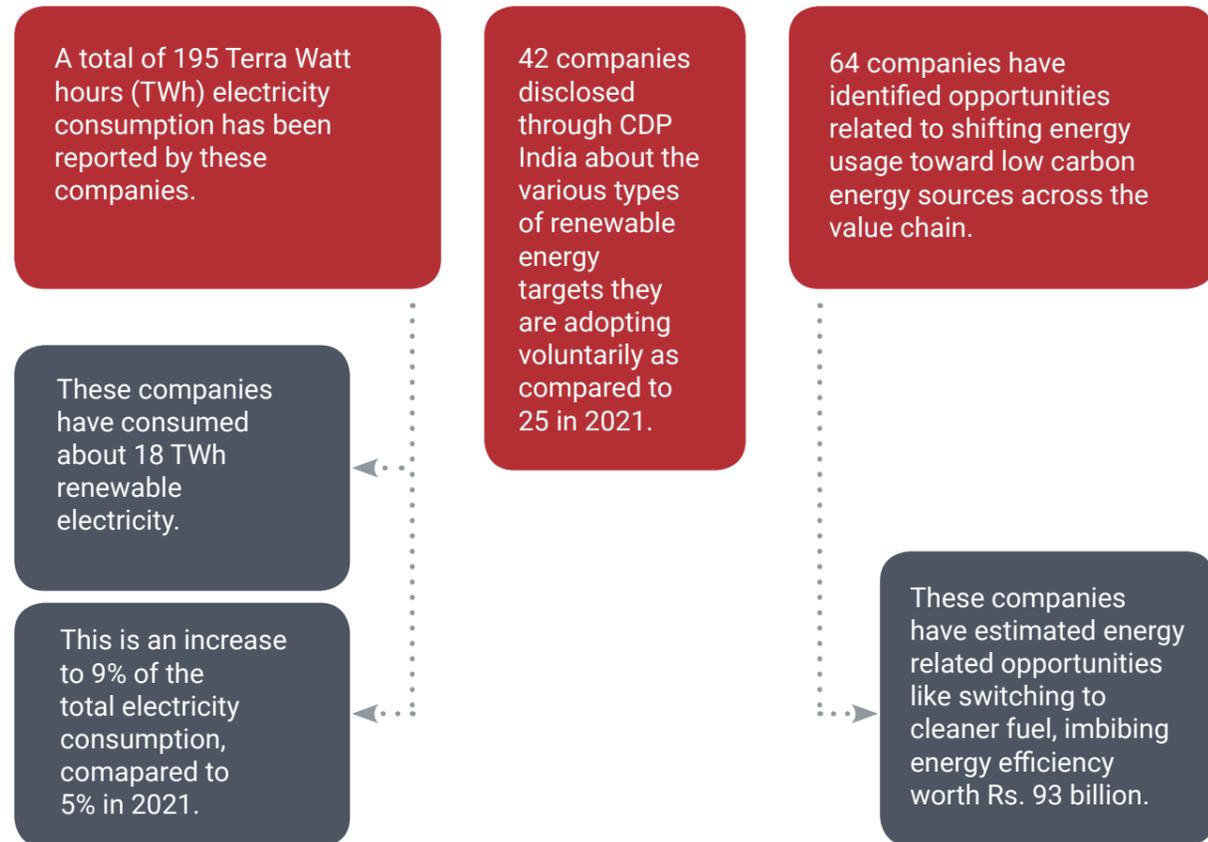


In India specifically, 42 companies have incorporated ICP (a 35% increase from 2021), and 68 companies are planning to adopt ICP in the next two years (up 25% from 2021). This brings the total number of companies that already use or plan to adopt ICP in the next two years to 110, about a 30% increase compared to 2021.

15 Internal Carbon Pricing is defined as voluntarily setting up a monetary value associated with each ton of carbon emissions.

Renewable Energy (RE)

A total of 122 companies responded to CDP's climate change questionnaire in 2022



Water Security

Current State: Measurement & Verification

On average, water discharge on a company level basis has steadily decreased from 2020-22 which can be attributed to better recycling practices and more efficient use of water resources.

- ▼ 264,000 litres in 2020
- ▼ 259,500 litres in 2021
- ▼ 240,000 litres in 2022

Targets and monitoring

- ▼ Around 67% companies reported monitoring their water targets at corporate levels while disclosing to CDP
- ▼ Around 60% companies reported to CDP's water questionnaire reported reducing environmental impact as the primary motivation for taking water targets followed with water stewardship.

Risks and opportunities

- ▼ It is encouraging to note that 96% (43 out of the 45 disclosing companies) responding to CDP India water security questionnaire undertake a water related internal risk assessment from time to time in order to rectify their water use and increase the water security.
- ▼ Majority of responding companies (80%) reported physical risks such as floods, droughts, and increased water stress, followed by regulatory (15%), reputation & markets (3%) and technology (2%). This indicates that water risks and extreme events due to climate change are inextricably linked.

- ▼ The overall financial risk reported by water responding companies in 2022 is INR 504 billion while the cost of response to risk stands at around INR 37 billion. The cost of inaction is 13 times more than the cost of addressing the risks indicating a prompt action to leverage long-term water resilience.

Cities, States and Regions

The city of Mumbai became the first-ever Indian and South Asian city (amongst the 122 cities globally) to be added to on CDP's 2022 A-list for climate action leadership.

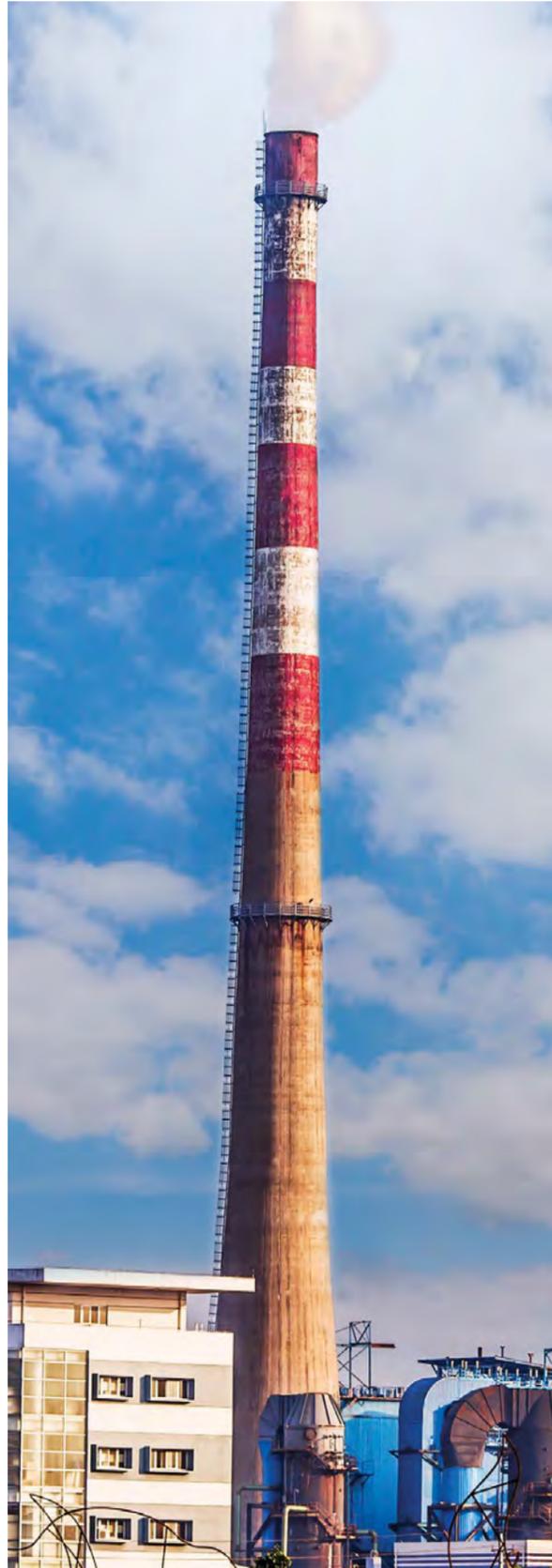


Climate Change Insights – Roadmap for Decarbonization



2





Embarking on the decarbonization journey requires stakeholders to gain deeper insights on their impact on climate change from their emissions profile. What are the main sources, and what is the intensity of emissions? What ambitions and strategies do reporting companies have in place?

In 2022, 122 Indian corporates disclosed their environmental data via CDP on climate change as compared to 85 companies reported in 2021 – an increase of 44%. 16 Indian companies made it to the prestigious CDP climate change leadership band list this year, with five leading the way as Climate Change Champions.

CDP & BRSR Alignment

The Security and Exchange Board of India (SEBI) has made ESG reporting mandatory for the top 1000 listed entities (by market capitalization) from 2022-2023 onwards. CDP India has conducted a mapping exercise that involved assessing the alignment of SEBI’s Business Responsibility and Sustainability Report (BRSR) with the 3 CDP thematic questionnaires namely- Climate Change, Water Security, and Forests. Overall, 65 out of 140 BRSR questions have some kind of overlap with the CDP questionnaire. Alignment of the CDP questionnaires reduces the reporting burden for companies already reporting to CDP India. 67 BSE 200-listed Indian companies reported to CDP in 2020, 89 in 2021, increasing to 122 in 2022 and only an upward trajectory is expected in the years to come.

Climate change leaders

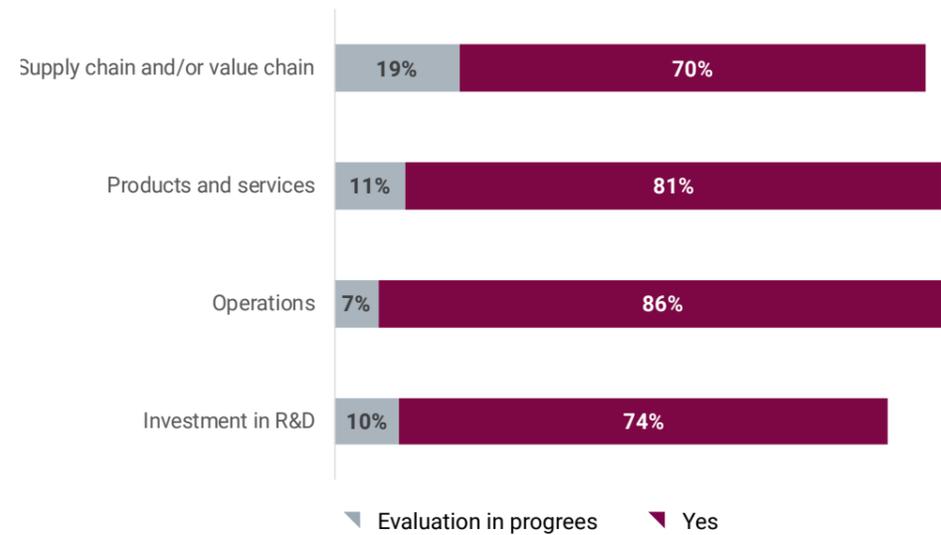
Company Name	Score
Infosys	A
JSW Steel	A
Hindustan Zinc	A
Mahindra Lifespace Developers Ltd	A
Wipro	A
ACC	A-
Dr Reddy’s Laboratories	A-
ITC Limited	A-
JSW Energy	A-
Mindtree	A-
Shree Cement	A-
TATA Consultancy Services	A-
TATA Steel	A-
Tech Mahindra	A-
Ultratech Cement	A-
YES Bank	A-

Governance and strategy

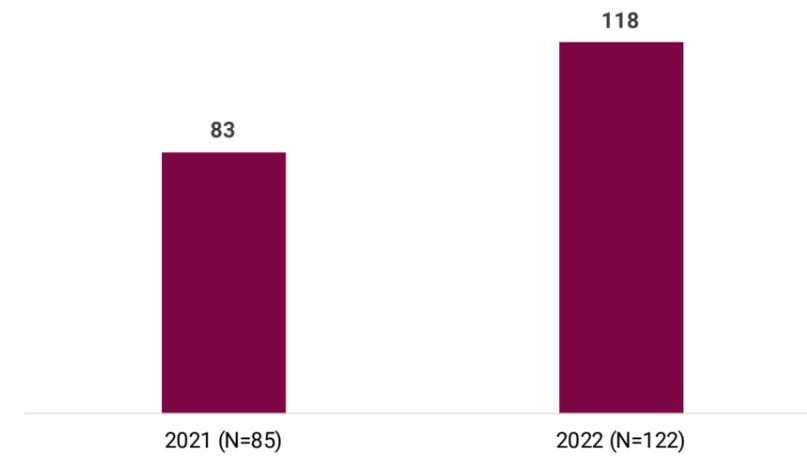
CDP’s Governance and Strategy module in the climate questionnaire is crucial as it reflects how sustainability and decarbonization are integrated at the management level. As per the data reported through CDP in 2022, disclosures, climate-related risks and opportunities significantly influence different business areas (as shown on the next page), reinforcing the importance of bringing climate change into the boardrooms.



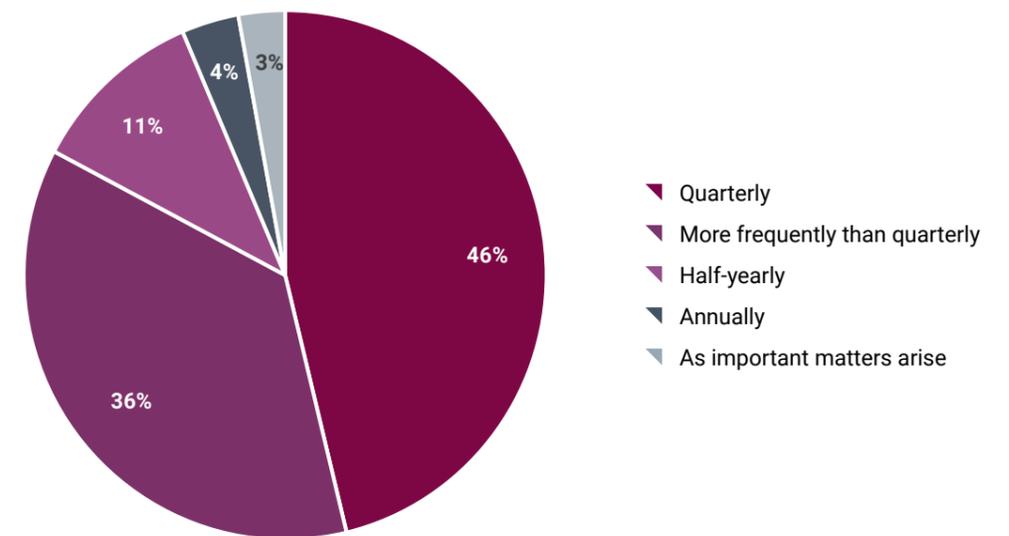
Strategic areas influenced by climate risks & opportunities
(% of respondents)



Companies with Board level oversight on climate-related issues
(# of companies)



Frequency of reporting to board on climate-related issues
(% of companies)



A climate conscious business strategy not only ensures operational excellence, business growth, and meeting stakeholder demands, but also facilitates tapping into national and international schemes aimed at tackling climate change, enhancing energy efficiency, and/or procuring a greater share of renewable energy. In the otherwise business-as-usual scenario, serious risks from regulations, shifts in technology and changing consumer expectations are inevitable, and becoming more so day by day.

CDP in India's data shows that many companies are steering their business with a low carbon navigation roadmap and are adopting corporate climate governance measures such as having a board level oversight or a dedicated management personnel for monitoring climate-related issues. For instance, **in 2022, out of 122 companies reporting through CDP India, 97% have board level oversight of climate related issues (an increase of 35 companies as compared to 2021) and 80% have at least**

one board member with competence on climate-related issues. As many as 82% of the companies are reporting to the board on at least a quarterly basis on climate-related issues.

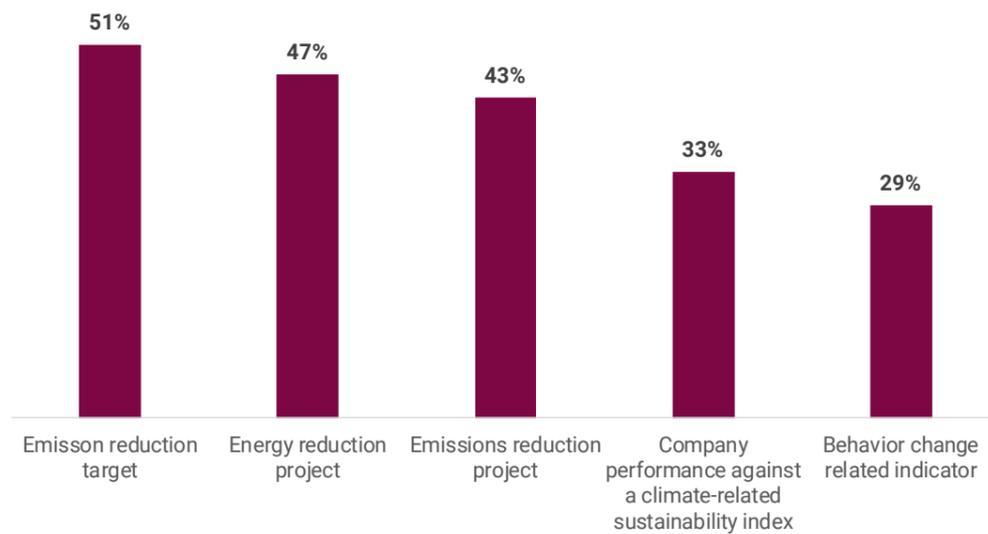
“At ACC, the Sustainability Committee consisting of six board members and chaired by an independent director is responsible for guiding in developing company-wide climate-related strategies and for overseeing the company's climate-related engagements. The committee anchors ACC's commitment to align with a 1.5°C business ambition. Further, the board has emphasized additional focus required on areas like clinker factor improvement and earliest installation of waste heat recovery systems on all integrated plants and aggressive approach on green energy.”

Head - Environment & Sustainability; ACC

To accelerate the pace of addressing climate-related issues, companies are adopting the practice of incentivizing the management of climate-related issues via monetary benefits (85%) and non-monetary benefits (12%). The decision of who is entitled to receive incentives is decided by the CEO (41%) followed by the Environment/Sustainability Manager (25%), the Chief Sustainability Officer (24%) and finally the Environmental, Health, and Safety Manager (10%).

Companies are also incentivizing climate-related activities as an encouraging approach towards achieving India's new climate ambitions. Out of 122 companies, setting an emission reduction target was found to be the most widely adopted practice in 2022, followed by energy and emission reduction projects.

**Activities incentivised
(% of companies)**



To understand the causality of future climate-related risk and opportunities, companies are adopting modelling applications such as scenario analysis to explore alternatives that may significantly alter the basis for 'business-as-usual' assumptions. In 2022, 58% of the companies responding to CDP in India used a scenario analysis to inform their strategy while 52% have a transition plan aligned with a 1.5°C world.

Value chain engagement

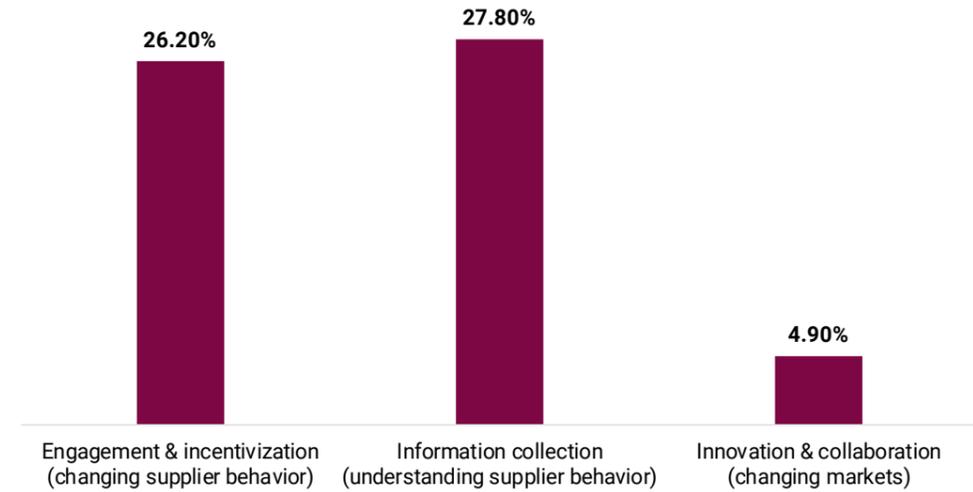
Over the years, CDP in India has observed that while companies might have defined governance mechanisms as well as strategies to implement sustainable solutions to manage climate change related issues, it is usually limited to their direct operations. This reduces the overall impact that should be achieved through these policies. In order to attain maximum positive impact and actually see the effect of these changes, companies need to collaborate with their entire network, and also

create a need for capacity building wherever possible. **Decarbonizing the supply chain is crucial.**

According to CDP global supply chain report 2020, value chain emissions are 11.4 times greater than a company's direct carbon footprint. Turning a blind eye to this part of a company's operations is therefore simply not a viable option. **As one of the fastest growing economies in the world and the fifth largest economy globally, India is well positioned to emerge as the next global manufacturing hub¹⁶.** Building supply chains resilient to climate shocks is vital to ensure business continuity and growth in the country.

Based on CDP India's analysis of this reporting year, 109 companies were engaged across different levels of their value chain on climate issues. This represents about 89% of the sample (122) compared to 85% in 2021. There appears to be a growing awareness and actions taken towards decarbonizing the supply chain.

**Types of supplier engagement
(N=122)**

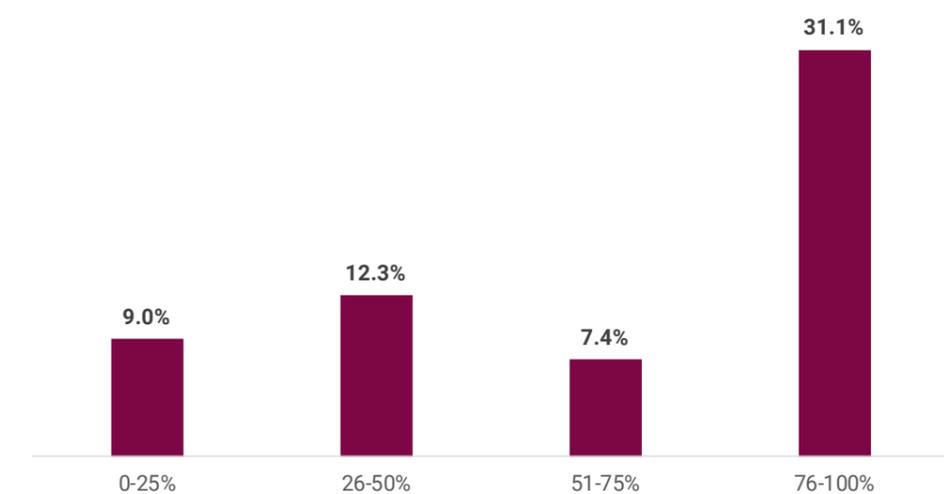


The top two methods of supplier engagement implemented by companies is:

Through information collection – companies tried to understand and study the supplier's behavioral patterns and suggest an alternative plan accordingly.

Engagement and incentivization – this method also proved to be successful for a number of companies in helping to change the supplier's behavior and patterns.

**Supplier engagement by % procurement spend
(N=122)**



About 21% of companies engage with suppliers that account for half of their procurement spend, while 38% of businesses collaborate

with their value chain partners comprising between 50-100% of total procurement spend.

16 <https://theprint.in/world/india-becomes-5th-largest-economy-in-world-a-perspective/1131813/>



Case study

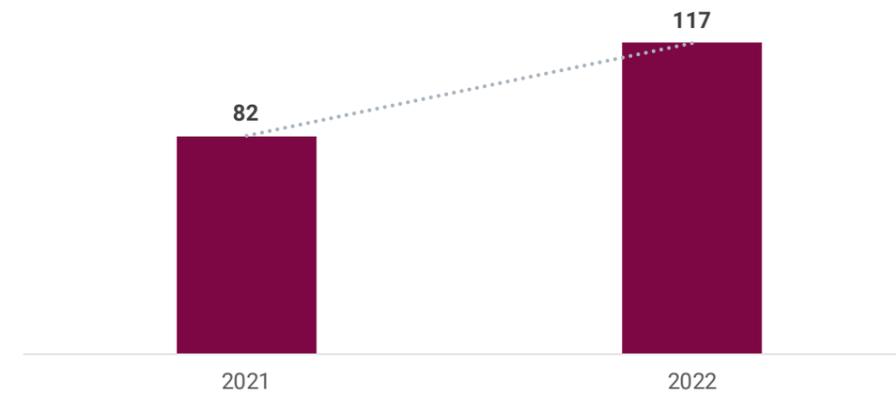
Tata Steel Limited procurement is governed by responsible supply chain policy (RSCP) focused on sustainable business practices. We encourage supply chain partners on commitment to sustainable business practices. Tata Steel has established a process of doing sustainability assessment of critical vendor partners. The implementation of the policies & procedures have also been focused upon in the assessment process through document verification and key data points such as monitoring of GHG emissions, energy consumption, ambient air pollution etc. 450+ critical vendors have been identified using a decision matrix considering factors such as Supplier Dependency, Spend Volume, Nature and Material Procured.

Climate change: Risks and opportunities

A future-oriented identification, assessment & response mechanism to climate-related impacts is crucial to ensuring an organization's competitiveness and long-term value creation. Climate change provides ample scope of realizing opportunities as the world transitions to a low carbon economy. Many global climate disclosure frameworks therefore place immense emphasis on assessing and reporting on the actual and potential impacts of climate-related risks and opportunities.

As discussed in the section on Strategy and Governance, of the 122 Indian companies responding to CDP's Climate Change questionnaire in 2022, 104 have confirmed the influence of climate-related risk and opportunities in at least one of their key business areas such as operations (86%), products and services (81%), investment in R&D (74%) and supply chain/value chain (71%). Also, 117 companies representing 96% of the respondents have a process in place for identifying, assessing, and responding to climate-related risks and opportunities which marks an increase of 35 companies as compared to 2021.

Companies having a process in place for identifying, assessing, and responding to climate-related risks and opportunities (# of companies, N=85, 122 resp.)

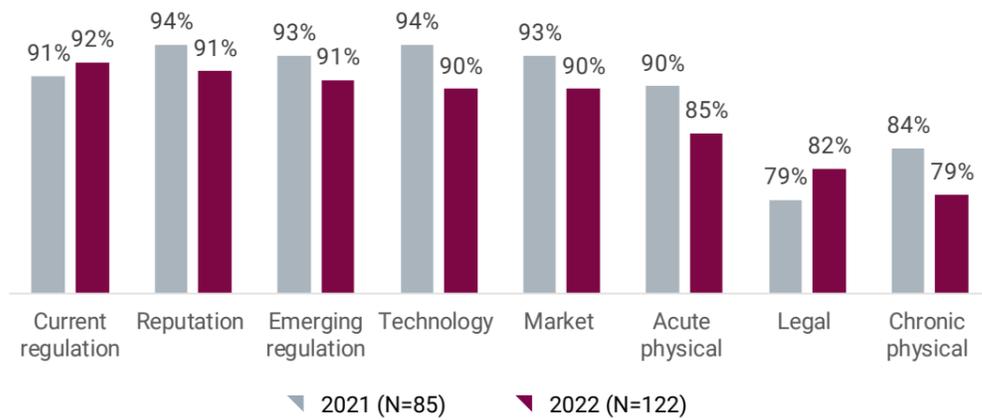


Risk of climate change

Climate change impacts and risks are becoming increasingly complex with each passing day, such as rising sea levels, ocean acidification and other extreme weather events. The arctic bomb cyclone that hit the USA in late 2022 is one such example of extreme weather conditions due to climate change. As these extreme weather events increase in frequency and severity, companies that consider and mitigate material risk will be more attractive to investors than companies that do not.

There is a slight change in the reporting behavior compared with 2021 when reputational and technological risks were the topmost concerns. In 2022, companies in India reported the maximum relevance of risk from current & emerging regulation. Also, a higher percentage of companies reported legal risks while the overall percentage of companies reporting physical risks is lesser in 2022 as compared to 2021. It would be apt to deduce that corporate agencies expect a stringent approach from regulatory authorities towards climate change affairs in times ahead.

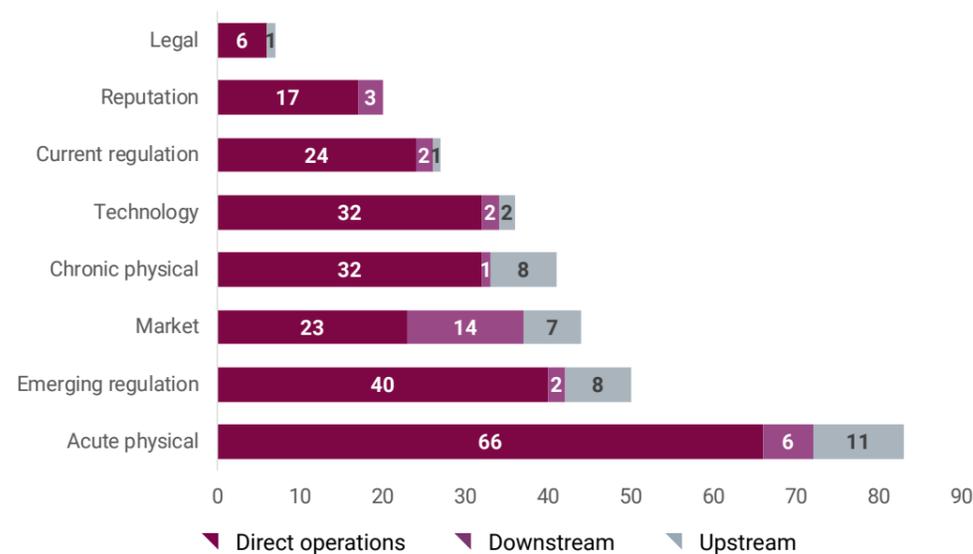
Risks relevant to Indian companies (% of companies)



A breakdown of risks as per their identification in the stage of value chain shows that climate-related risks affect the direct operations as well as supply/value chains. It is noteworthy to mention that the risk trend is similar to last year with market risks being the most relevant for companies' downstream operations. However, the number of risks identified have significantly

escalated, indicating that a robust approach to overcome the risks needs to be implemented. A framework of climate resilient adaptive and mitigative strategies such as employing nature-based solutions, shifting to cleaner energy sources and strengthening sustainable food chains needs to be prioritized.

Risks identified in value chain (# of companies)

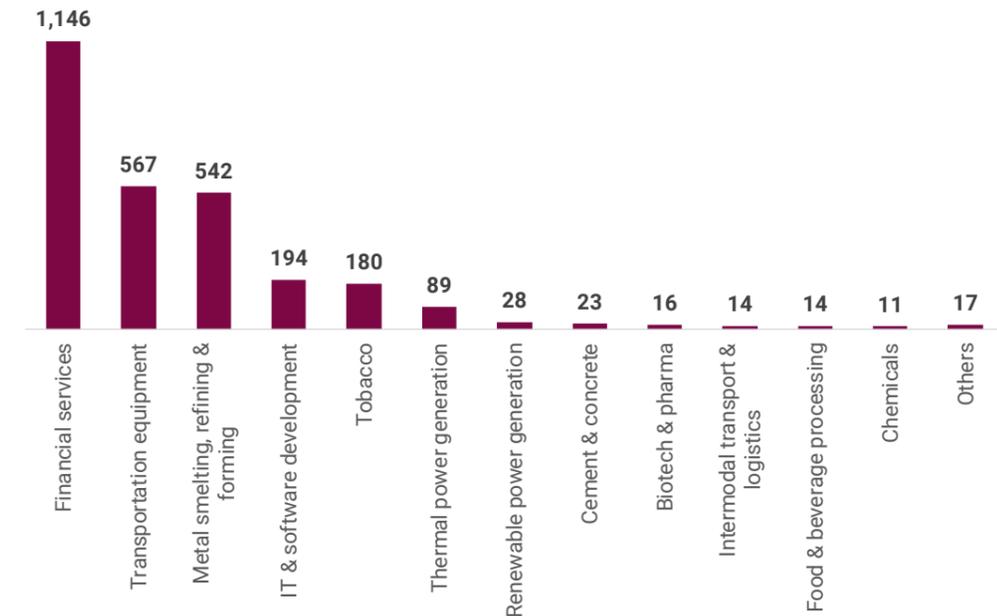


* Upstream and downstream risks are defined based on the location of operation in the value chain.

The financial impact reported from climate-related risk was estimated to be INR 2,842 billion by Indian companies responding to CDP. The sectoral analysis of climate-related impact lists the financial sector to lead; similar

to the trend seen in 2021. However, the overall reported risk is 15% less in 2022 due to low reporting by Industries such as metals & mining, oil & gas and financial services.

Financial impact of climate-related risks (Billion INR)



Climate change opportunities

Climate-related opportunities encompass the adaptive and mitigative approaches adopted by businesses in their climate proofing journey. This brings to the fore several areas identified by TCFD¹⁷ such as resource efficiency, low carbon transition, access to new markets and making the supply chains more resilient. Companies are increasingly transitioning towards clean

energy sources ie solar and wind energy. Of the 122 Indian companies disclosing to the climate change questionnaire in 2022, 93% have identified a potential financial or strategic impact on business performance from climate opportunities. **The highest financial impact of opportunities lies in direct operations, particularly under Products and Services.**

17 The Task Force on Climate-Related Financial Disclosures (TCFD) was created in 2015 by the Financial Stability Board (FSB) to develop consistent climate-related financial risk disclosures for use by companies, banks, and investors in providing information to stakeholders

National Green Hydrogen Mission

Fueling the economy with clean power

In an effort to decarbonize major economic sectors, Prime Minister Shri Narendra Modi launched the National Green Hydrogen Mission on 15th of August, 2021. The main aim of this mission is to make India energy independent while reducing the fossil fuels imports as well as the yearly green house emissions.

The initial outlay for the Mission will be Rs.19,744 crore, including an outlay of Rs.17,490 crore for the SIGHT programme, Rs.1,466 crore for pilot projects, Rs.400 crore for R&D, and Rs. 388 crore towards other Mission components.¹⁸

Following are some key features of this mission:

This initiative proposes the following outcomes to be achieved by the year 2030:

- ▼ India to be promoted as a Global Hub of Green Hydrogen for purposes of its production, utilization as well as the export of green hydrogen and its derivatives
 - ▼ Development of green hydrogen production capacity of at least 5 MMT (Million Metric Tonne) per annum with an associated renewable energy capacity addition of about 125 GW in the country
 - ▼ Over Rs. Eight lakh crore in total investments
 - ▼ Creation of over Six lakh jobs
 - ▼ Cumulative reduction in fossil fuel imports over Rs. One lakh crore
 - ▼ Abatement of nearly 50 MMT of annual greenhouse gas emissions
- ▼ The mission plans to target domestic manufacturing of electrolysers and production of Green Hydrogen as part of its Strategic Interventions for Green Hydrogen Transition Programme (SIGHT).
- ▼ Identifying the regional capabilities of areas that can support large scale production and/or utilization of Hydrogen and support them to develop into Green Hydrogen Hubs.
- ▼ Supporting pilot projects in emerging end-use sectors and production pathways.



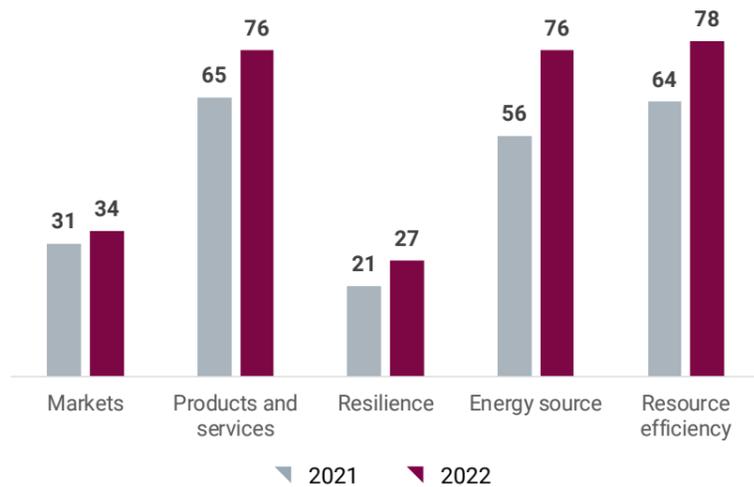
- ▼ The mission also proposes to facilitate a public-private partnership framework for R&D (Strategic Hydrogen Innovation Partnership – SHIP). These R&D projects will be goal-oriented, time bound, and suitably scaled up to develop globally competitive technologies.
- ▼ Development of an enabling policy framework to support establishment of Green Hydrogen ecosystem as well as a robust Standards and Regulations framework.
- ▼ A coordinated skill development programme will also be undertaken under the Mission.

18 https://www.pmindia.gov.in/en/news_updates/cabinet-approves-national-green-hydrogen-mission/

Source : www.pmindia.gov.in



Opportunities identified by Indian companies (# of opportunity)



The total estimated value of opportunities identified by Indian companies reporting through CDP in 2022 is approx. INR 31,000 billion. This represents a 10x increase as compared to 2021 mainly because of inclusion of green hydrogen opportunity and shift towards cleaner energy.

Type of opportunity	Financial impact of opportunity (Billion INR)
Energy source	93
Markets	909
Products and services	28852
Resilience	1147
Resource efficiency	128

Emissions trends and verification

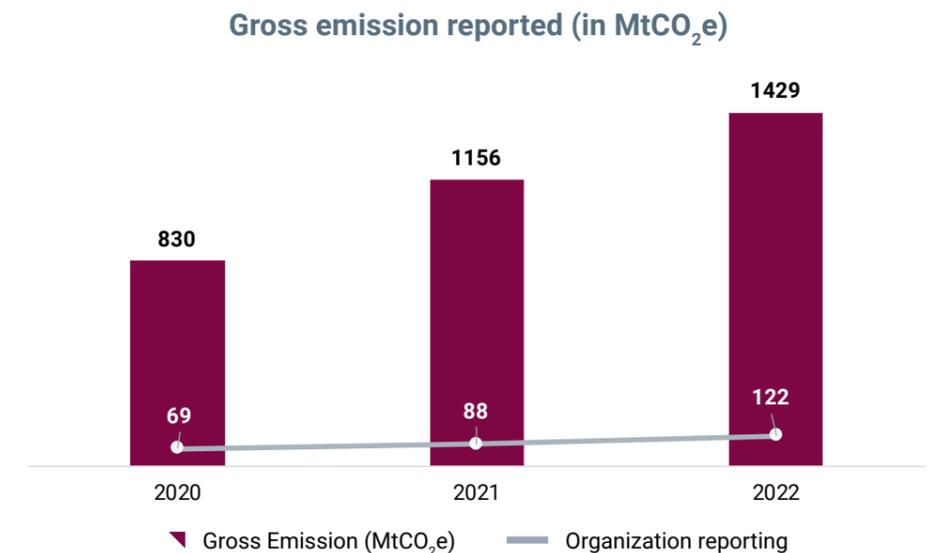
The demand for corporate transparency has led to an increasing number of companies measuring their GHG emissions generated by their activities. Companies look at their own operations as well as the operations and working of their value chain. Hence, information and monitoring of GHG emissions has expanded to cover Scope 1, Scope 2, and Scope 3 emissions¹⁹.

There are both short and long-term influences on GHG emissions. In the short term, we can think of abrupt geopolitical and economic events that could lead to significant but temporary changes in annual emissions. In the long term, structural shifts in technologies, production, and investment decisions, as well as economic and climate policies, can play an important role in influencing GHG emissions. The only way to check this influence is to disclose the data for these emissions.

Scope of opportunities

- Resource efficiency**
 Opportunities related to improving resource efficiency across production and distribution processes, buildings, machinery/appliances, and transport/mobility.
- Energy source**
 Opportunities related to shifting energy usage toward low emission energy sources.
- Products and services**
 Opportunities related to innovation and development of new low-emission and climate adaptation products and services.
- Markets**
 Opportunities in new markets or types of assets that may help organizations to diversify their activities and better position themselves for the transition to a lower-carbon economy
- Resilience**
 Opportunities related to the development of adaptive capacity to respond to climate change. They may be especially relevant for organizations with long-lived fixed assets or extensive supply or distribution networks; those that depend critically on utility and infrastructure networks or natural resources in their value chain; and those that may require longer-term financing and investment.

Emission disclosures



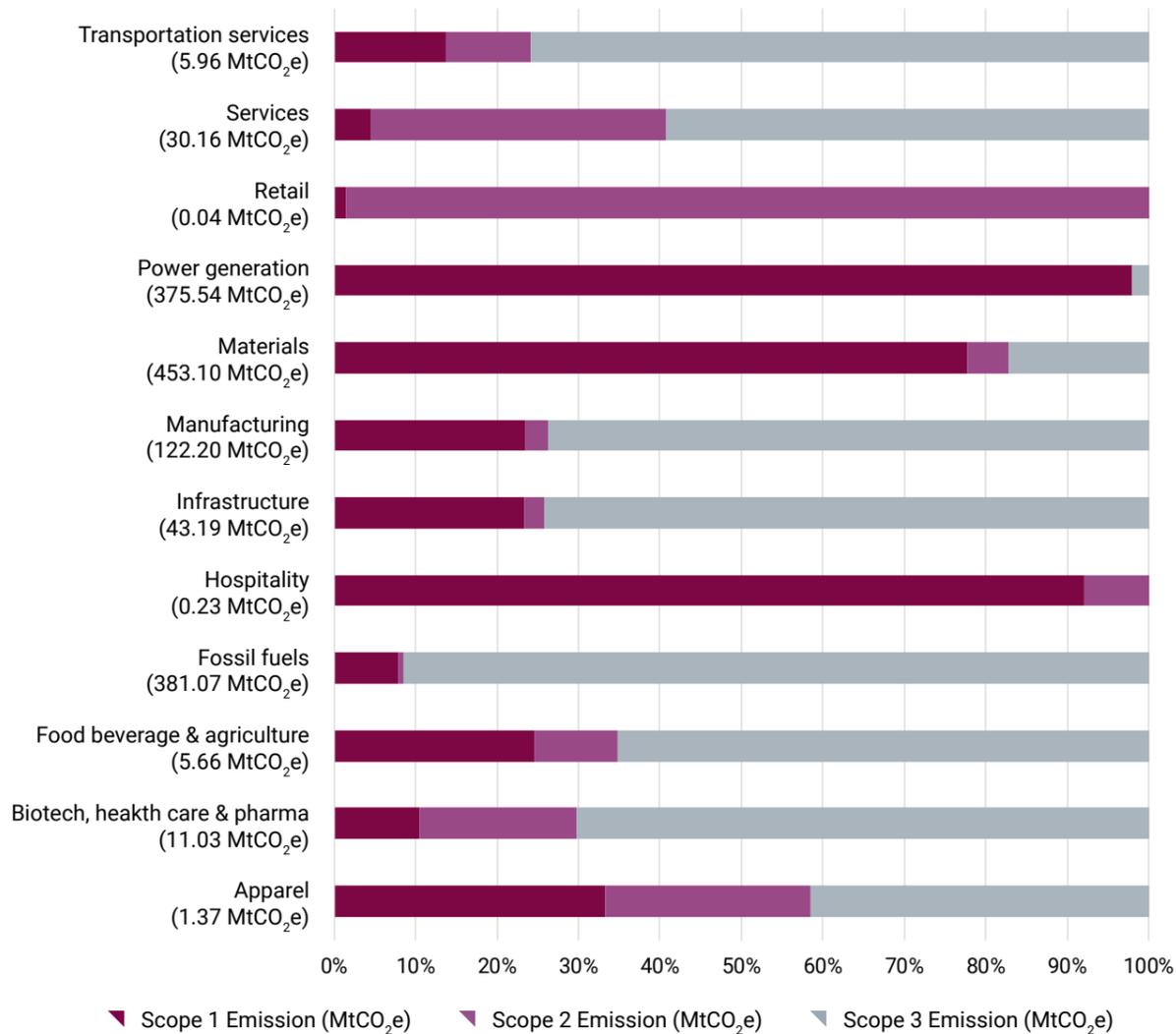
¹⁹ The GHG Protocol Corporate Standard classifies a company's GHG emissions into three 'scopes'. Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 emissions are all indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.

In 2022, Indian companies responding to CDP reported a total carbon equivalent (CO₂e²⁰) emissions of about 1429 million tons CO₂e (MtCO₂e), an increase of 24% compared with 2021 figures. This is primarily attributed to an increase in the number of companies responding to CDP in 2022. More companies disclosing automatically leads to more GHG emissions data. Scope 1 carbon emissions increased by 16% to 794 MtCO₂e in 2022, while Scope 2 rose by 46% to 44 MtCO₂e. Scope 3 increased significantly by 34% to 591 MtCO₂e. Further analysis of the GHG emissions

of disclosing companies reveals important sectoral information, especially on how it is distributed amongst different sectors.

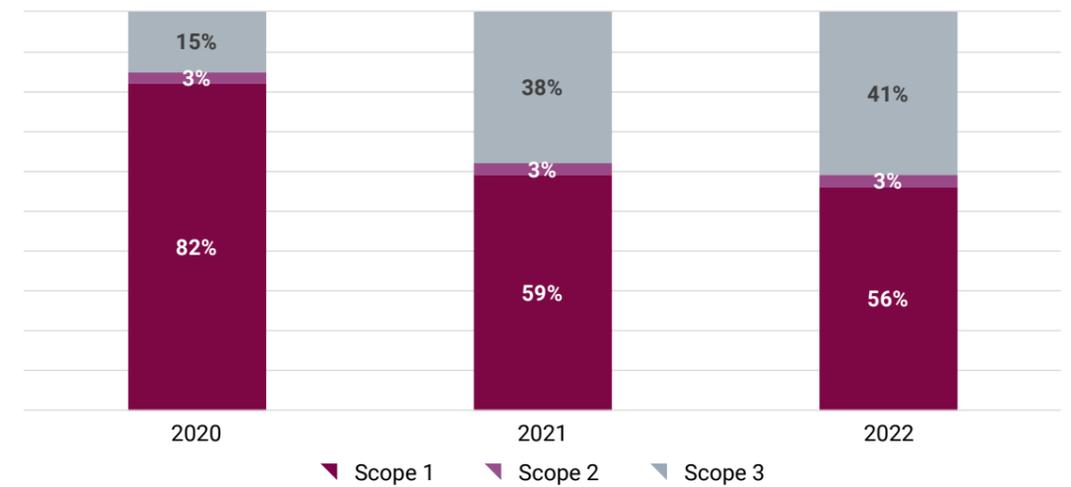
The highest emitting sectors are materials with 453.1 MtCO₂e, fossil fuels with 381.1 MtCO₂e and power generation with 374.5 MtCO₂e. Also, the majority of emissions coming from the material and power generation sectors are attributed to direct activities, while for fossil fuels close to 91% emissions are concentrated to indirect Scope 3 emissions.

Sectoral share of reported Scope 1, 2 and 3 emissions



²⁰ It is a metric measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.

Scopewise emission trends (% of total emissions)



If we look at the emissions across the three scopes (Scope 1, Scope 2, and Scope 3), the largest share of emissions is still coming from direct sources (Scope 1 and Scope 2) due to the use of fuels in the direct operations. Interestingly, the share of Scope 3 emissions among companies disclosing to CDP has increased from 15% in 2020 to 41% in 2022. This suggests that businesses are now realizing the importance of value chain emissions and starting to report on the same.

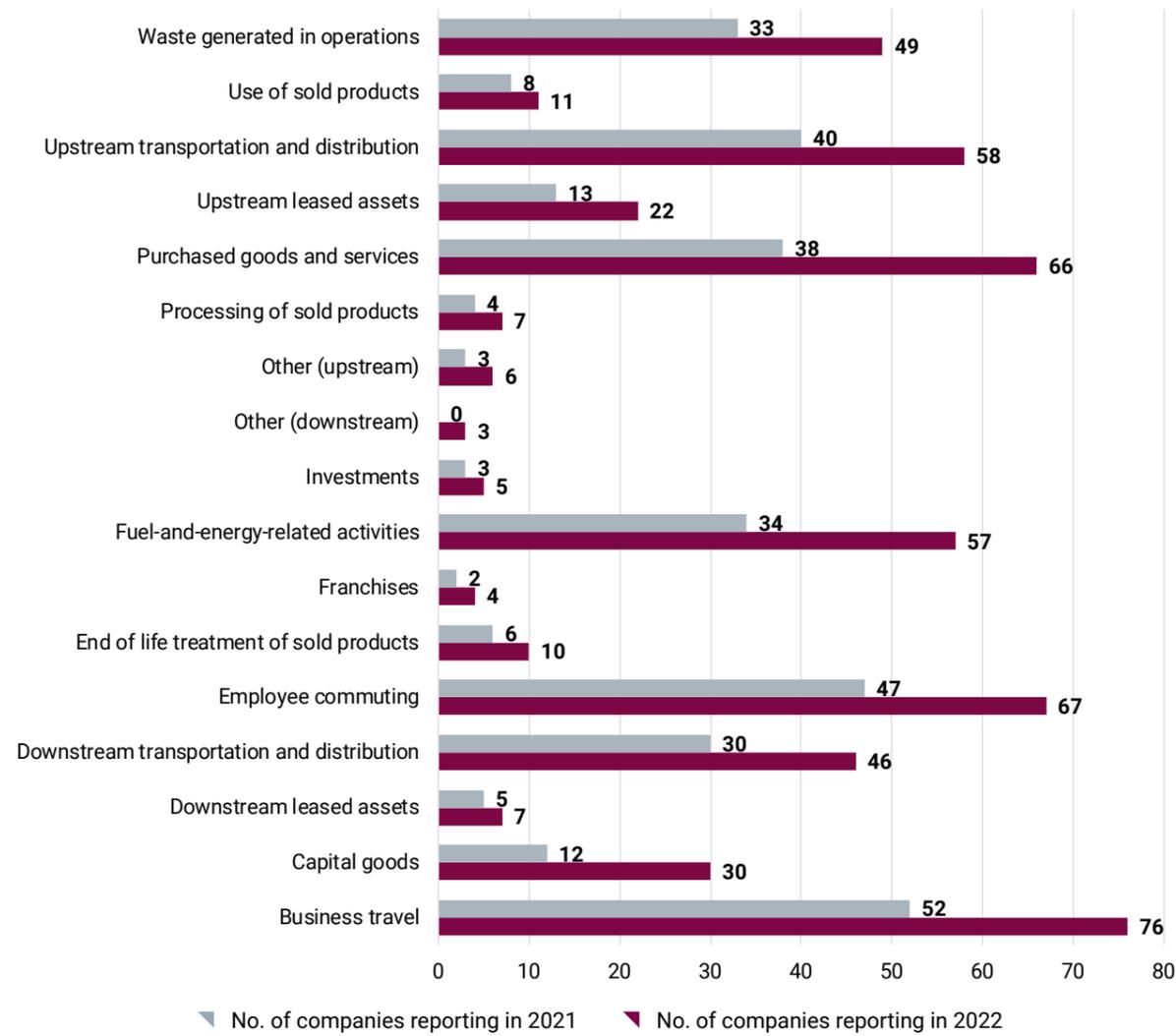
decarbonization. Only five companies reported emissions from the category Investments out of which only one is a financial Institute (Yes Bank Ltd.). This is despite 11 Indian financial institutes responding to CDP India in 2022. This indicates that for banks, asset managers and other financial institutions, Scope 3 calculations and reporting remains an uphill battle.

Companies engaging with their value chain (Scope 3)

With 41% of total emissions coming from the value chain of the responding companies, it is interesting to see the distribution of companies reporting on different categories of Scope 3 emissions. From the emerging data, it is evident that categories like business travel and employee commuting are by far the most reported categories pertaining to ease in data collection and gathering. It is observed that the maximum change has taken place in the purchased goods and services and fuel-and-energy-related activities categories. This is a clear indicator of a larger engagement with suppliers on issues of emissions and



Scope 3 categories reported in 2022 & 2021



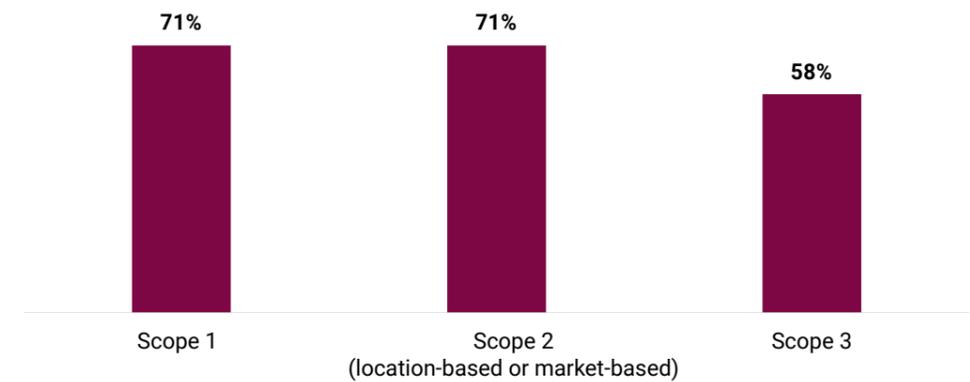
Emission verification

Companies are encouraged to verify the reported GHG emissions data in their disclosure through CDP's scoring methodology, which incentivizes verified data disclosures. This percentage varies according to the specific questionnaire routes chosen. Alongside other requirements, the qualification criteria for featuring in the CDP A List companies includes achieving full leadership points on Scope 1 and 2 verification questions.

Third party verification is carried out by an independent external organization. This is an

important aspect of emissions reporting that adds credibility to disclosures and enhances transparency. Of the 122 companies responding to CDP India in 2022, 71% (87 companies) have reported third party-verified Scope 1 emissions. Assurances by third party for Scope 2 and Scope 3 categories stood at 71% (87 companies) and 58% (71 companies) respectively. More companies are opting for the third-party verification of Scope 1 data as reflected in a 32% increase compared to 2021. Several companies across different sectors reported verified emissions data for all 3 scopes including relevant and/or reported Scope 3 emissions categories.

% of companies with third party verification or assurance (N=122)



Targets and performance

Emission reduction targets are necessary for urgent climate action because they provide a clear and measurable goal for reducing greenhouse gas emissions.

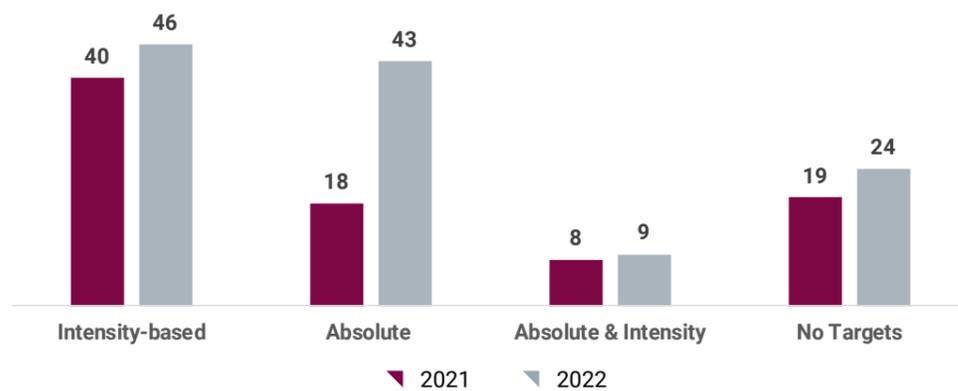
Emissions reduction targets can be set at the group level, plant/site level, and they can be based on various approaches, such as intensity targets (eg reducing emissions per unit of operation eg per mWh) or absolute targets (eg reducing total emissions by a certain amount).

Analysis found that approximately 80% of disclosing companies have absolute or intensity

targets in place. Among the 122 companies, 46 companies have intensity-based targets, 43 companies have absolute targets and nine companies reported that they have both absolute and intensity targets in place across Scope 1, Scope 2 and Scope 3. This year, two financial services have mentioned that they have both intensity/absolute and portfolio targets in place.

Strategizing and implementing stringent practices in line with the targets is critical for low carbon operations. Tracking them annually through disclosures ensures accelerating the climatic action.

**Emission reduction target type
(No. of companies)**



Setting emissions reduction targets have various benefits, including:

Meeting regulatory requirements:

Many countries and regions have established laws and regulations that require companies to reduce their greenhouse gas emissions. By setting emissions reduction targets, companies can ensure they are in compliance with these requirements. 51 companies reported that they have emissions reduction initiatives in compliance with regulatory requirements in 2022 disclosures.

Improving reputation:

Companies that set and achieve emissions reduction targets can enhance their reputation as environmentally responsible and sustainable businesses. This can help attract customers and investors who prioritize sustainability.

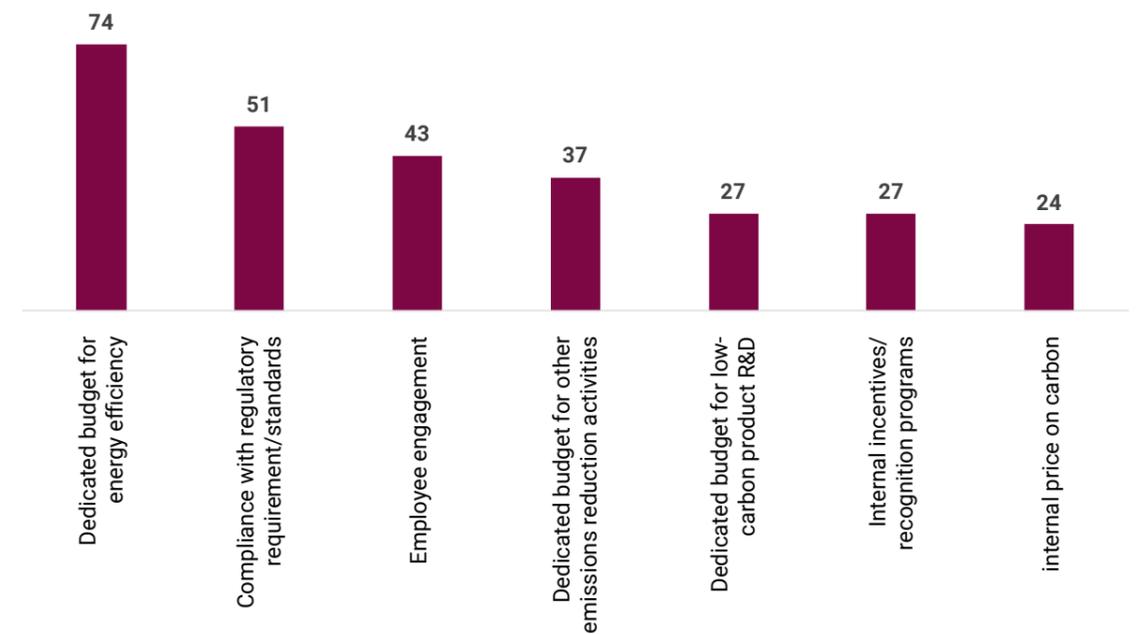
Saving money:

Reducing emissions can often lead to energy efficiency improvements and other cost-saving measures, which can help companies to reduce their operating costs.

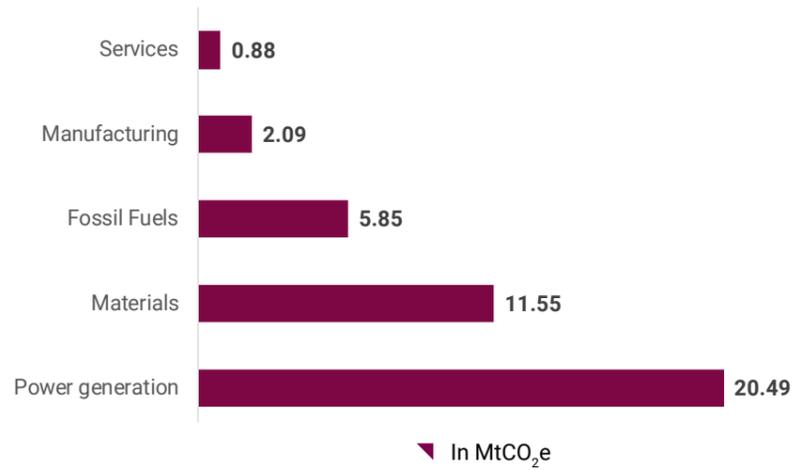
Contributing to global efforts to address climate change:

By reducing their own greenhouse gas emissions, companies can play a role in addressing the global challenge of climate change. 74 companies reported they have dedicated budgets for energy efficiency, 43 companies have reported they have employee engagement and 27 companies reported they have dedicated budgets for R&D of low carbon products as well.

Various emission reduction initiatives reported by companies



Highest CO₂e emission saving across the top 5 sectors (MtCO₂e)

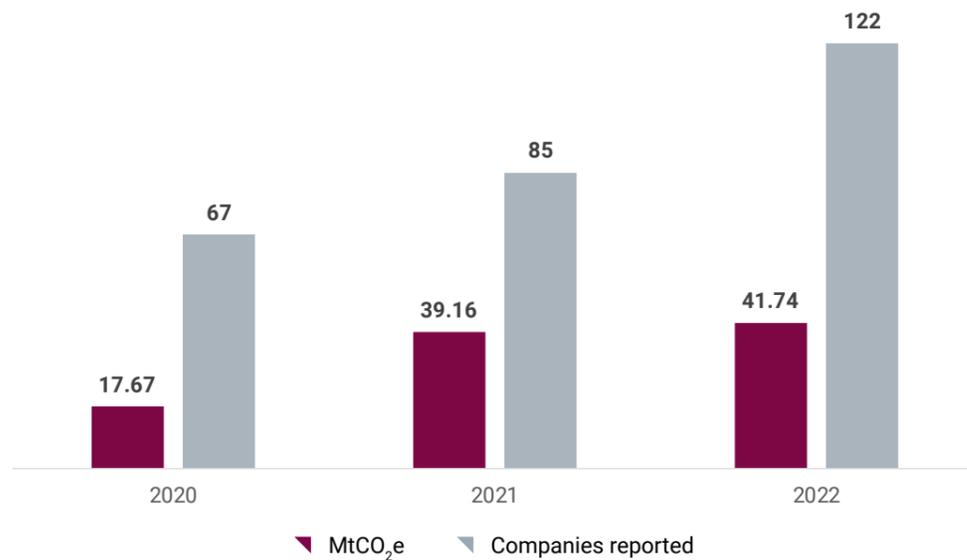


As per the analysis, renewable energy sources continue to be the most popular choice (69%) amongst disclosing companies in the consumption phase. Power generation companies reported the highest emission reduction of 20.49 MtCO₂e followed by Materials as primary sector that includes companies from Chemical, cement, mining etc. Most of the companies reported to have continued to increase their reliance on low-

carbon energy-based sources during production phase.

Companies have reported that the implementation of various initiatives like energy efficiency in production process, energy efficiency in buildings, low carbon energy consumption, low carbon energy generation and reducing waste and material circularity are some levers of emission reduction initiatives.

Comparison on estimated CO₂e saving reported by disclosing companies (MtCO₂e)



With respect to the companies reported this year, there has to be more action across the industries to stay in line with the required emissions reduction goals for a thriving economy.

Projections show that there have been fewer emissions savings disclosed, which could be due to consumption and productions peaking after recovering from Covid-19 outbreak.

It is interesting to note that 69 companies have reported that their product portfolio consists of low carbon products, which shows there is a growing market for low carbon products. A shift in consumer mindset acts as a goal for companies to shift towards less carbon intensive products.

Decarbonization Strategies



3

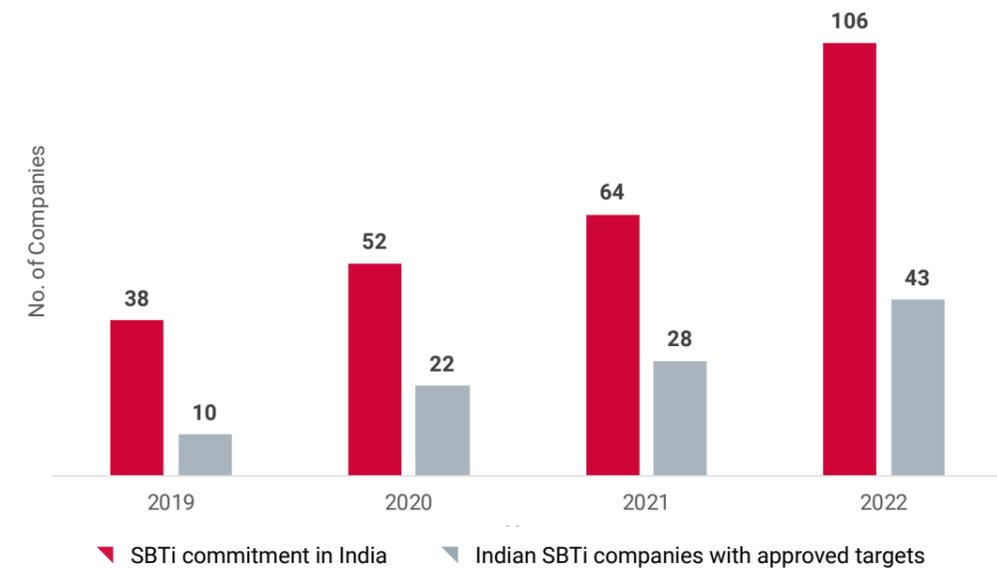
Science-Based Targets (SBTs)

The Science Based Targets initiative (SBTi) is a global body enabling businesses to set ambitious emissions reduction targets in line with the latest climate science. It is focused on accelerating companies and financial institutions across the world to halve emissions before 2030 and achieve net-zero emissions before 2050.

The initiative is a collaboration between CDP, the United Nations Global Compact (UNGC), World Resources Institute (WRI) and the World Wide Fund for Nature (WWF) and is one of the 'We Mean Business Coalition'²¹ commitments. The initiative champions science-based target setting as a powerful way of boosting companies' and financial institutions' competitive advantage in the transition to a low-carbon economy.



Growth of SBTi in India



India ranks amongst the top three developing economies having the highest number (40) of net-zero commitments in spite of all its challenges (technological feasibility, policy etc.) and setbacks. Although this is a much-appreciated step, India is yet to create a nationwide roadmap for reaching net-zero by 2070. However, with the rise in SBTi commitments by companies to around 62% compared with 2021, it is positive to see that Indian corporates are accepting the challenges and trying to overcome them through a collaborative effort.

The SBTi released the new criteria & recommendations - version 5.0 for target setting - at the end of 2021. This new criterion came into force from 15th July 2022. The SBTi made several changes to its criteria for near-term targets.

These include:

- Increasing the minimum Scope 1 and 2 ambition temperature classification from well below 2°C to 1.5°C.
- Increasing the minimum Scope 3 ambition temperature classification from 2°C to well below 2°C.

The new strategy has been rolled out in response to increasing urgency for climate action and the success of science-based targets to date. 1.5°C-aligned targets are now the most common choice for businesses representing 68% of all SBTi-approved targets in 2022 globally. Around 56% of the Indian companies with targets approved by the SBTi have their Scope 1 & 2 targets aligned with a 1.5°C scenario (1.5DS) which shows that science-based targets are attainable. Aligning the Scope 3 value chain emissions in line with the 1.5DS²² is still a major challenge due to lack of data availability, multi-stakeholder engagement, and limited resources. Overall, more than 1,000 companies from across the world have committed to the highest ambition of net-zero through the SBTi's Net-Zero Standard.

²¹ A global non-profit coalition working with the world's most influential businesses to take action on climate change.

²² The 1.5 degree scenario refers to the internationally agreed-upon target to limit global warming to 1.5°C above pre-industrial levels, as set out in the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC). It accounts for roughly 4.2% reduction of emissions year on year.

CDP India's SBTi incubator project has supported around 40+ companies in their science-based target setting journey.

SBTi Incubator

The Science Based Targets initiative Incubator is a unique project of CDP India that was launched in April 2020, to provide technical support with the main objective of handholding and catapulting organisations from commitment stage to target development stage of the Science Based Targets Initiative.



GHG Inventory Check: CDP will provide technical assistance in understanding company's organizational boundary and GHG emission profile, categorization of direct and indirect emissions (Scope 1 & 2) based on the emission source and evaluation of other indirect GHG emissions, Scope 3 categories.

boundary and GHG emission profile, categorization of direct and indirect emissions (Scope 1 & 2) based on the emission source and evaluation of other indirect GHG emissions, Scope 3 categories.



SBTs Development: CDP will provide technical assistance to companies for developing their SBTs by selecting appropriate methodology for Scope 1 and 2 emissions, modelling their targets as per their inventory and selecting categories under Scope 3 which are ambitious and can be achieved (if relevant).

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Target Submission Support: After the SBT development, the next process for companies is to submit a target validation form to SBTi to get their targets approved. As a part of the Incubator project, CDP will provide support to companies in filling the Target Submission Form and making it ready for submission to the SBTi. We will also aid companies in preparing replies for queries raised by SBTi team during the validation process.

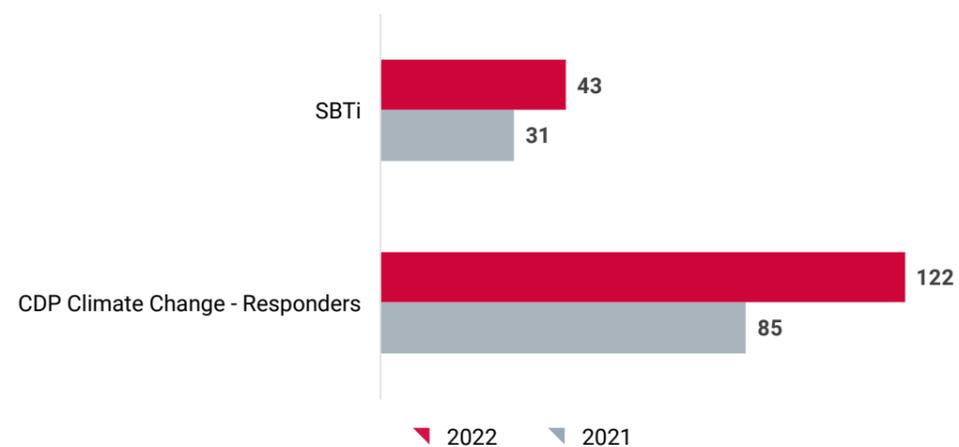
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Communications Support: After the target validation, CDP will assist companies in preparing communication material like blog posts and articles.

material like blog posts and articles.

CDP responders committed to SBTi

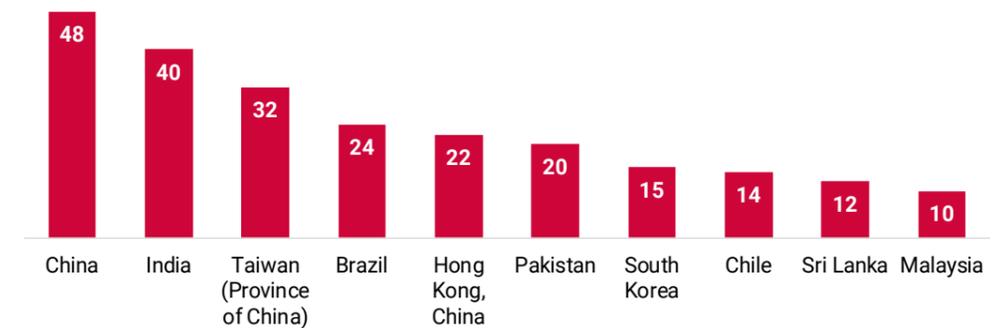


43 companies committed to SBTi also reported climate change data to CDP in 2022, a nearly 40% increase from 2021. The most convincing factor for the SBTi committed companies to disclose through CDP India, the world's robust environmental platform is keeping track of their progress which sends a strong message to all stakeholders - investors, employees, customers, etc that companies are taking strong actions towards decarbonization and committing to follow the best practices by tracking their emissions and taking positive action. This

boosts investors' confidence and re-aligns the behavioural choice of the customer.

CDP in India's analysis shows that the companies being transparent on their environmental footprint are moving ahead of the curve with strong climatic commitment. For the year 2022, the SBTi-committed Indian companies reporting to CDP have shown a decrease in their Scope 1, Scope 2 & Scope 3 emissions by 4%, 26% & 28% respectively based on the CDP analysis.

Net-zero commitments - Top 10 developing nations (No. of companies)



India ranks 2nd in terms of net-zero commitments (40)²³ among the developing nations, showcasing a strong affinity for switching to low carbon products and transitioning towards the low carbon economy.

The SBTi Net-Zero Standard defines corporate net-zero as:

- Reducing Scope 1, 2, and 3 emissions to zero or to a residual level that is consistent with reaching net-zero emissions at the global or sector level in eligible 1.5°C-aligned pathways.
- Neutralizing any residual emissions at the net-zero target year and any GHG emissions released into the atmosphere thereafter.

To contribute to societal net-zero goals, companies must consistently reduce emissions and counterbalance the impact of any emissions that remain.

23 SBTi Companies taking action

Internal Carbon Pricing (ICP)

Another powerful decarbonization tool is setting up an Internal Carbon Price (ICP) where companies (on a voluntary basis) place a monetary value on each ton of carbon they emit. The financial risk from carbon pricing is a function of company's carbon emissions, location of operations, business model, and

the market conditions of the sector²⁴. Owing to the variation of carbon price across regions, the total carbon pricing risk not only depends on how much a company emits, but also where these emissions occur. While hypothetical in nature, it is a strategic planning tool that helps companies assess the risks of carbon emissions on their business operations encouraging them to choose an energy efficient path.

National Carbon Market

At present, India is looking at establishing a national carbon market as a way of promoting climate mitigation and putting the country on an accelerated track to achieving its net-zero goals and becoming carbon neutral by the year 2070.

In order to facilitate achieving these targets, it is important that India comes up with a robust plan to develop a domestic carbon market, thereby driving demand and creating opportunities.

Such a carbon market would help create synergies across different policy measures for climate change mitigation, by creating a common marketplace for emissions trading through development of a metaregistry. The World Bank's Partnership for Market Readiness (PMR) announced a US\$ 8 million grant for India to prepare for and pilot the use of carbon pricing instruments to help reduce to greenhouse gas (GHG) emissions.

Perform Achieve and Trade (PAT) scheme is a flagship programme of Bureau of Energy Efficiency under the National Mission for Enhanced Energy Efficiency (NMEEE). NMEEE is one of the eight national missions under the National Action Plan on Climate Change (NAPCC) launched by the Government of India in the year 2008.

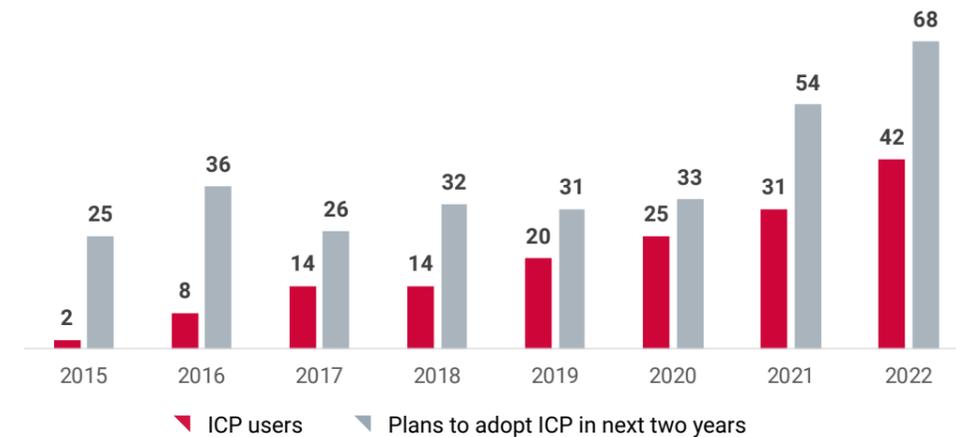
While the PAT scheme has been able to significantly reduce emissions in the Indian economy, there has been a surplus in the ESCerts (Energy Saving Certificates) supply in the market. The PAT scheme is based on the premise that price of ESCerts shall act as an incentive for entities to invest towards energy efficiency profitably or where unable to buy ESCerts cost effectively.

A study on the participation of Indian companies Science-Based Targets initiative's (SBTi) 'Business Ambition for 1.5 C' campaign reveals that more than 60 private enterprises in India have either committed or set a target under the same. Currently of the 60 Indian companies that are a part of SBTi, 27 have already set a target for reductions in their scope 1,2 and 3 emissions by a specific target year. To understand the potential demand of emission offset instrument, project team estimated annual offset requirement of 5 group companies, those are part of PAT as well as SBTi (with committed targets upto 2030).

Globally 5600 corporates have committed emission reduction on SBTi or CDP and expected offset requirement from such companies is estimated to be 270 to 950 million tonnes of CO2 by 2030.

Source : Bureau of Energy Efficiency (Draft Blueprint on National Carbon Markets)

ICP adoption trends in India (# of respondents)



As the graph depicts, 42 Indian companies have incorporated ICP (a 35% increase from 2021), and 68 companies are planning to adopt ICP in the next two years (up 25% from 2021). This brings the total number of companies that already use or plan to adopt ICP in the next two years to 110, about a 30% increase compared to 2021.

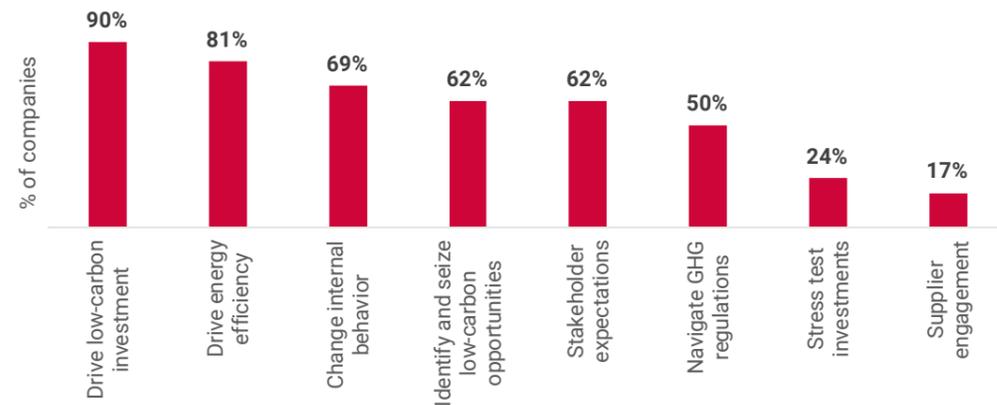
The growth in the number of companies using or planning to use ICP in the next two years reflects the success of this tool in the decarbonization trajectory of Indian companies.

Objectives and type of ICP

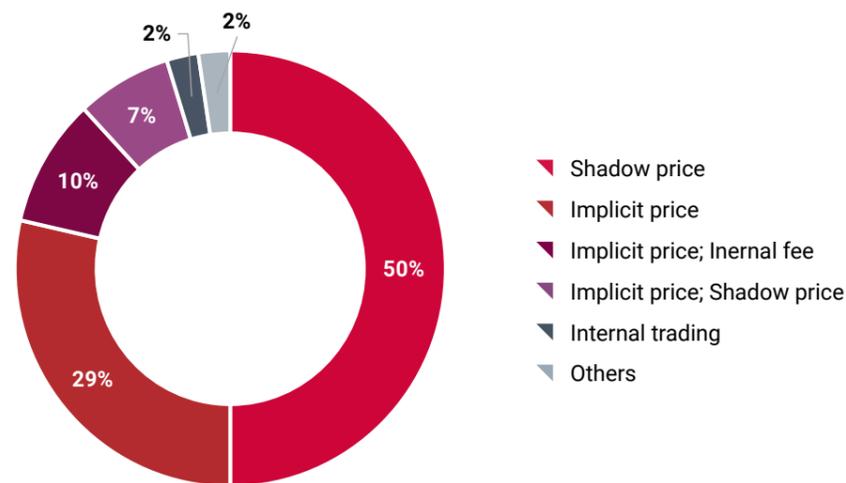
There are several reasons why companies use the ICP (see objectives in graph below). While the majority of companies responding to CDP India adopted at least two objectives, some are using ICP only for a dedicated vertical. The graph below highlights that driving low-carbon investment and energy efficiency, and changing internal behavior are the dominant outcomes favored by companies with the use of ICP. As per the ring graph, shadow pricing which is putting a price on the projected emissions continues to be the most used form of ICP by companies disclosing in 2022.

24 <https://www.spglobal.com/spdji/en/documents/research/research-carbon-pricing-discover-your-blind-spots-on-risk-and-opportunity.pdf>

Objective of using ICP
(% of companies, N=42)



Type of ICP used
(N=42)



Type of ICP

Shadow Pricing:

A hypothetical cost on projected carbon emissions.

Internal Trading:

Allows business units within a company to trade their allocated carbon credits based on respective emissions.

Internal fee:

A per-unit fee based on the amount of GHG the company emits (eg INR 700 per tCO₂e).

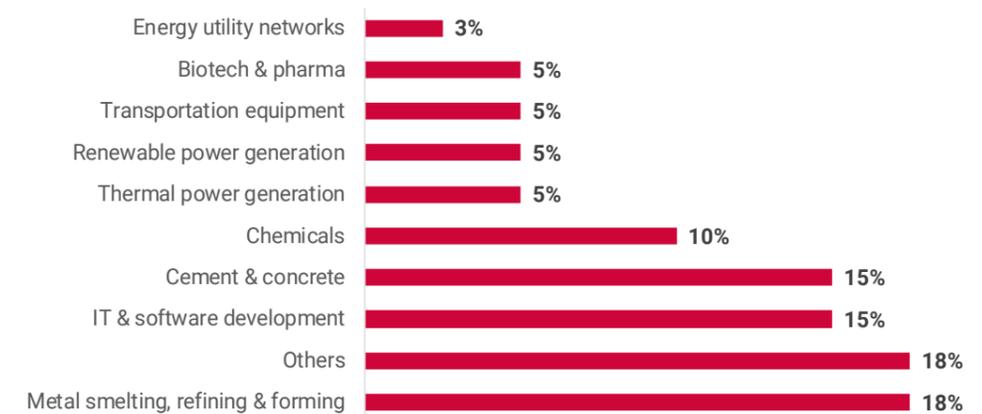
Implicit Price:

Helps quantify the capital investments required to meet climate-related targets.

Under the TCFD’s recommendation on ‘Metrics and Targets’²⁵ ICP is listed as a key metric to measure and manage climate-related risks and opportunities. A sectoral analysis of CDP India’s data shows that - apart from the IT

sector - emissions intensive sectors such as metal smelting, refining & forming, cement and concrete and chemicals are pricing carbon internally.

Sectoral distribution of ICP
(% of companies, N=42)



ICP companies having SBTi targets



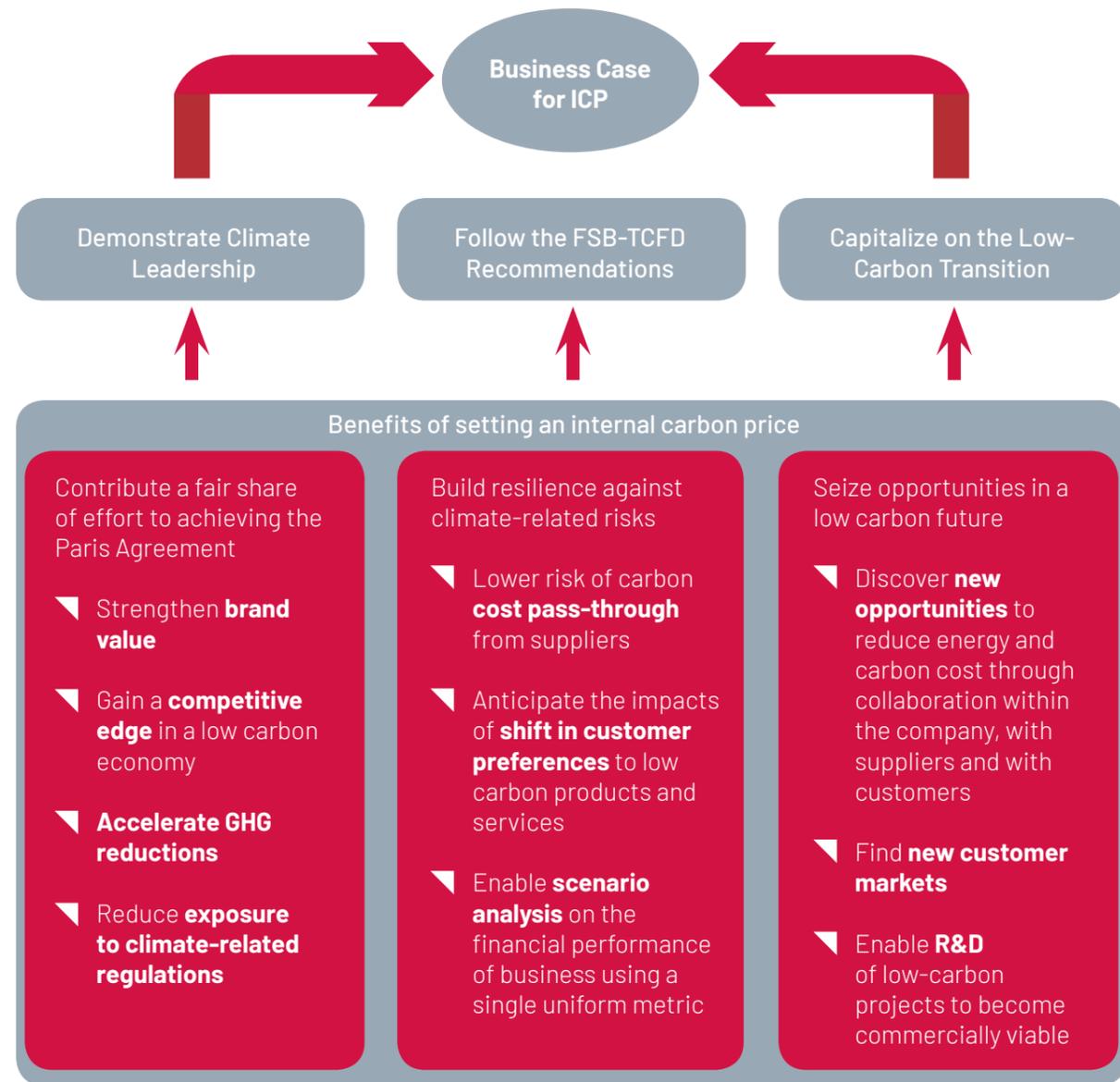
Noteworthy here is the correlation between companies that have incorporated ICP and those that have set science-based targets. As per CDP India’s 2022 data, out of the 42 companies having an ICP, 14 of them have committed to the SBTi and 13 companies have their target set and approved by the SBTi; an indicator of ICP being an effective tool for mitigating climate risks.

Uses and benefits

Carbon management has increasingly become an area of importance for many businesses. Corporations have been using ICP as a strategic planning tool that can promote decarbonization from fossil fuel usage and deliver powerful innovation incentives. The infographic²⁶ on the next page summarizes the principles for employing ICP and its associated benefits.

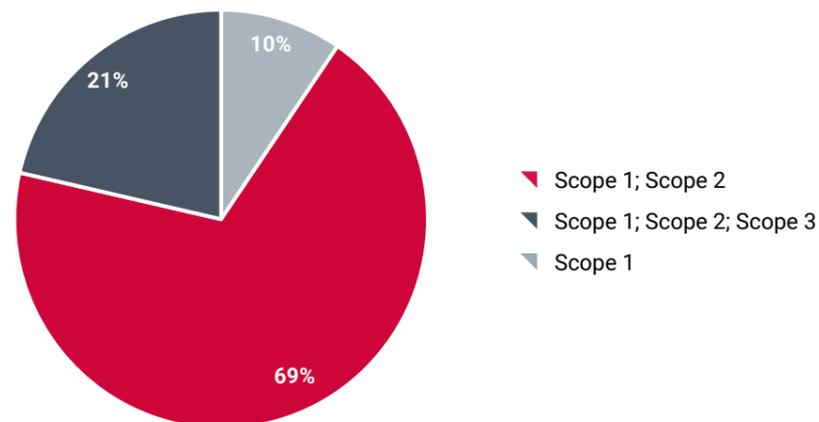
²⁵ It states “where relevant, organizations should provide their internal carbon prices as well as climate-related opportunity metrics such as revenue from products and services designed for a lower-carbon economy”.

²⁶ <https://cdn.cdp.net/cdp-production/cms/reports/documents/000/002/740/original/cpu-2017-how-to-guide-to-internal-carbon-pricing.pdf?1521554897>



CDP India's 2022 data shows that companies using ICP often include Scope 3 activities. However, for the hard to abate sector, they primarily report on Scope 1 and Scope 2 emissions.

GHG scope identified by companies for ICP
(% of respondents, N=42)



Internal Carbon Pricing as disclosed by Indian companies in 2022

Company	Price in INR	Price in USD (using CDP conversion rate)	Type of ICP used
ACC	3753	50.76	Implicit price; Shadow price
Adani Green Energy	800	10.82	Shadow price
Adani Ports & Special Economic Zone	1516	20.51	APSEZ internally applies carbon price of USD 20/tCO ₂ e on all Scope 1 and Scope 2 emissions from all its operations.
Adani Transmission Ltd	800	10.82	Shadow price
AIA Engineering Ltd.	Private	Private	Private
Ambuja Cements	2466.3	33.36	Implicit price
Arvind Ltd.	184.83	2.50	Shadow price
Benzo Chem Industries Private Limited	1236	16.72	Implicit price
Creative Group of Industries	Private	Private	Private
Dalmia Bharat Ltd	11	0.15	Shadow price
Dr. Reddy's Laboratories	937	12.67	Implicit price
Godrej Agrovet	800	10.82	Shadow price
Godrej Consumer Products Limited	800	10.82	Shadow price
Godrej Industries	745	10.08	Shadow price
HCL Technologies	246.26	3.33	Implicit price
Hero Motocorp Ltd	Private	Private	Private
Hindalco Industries	Private	Private	Private
Hindustan Zinc	1083.33	14.65	Shadow price
Indfrag Ltd (Group)	398.8	5.39	Internal fee
Indian Oil Corporation	Private	Private	Private

Company	Price in INR	Price in USD (using CDP conversion rate)	Type of ICP used
Infosys Limited	1053.5	14.25	Implicit price
JSW Cement Limited	1638	22.16	Shadow price
JSW Energy	855	11.56	Shadow price
JSW Steel Ltd.	1500	20.29	Shadow price
Jubilant Ingrevia Limited	Private	Private	Private
Jubilant Pharmova Limited	Private	Private	Private
Mahindra & Mahindra	739	10.00	Implicit price; Internal fee
Mindtree Ltd	Private	Private	Private
ReNew Energy Global PLC	1643	22.22	Shadow price
Sanyo Special Steel Manufacturing India Pvt. Ltd.	752.02	10.17	Implicit price
Shree Cement	1530	20.70	Shadow price
Tata Chemicals	1478.6	20.00	Shadow price
Tata Consultancy Services	1131	15.30	Implicit price; Shadow price
Tata Metaliks Ltd	3200	43.28	Shadow price
Tata Power Co	1251	16.92	Implicit price; Internal fee
Tata Steel	2720	36.79	Implicit price
Tech Mahindra	1035	14	Implicit price; Internal fee
Ultratech Cement	800	10.82	Shadow price
Vedanta Ltd	15	0.20	Shadow price
Wipro	3704.7	50.11	Shadow price
Yes Bank Limited	970	13.12	Implicit price

Case study: Tata Steel

Tata Steel is committed to becoming carbon neutral by 2045 and believes that corporates taking early actions to reduce their carbon footprint are likely to get opportunities in the form of greater market access and lower carbon taxes. The company states that ICP (Internal Carbon Pricing) is an important tool for achieving its decarbonization goal and aligns project appraisal decision-making with emissions reduction objectives. The company is using ICP as a strategic planning tool to prepare for the transition to a low-carbon economy and manage climate-related business risks in the following processes:

- ▼ Capital expenditure: ICP is being used to evaluate all capital projects. The carbon adjusted Project IRR (CaIRR) of any project must be above a hurdle rate, which is determined by taking ICP into consideration.
- ▼ Operational decisions: Crucial business decisions, like buying raw materials, take ICP into consideration while determining the Total Cost of Ownership (TCO) of using the specific raw material compared with other available alternatives.

The company states that setting an ICP is challenging in the Indian context in absence of explicit relevant mandates. If the ICP is set too high, it can be detrimental to the financial well-being of the company. On the other side, if it is set too low, then introduction of internal carbon pricing will not have the desired effect on decision-making. Tata Steel has adopted an evolutionary pricing strategy, which means that prices will typically rise over time.

Renewable Energy (RE)

Another key tool for decarbonization is the move from fossil fuels to renewable energy sources. In response to this, India – with its updated nationally determined contributions (NDCs)²⁷ – has set ambitious renewable energy plans. The most conspicuous target is 50% cumulative electric power installed capacity from non-fossil fuel energy sources by 2030.²⁸ **A decarbonized power sector where renewable supply sources are aligned to corporate demands as well as targets for renewable energy would be the ideal scenario.** According to Ministry of New and Renewable Energy, India appears to be on the right path since it is globally ranked fourth for its overall installed renewable energy capacity, and this has increased 286% in the last seven and a half years. Renewable energy has a share of 26.53% in the total installed generation capacity in the country. There has also been a cost democratization of renewable energy tariffs with solar tariff hitting the record low of ₹1.99/unit.²⁹

Solar energy is going to be a major source of energy needs not only today but in the 21st century, because solar energy is Sure, Pure and Secure.

- Narendra Modi
Prime Minister of India
At the inauguration of Asia's largest 750 MW solar power project at Rewa in Madhya Pradesh

Renewable energy disclosures

Increased renewable electricity consumption: In 2022, the 122 companies headquartered in India have reported a total of 195 Terra Watt hours (TWh) electricity consumption. These companies have consumed about 18 TWh renewable electricity which is 9% of the total electricity consumption, compared to 5% reported in 2021. The observed 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; and
- ▼ compliance targets such as Renewable Energy Purchase Obligations (RPO)³⁰.

CDP India works closely with industries to generate dialogues and capacity building trainings for companies to understand the benefits of transitioning to renewable energy sources, while also guiding them on how they can do so.



²⁷ Nationally determined contributions (NDCs) are at the heart of the Paris Agreement and the achievement of its long-term goals. NDCs embody efforts by each country to reduce national emissions and adapt to the impacts of climate change. The Paris Agreement (Article 4, paragraph 2) requires each party to prepare, communicate and maintain successive nationally determined contributions (NDCs) that it intends to achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions.

²⁸ <https://unfccc.int/sites/default/files/NDC/2022-08/India%20Updated%20First%20Nationally%20Determined%20Contrib.pdf>

²⁹ <https://mnre.gov.in/>

³⁰ Under Section 86(1) (e) of the Electricity Act 2003 ("EA 2003") and the National Tariff Policy 2006, Renewable purchase obligation (RPO), is a mechanism by which the obligated entities are obliged to purchase certain percentage of electricity from Renewable Energy sources, as a percentage of the total consumption of electricity.

RE100

RE100 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.

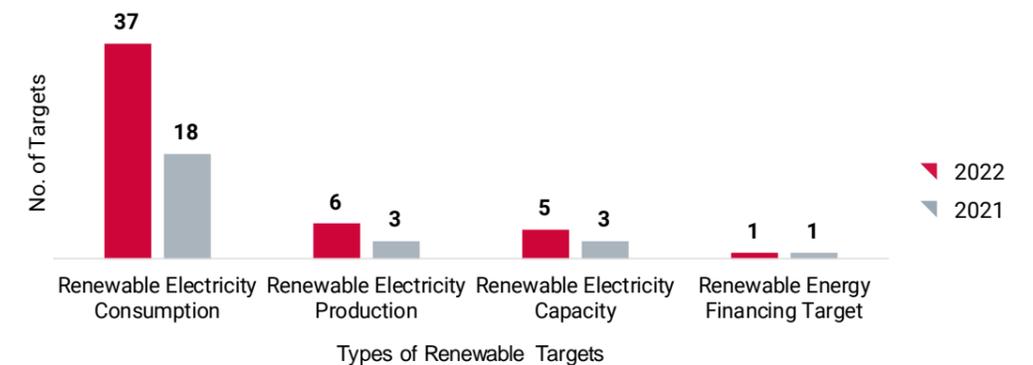
Eight companies headquartered in India have committed to the RE100 initiative. These are: Chalet Hotels, Dalmia Bharat Ltd. Infosys Ltd., JSW Cement Limited, Mahindra Holidays & Resorts India Ltd., Mindspace Business Parks REIT, Tata Motors Ltd., and Ultratech Cement Ltd. For more details about India's initiatives, visit RE100.org and follow #RE100 on Twitter.

Setting targets

In 2022, 42 companies from India reported various types of renewable energy targets. The level of ambition, ie a share of renewable energy in the target year, for most of the companies varies between 20-100%.

When we look at leadership in renewable electricity sourcing, eight companies have committed to sourcing 100% renewable electricity across their operations and joined the RE100 initiative. Companies usually take more than one renewable energy target type.

Renewable energy targets



Opportunities

Renewable energy plays an important role in the corporate value chain due to its zero-carbon intensity and ability to provide long-term energy security. 64 companies have identified opportunities related to shifting energy usage towards low carbon energy sources across the value chain. Of these, 59

companies have identified opportunities in the direct operations, followed by 6 companies in the upstream operations³¹ and 2 companies in the downstream operations³² of the value chain. These companies have estimated energy related opportunities worth Rs 93 billion, mainly in direct operations. Half of these companies anticipate a time frame of five to seven years to tap into these opportunities.

³¹ The upstream operations include all activities related to the organization's suppliers: those parties that source raw material inputs to send to the manufacturer.

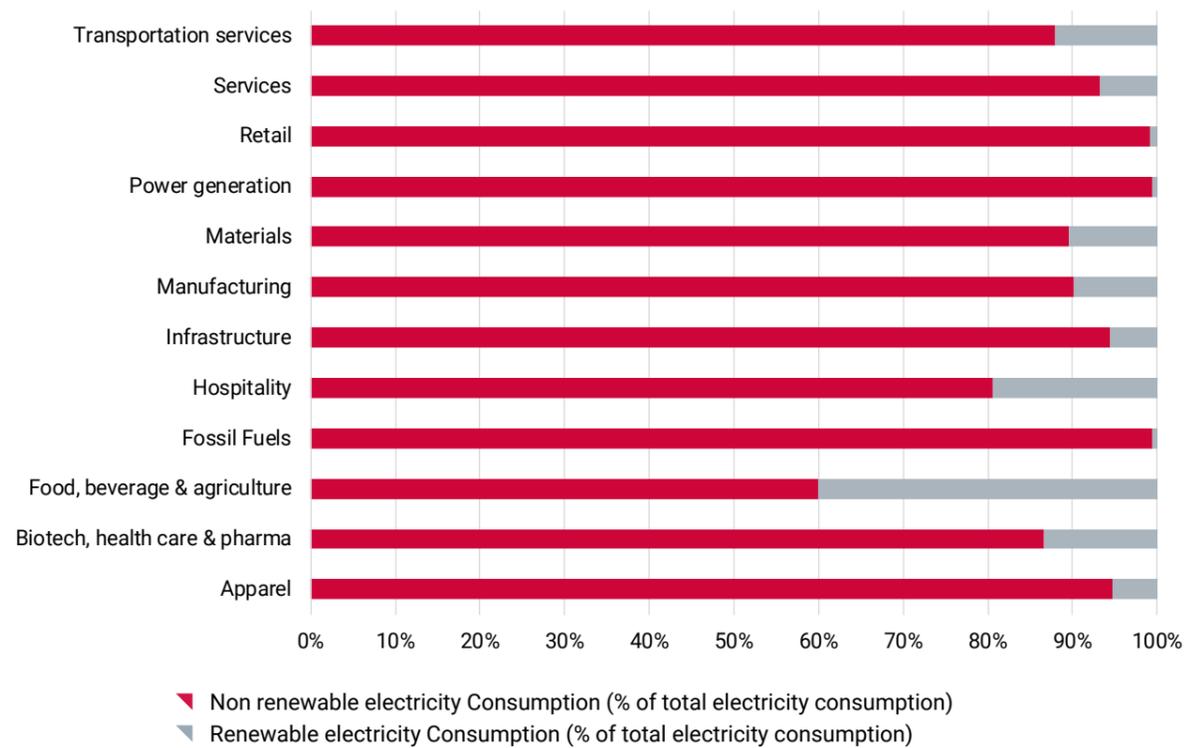
³² The downstream operations refer to activities post-manufacturing, namely distributing the product to the final customer.

The leading sectors

Food & beverage, services and hospitality sectors are the leaders with a combined 11% of their total electricity coming from renewable sources, but it is also worth noting that the total electricity consumption of these sectors is relatively less when compared to sectors like power generation, materials, manufacturing,

and fossil fuels (collectively grouped as hard-to-abate sectors). These hard-to-abate sectors still rely on non-renewable sources for more than 95% of their energy consumption. This gap needs to be reduced drastically if India hopes to achieve decarbonization for about 50% of its cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030.

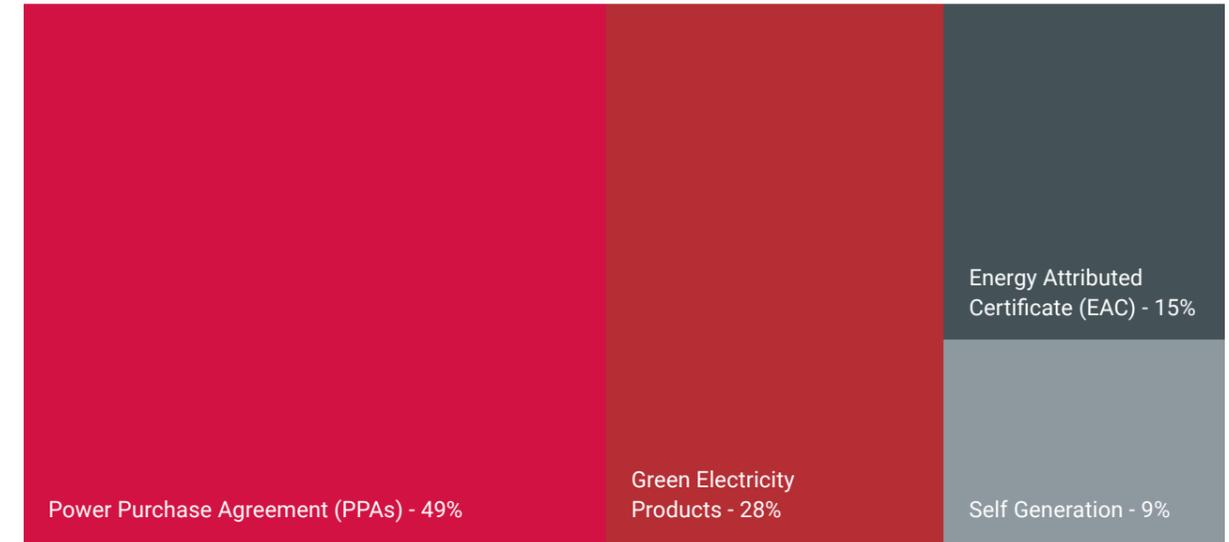
Electricity consumption across sectors in 2022



A detailed breakdown shows that the Power Purchase Agreement (PPA) is the preferred sourcing option among companies for sourcing renewables, followed by the purchase of Green Electricity Products and Energy Attribute Certificates (EACs). Recent times have shown that companies are shying away from

entering into long time agreements (10-15 years). However, the cost competitiveness of renewables in the energy markets has increased the scope to modify agreements by shortening the timeframes and encouraging companies to commit to greener sourcing options.

RE sourcing options preferred by responding companies in 2022 (% of RE consumption)



(Note: Some companies have 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.)

Indian Supply Chain Program

Decarbonization of the corporate value chain is critical if we are to achieve emissions reduction at a large scale and meet India's ambitious climate commitments. CDP India officially launched the Supply Chain Program this year with three Indian corporates as its members - Wipro, Adani Green Energy and Adani Transmission Ltd. The program saw the participation of 164 value chain companies thanks to the active engagement of the Supply Chain members.

The initiative involves the customer, ie the supply chain member requesting their suppliers to report their environmental information to CDP's climate change questionnaire. The granularity of the suppliers' disclosure enables the customer to make informed procurement decisions from a sustainability lens.

Program scope

The program provides tailored support to corporate members across several facets, right from evaluating and understanding supplier performance to identifying strategic partners and help them set KPIs for the next reporting year. The data product deliverables offer in-depth analysis and insight into the responding suppliers' data across key climate metrics - emissions, targets, renewable energy, governance etc.

In 2022, CDP India's supplier services included hosting capacity building training on emissions reporting, addressing disclosure related queries via live sessions and resource sharing such as guidance documents, recorded webinars and technical notes.

By using the CDP platform, Adani Transmission Ltd and Adani Green Energy are connecting with strategic suppliers on climate change. We want to see our suppliers matching our ambitions, setting emission reduction targets and report progress towards achieving them. GHG emissions reduction can drive innovation and enable cost optimization resulting in win-win situation for all.

- Adani Group

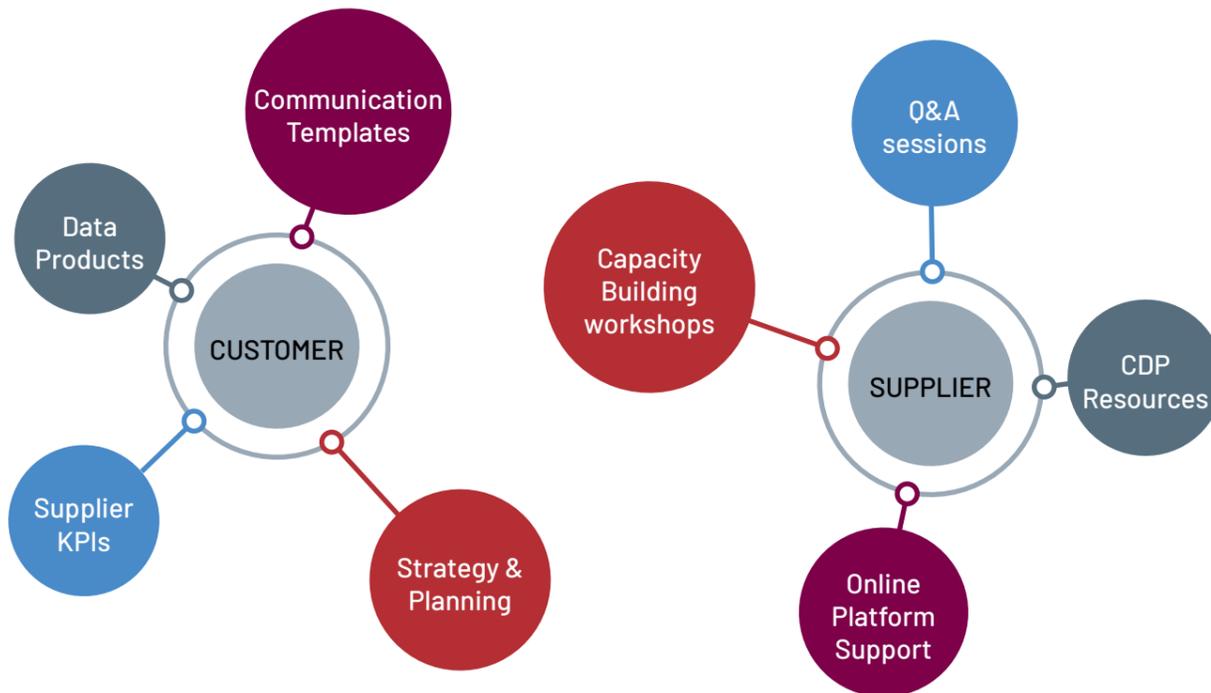
Wipro is happy to be a part of the CDP Supply Chain Program - one of the key programs contributing to our Net Zero strategy. It has helped us engage with our major contributing suppliers in a short period of time. As more organizations engage with their value chain partners on climate change through CDP, we hope that understanding and the quality of engagement will significantly improve.

- Wipro

Key findings of CDP India 2022 disclosure:

- ▼ The supplier base of Indian corporate members was mostly comprised of SMEs.
- ▼ Share of suppliers allocating emissions to their customers was low (only around 23%).
- ▼ About 48% of value chain partners reported having emissions reduction initiatives in place.
- ▼ Two in five companies engage with their own supply chain on climate-related issues.
- ▼ Total of 72 companies (44%) reported using electricity from renewable sources.
- ▼ Total emissions reduced by all suppliers was 15.3 million tonnes CO₂eq which is almost five times the reported emissions of the three customers (3.3 million tonnes CO₂eq).
- ▼ More than two-thirds of responding supply chain companies have board-level oversight on climate issues.
- ▼ Suppliers reported financial savings from emissions reduction initiatives worth INR 3126 crores.

Customer and supplier services



Financing Decarbonization



4



CDP's global disclosure system equips capital markets with the data needed to engage with companies on their environmental impact, empowering capital market actors to have foresight on the environmental impact of a company before making business decisions.

Financial institutions have access to reliable, comparable data related to the environment and decarbonization and can base lending decisions on this data. Financial institutions use our data and scores not only when they

lend money to companies but also when they invest in them. By using CDP's data, capital market actors (investors/banks) are better able to mitigate risks associated with increasing climatic uncertainty, including physical, reputational and regulatory risks.

In 2022, over 680 investors across the globe, with assets of over US\$130 trillion, requested 10,000+ companies to disclose to them through the CDP platform. Indian financial institutions are driving the climate action locally, with 11 Indian FIs being signatories with CDP and use the environmental data collected by us as a base to inform their lending decisions.

Financial institutions also disclose through CDP on their own environmental performance. In India, 11 financial institutions disclosed through us in 2022. CDP India is trying to increase these numbers and is also trying to expand the use of our disclosure data within the financial sector.

In 2022, CDP India held consultations with the representatives of its Financial Institutions Working Group to gain perspective on a discussion paper from the Reserve Bank of India* to address risks from climate change and mobilize sustainable finance. CDP India submitted its collective response to the RBI and supports this significant directional change.

CDP India also undertook a rapid assessment study of capacity building needs for the financial sector ecosystem with respect to climate and sustainable finance. As an outcome of this rapid assessment, CDP India held a roundtable conference in collaboration with the UNDP and presented the key findings of the assessment. CDP India thereby initiated a dialogue around reinforcing capacities by equipping professionals working across corporate and financial institutions on aspects of **climate risk, the need for transparent disclosure and sustainable financing**. The roundtable was chaired by UNDP's Associate Administrator and UN Under Secretary General, Ms. Usha Rao-Monari.

* For more information about this, visit [CLIMATERISK46CEE62999A4424BB731066765009961.PDF \(rbi.org.in\)](https://www.rbi.org.in/CLIMATERISK46CEE62999A4424BB731066765009961.PDF)

Water Security

An aerial photograph of a narrow river or canal. The water is dark and still, reflecting the surrounding lush greenery. On either side of the water, there is a dense forest of tall palm trees with vibrant green fronds. In the center of the river, a small, narrow boat is visible. The boat has a blue hull with yellow trim along the edges. It appears to be carrying a person or some equipment. The overall scene is peaceful and natural.

5

The gap between global water supply and demand is projected to reach 40% by 2030³³. In many places, demand is already exceeding sustainable supply, and in others, water scarcity is hindering economic growth. Water-related hazards continue to have serious implications on human life and the Indian economy, which requires an investment of \$46.3 billion to fund climate adaptation – 1.7% of India’s GDP³⁴.

As governments move to protect water bodies, businesses identify a transition risk if they do not address pollution and over-extraction of water within their own operations.

In 2022, 45 Indian companies disclosed through CDP – an increase of 22% from 2021 when 37 companies responded. Just two Indian companies made it to the prestigious A List this year, demonstrating climate action ambition and impressive environmental leadership.

Water security leaders

Company Name	Score
Mahindra Lifespace Developers Ltd	A
Tech Mahindra	A
Hindustan Zinc	A-
ITC Limited	A-
Mahindra & Mahindra	A-

India has made major strides in water security. Our water vision towards 2047 will be a big contribution to Amrit Kaal. The nation is working together to build 75 Amrit Sarovars in every district. Till now 25,000 Amrit Sarovars have already been constructed.

- Narendra Modi
Prime Minister of India

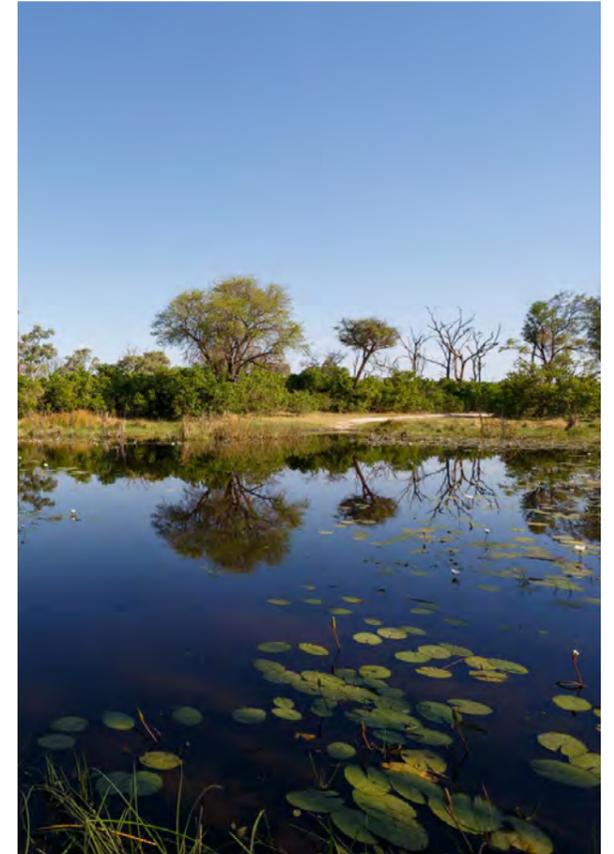
At the 1st All India Annual State Ministers Conference on Water with the theme “Water Vision@2047” in Bhopal, Madhya Pradesh

Current state

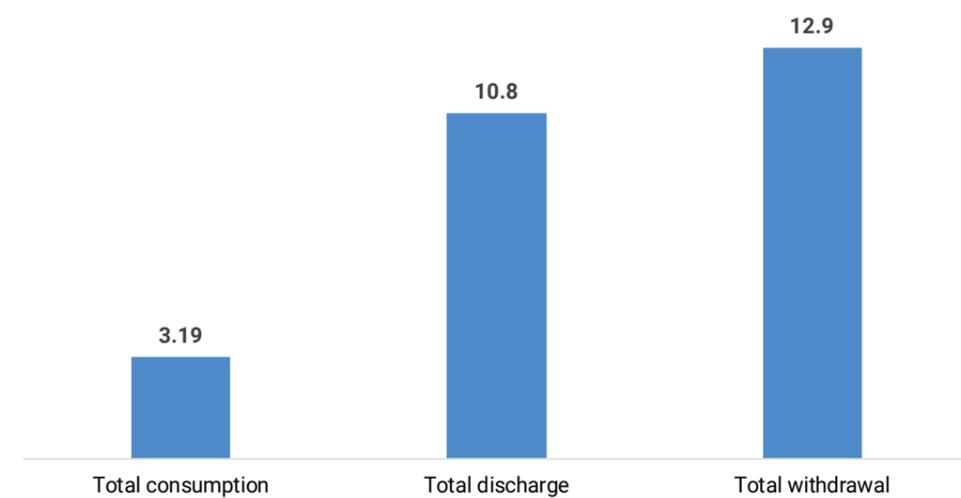
2022 has witnessed a status quo when it comes to water resource management in the private sector. The responding companies are majorly from the cement (6), chemicals (5), metals and mining (4), food, beverages and tobacco (4), electric utilities (4) and biotech, healthcare and pharma (6) sectors.

While the number of reporting companies increased, the water consumption has also increased almost two-fold from 1.6 to 3.2 million liters in the same period. This can largely be attributed to the expansion in the scale of operations and greater demand for companies’ products and services.

In terms of volume of water withdrawal, 23 companies (51%) stated an increase from previous year; 16 corporates (36%) reported lower withdrawals and only four enterprises (9%) observed no change.



Corporate water activity (Megalitres, N=45)



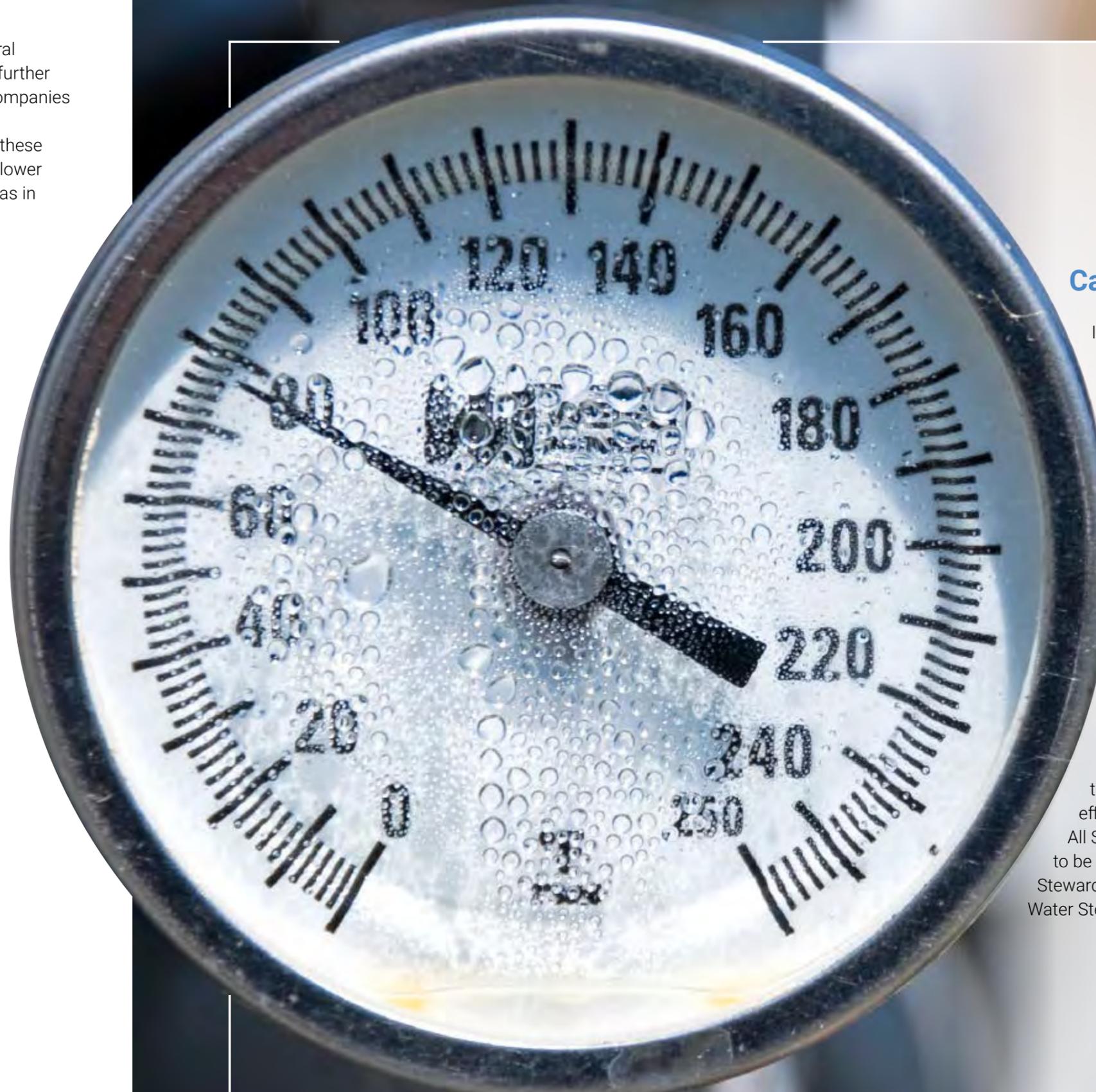
33 <https://www.unep.org/news-and-stories/press-release/half-world-face-severe-water-stress-2030-unless-water-use-decoupled>
 34 <https://www.hindustantimes.com/india-news/floods-storms-may-have-cost-india-7-6bn-last-year-alone-report-101668450785781.html>

Water scarcity is a major issue in several parts of India and climate change has further worsened this problem. About 3 in 4 companies (34 of 45) withdraw water from water-stress areas³⁵ however, almost 80% of these companies have reported the same or lower levels of withdrawal from stress areas as in previous years.

Key trends

On an average, water discharge on a company level basis has steadily decreased from 2020-22.

- ▼ 264,000 litres in 2020
- ▼ 259,500 litres in 2021
- ▼ 240,000 litres in 2022

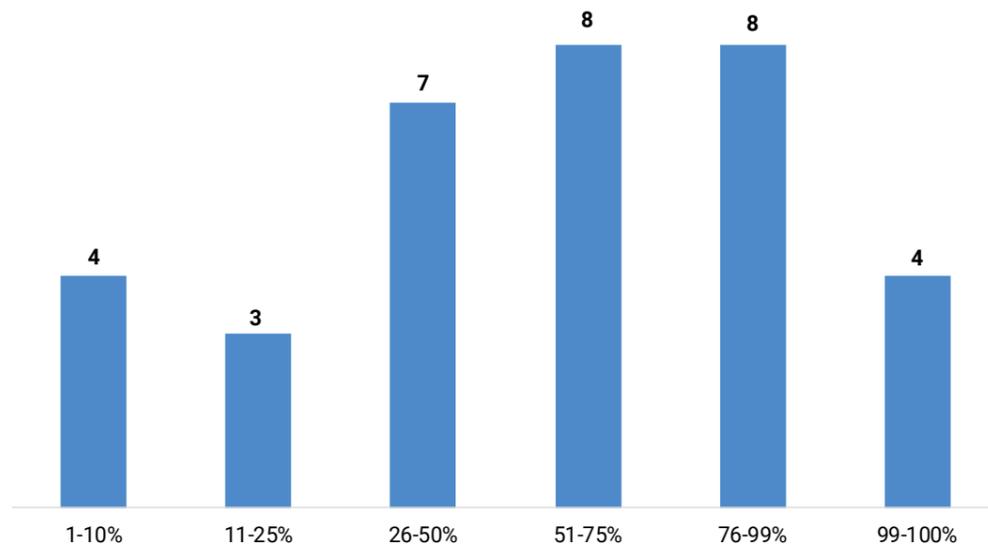


Case study

ITC measures and monitors water discharge quantity with calibrated water throughout meters on a daily basis, at all manufacturing locations & hotels in line with relevant and applicable statutory norms. Data is reported on a half-yearly basis from all sites by relevant EHS personnel and after various levels of verification, are consolidated at the Business and Corporate levels. Businesses analyse and assess their water-related data and link them to relevant KPIs. This data is important in progressing towards zero effluent discharge and recycle/reuse of treated effluent to reduce freshwater intake. All ITC units met their regulatory requirement related to effluent discharge quantity in FY2021-22. All Sites in High Water Stressed Areas are to be certified as per the International Water Stewardship Standard by AWS (Alliance for Water Stewardship).

35 <https://smartwatermagazine.com/q-a/what-water-stress>

% Water withdrawn from stress areas



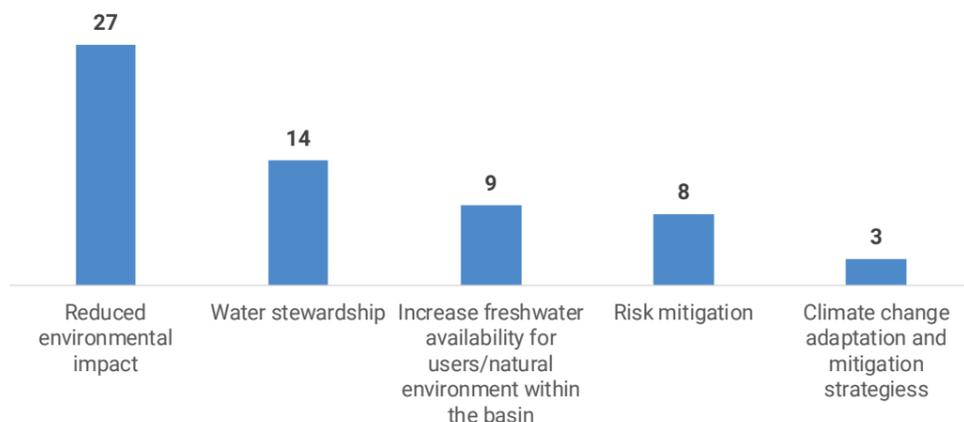
A worrying sign is that 20 out of 34 companies withdraw between 50-100% of water from stress areas. Apart from the urgent need for corporates to diversify their sourcing requirements from areas that can be replenished they should ultimately aim to reduce their water withdrawals.

Water: Targets and performance

India is highly vulnerable to floods. Out of the total geographical area of 329 million hectares (mha), more than 40 mha is flood

prone.³⁶ Floods are a recurrent phenomenon, which cause huge loss of lives and damage to livelihood systems, property, infrastructure and public utilities. The severity and frequency of floods in India can vary from year to year, depending on factors such as monsoon patterns, deforestation, and climate change. Some regions in India, such as the northeastern states, are particularly susceptible to severe flooding, while other areas may experience only occasional or moderate flooding. These impacts can have significant consequences for businesses and corporations. Among the

Primary motivation for setting water targets amongst Indian corporates



36 As per National Disaster Management Authority- Gol: <https://ndma.gov.in/Natural-Hazards/Floods>

45 companies that disclosed on water targets, reducing environmental impact (27) emerged as the most sought out-reason for setting water-related targets followed by water stewardship (14).

For example:

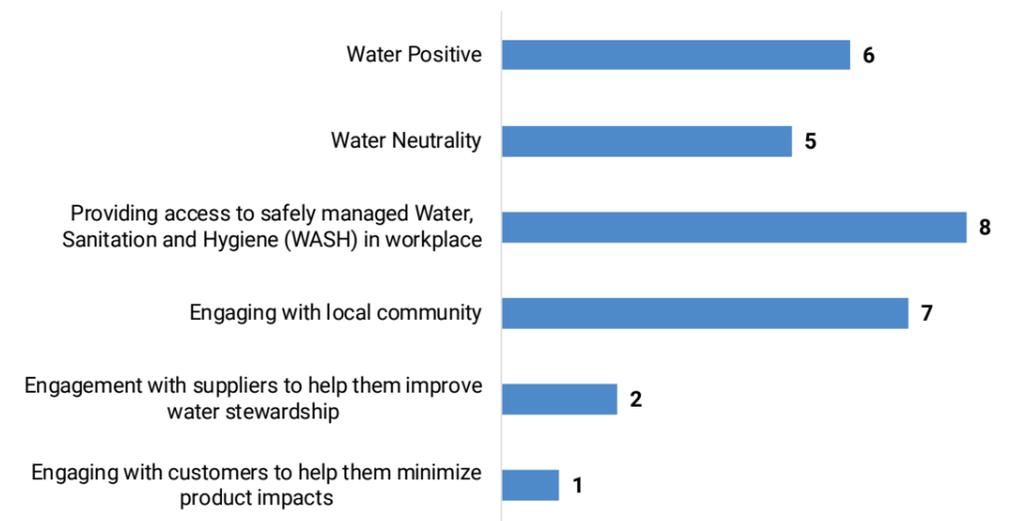
- ▶ Water shortages can disrupt the operations of businesses that rely heavily on water, such as agriculture, manufacturing, and energy production;
- ▶ Extreme weather events, such as floods and droughts, can damage infrastructure, disrupt supply chains, and impact the availability of raw materials;
- ▶ Changes in water availability and quality can affect the health and productivity of workers, as well as the quality of products and services;

▶ Companies that rely on natural resources, such as timber and minerals, may be affected by changes in water availability or quality that impact the productivity of these resources;

▶ Changes in water availability and quality can also impact the cost and availability of water for businesses, which can impact their profitability.

Climate change exacerbates water scarcity and alters water cycles, leading to increased frequency and severity of floods, droughts, and other extreme weather events. To tackle these challenges, conservation and management of water resources are of utmost importance. There is an urgent need to track water consumption, set water targets and safeguard businesses with advanced planning. Among the overall 45 Indian companies that disclosed through CDP, almost all have one or more water-related targets.

Most frequently reported water goals



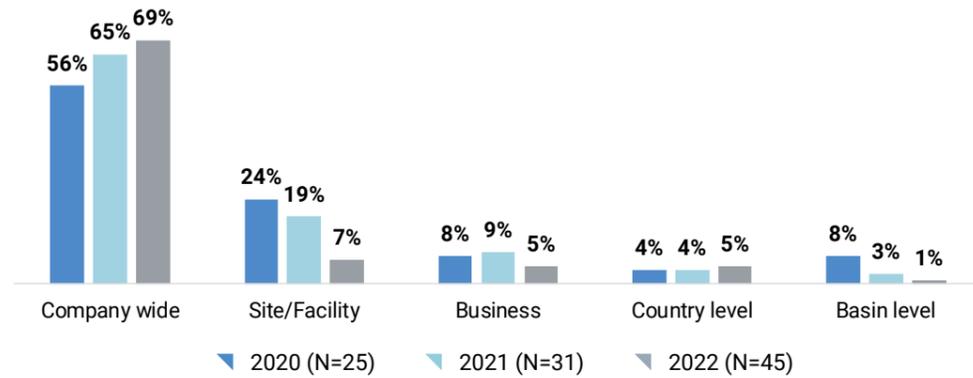
Sustainable water management is key for society to adapt to climate change by building resilience, protecting health, and saving lives. It also helps to mitigate climate change itself by protecting ecosystems.

The 45 companies that disclosed on water this year reported that they are measuring their water-related goals and targets at the corporate level as part of achieving these water-based targets.

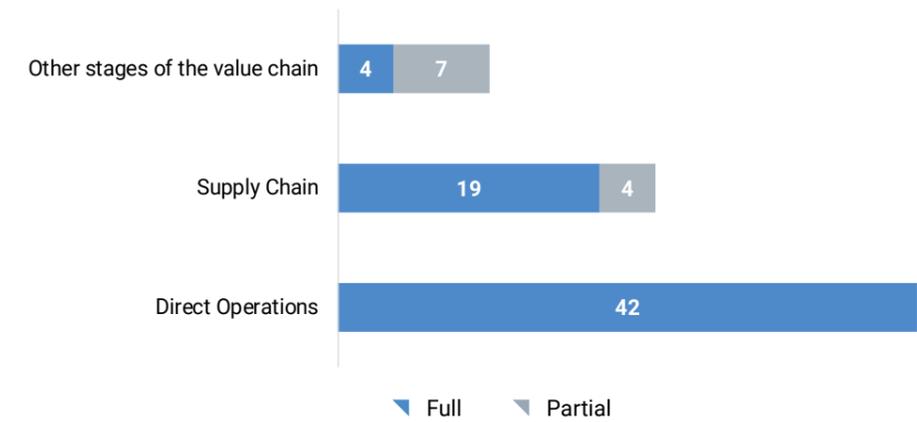
The water goals being monitored at corporate level included providing access to safely managed water, sanitation and hygiene (WASH)

in workplaces and local communities and becoming water positive³⁷ or water neutral³⁸ by 2030.

Water-related goals monitoring level (% of goals)

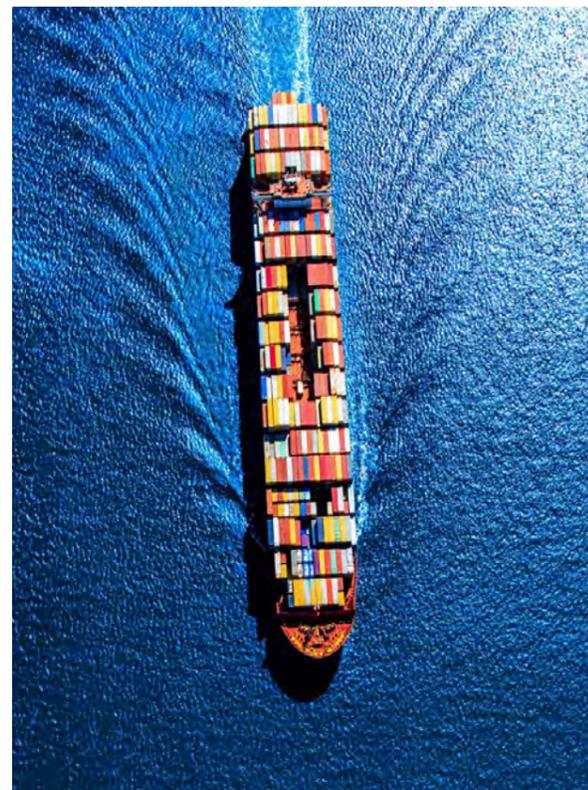


Water related assessment coverage (# of companies, N=43)

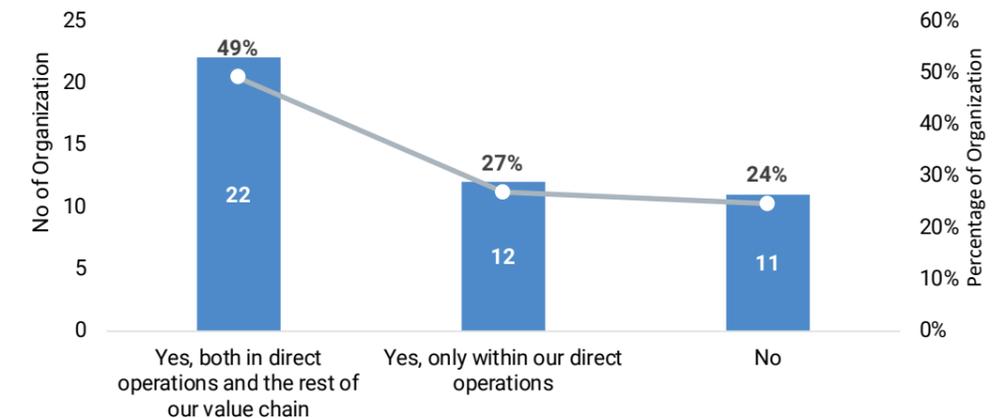


Water-related risks and opportunities

Water risk assessments provide a framework to gauge water-related risk exposure. It is encouraging to note that 96% (43 out of 45) companies responding to the CDP India water security questionnaire undertook a water-related risk assessment. The fact that these included coverage of impact across value chains shows that companies carry out some level of risk assessment beyond direct operations and supply chain. It is well agreed that a company's major impact lies beyond its direct operations. Hence, a robust approach to risk management needs to include risk assessment in the supply chain and beyond instead. As per the graph around 50% of the responding companies attribute a financial or strategic impact from water related risks for both their direct operations and rest of the value chain.



Inherent water related risks with the potential to have a substantive financial or strategic impact (# of companies, N=45)

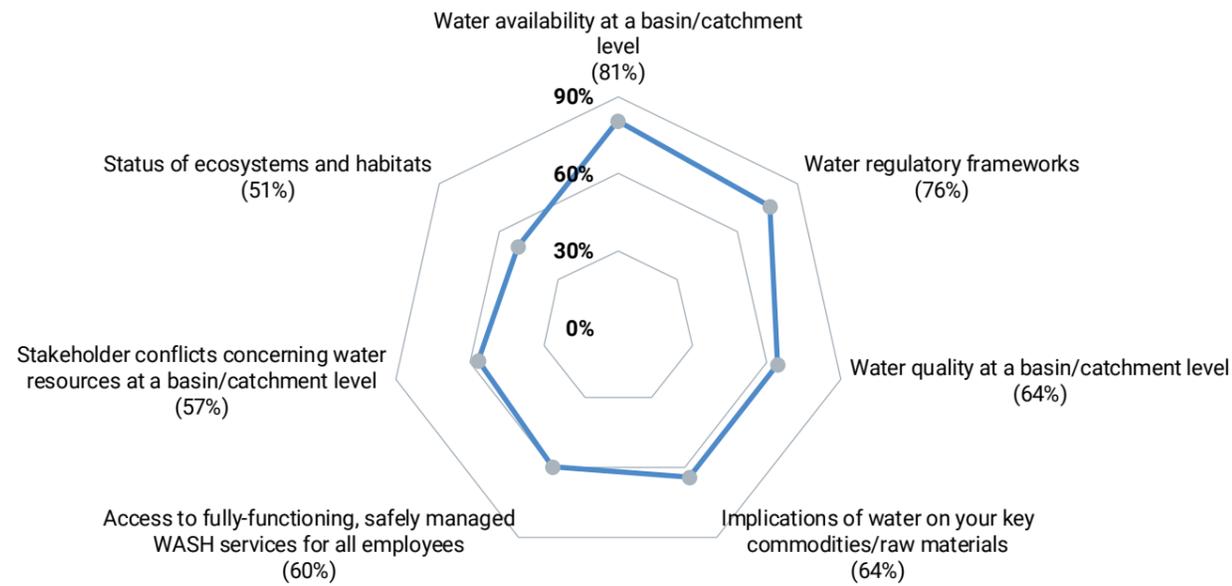


Risk assessment helps to figure out the inherent business risks that may act as hurdle to the business growth and determine appropriate ways to control or minimize the effects of risk. As part of risk assessments, various issues such as water availability and quality, regulatory frameworks, access to WASH services and more are measured across a wide spectrum of stakeholders including investors, regulators, suppliers, and local communities.

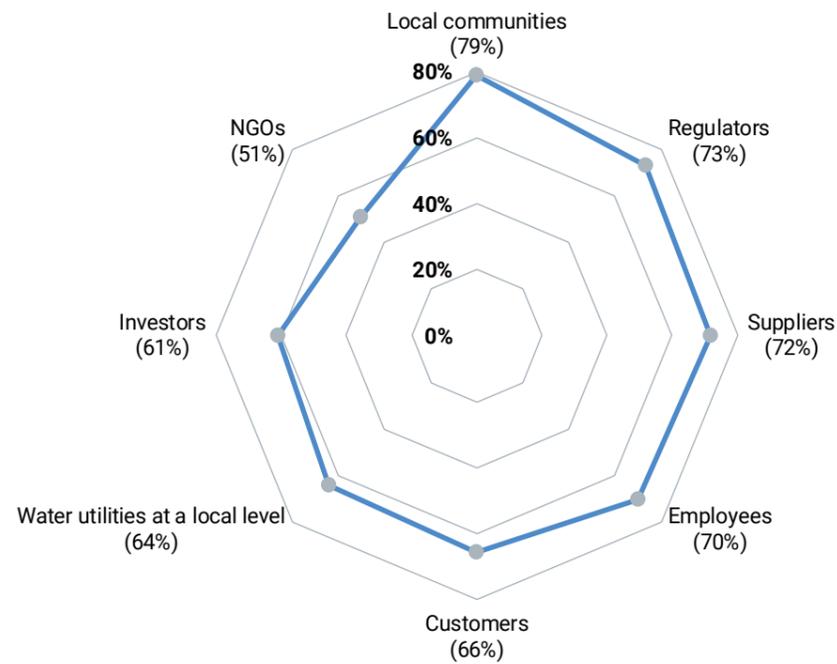
This illustrates the comprehensiveness of the water risks assessed by businesses. Water stewardship by corporations shows the increasing priority of integrating water-related issues in overall ESG disclosures. Out of the total companies disclosing through CDP India water security questionnaire, more than 50% represent sectors such as Chemicals, Metal smelting, refining & forming, cement and pharmaceuticals.

³⁷ Being "water positive" generally refers to a company taking actions to conserve and protect water resources, and potentially even to restore or enhance water resources beyond their current state.
³⁸ Being "water neutral" generally refers to a company taking actions to offset its water usage, typically by investing in projects that increase the availability of clean water in areas of need or by funding research on water-related issues. The goal of being water neutral is to ensure that a company's water usage does not have a negative impact on the environment or local communities

Contextual issues considered for assessing water-related risk



Stakeholders considered for water risk assessment



Water-related risks

The majority of responding companies (80%) reported physical risks such as floods, droughts, and increased water stress followed by regulatory (15%), reputation and markets (3%) and technology (2%) risks. This further proves that water risks and extreme events caused by climate change are inextricably linked.

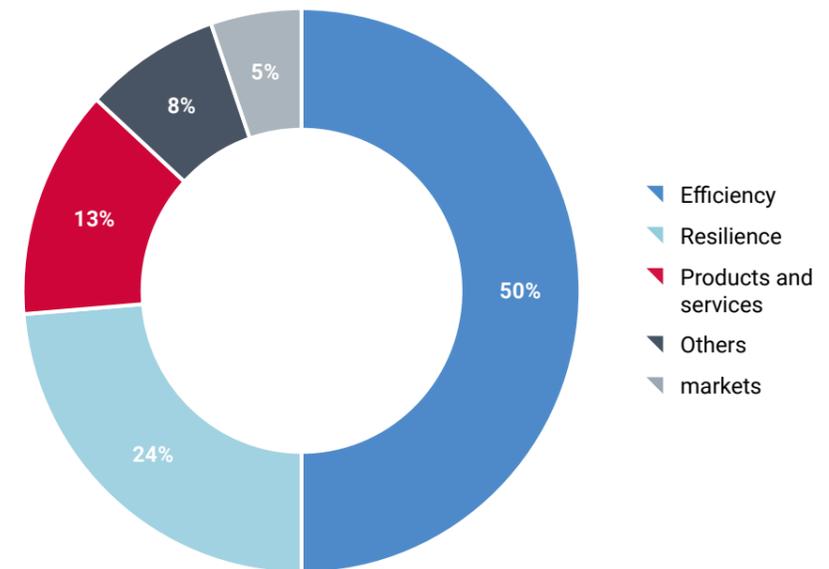
By 2050, the number of people at risk of floods will increase from its current level of 1.2 billion to 1.6 billion. In the early to mid-2010s, 1.9 billion people, or 27% of the global population, lived in areas that will potentially become severely water-scarce. By 2050, this number will increase to between 2.7 and 3.2 billion people (United Nations, 2020)³⁹.

In terms of financial impact, the overall risk reported by water-responding companies in 2022 is INR 504 billion, while the cost of response to risk stands at around INR 37 billion. The cost of inaction is 13 times more than the cost of addressing the risks indicating a prompt action to leverage long-term water resilience.

Water-related opportunities

Companies are increasingly adopting best practices aimed at improving water efficiency in operations, water recovery from sewage management, cost savings and increased resilience to impacts of climate change amongst others. 44 out of 45 water responding companies in India have identified opportunities that may have a substantive financial or strategic impact on their business.

Water-related opportunities identified (% opportunity total opportunity)



39 <https://www.unwater.org/water-facts/water-and-climate-change>

Opportunity	Examples
	Cost savings:
Efficiency	Reducing water use through water efficiency, recycling or re-use of wastewater, may provide savings by reducing energy use, water bills or the need for discharge permits.
	Climate change resilience:
Resilience	Investing in solving water-related challenges such as poor water infrastructure, implementing flood risk strategies or catchment restoration for example, may have the dual purpose of sustaining important operational inputs such as water supply or product distribution as well as ensuring resilience against climate change.
	Sales of new products and services:
Products and services	Local water issues in certain markets e.g. poor water quality in China, may create greater demand for new products e.g. domestic water filters. Designing new products or services in response to increasing water challenges.
	Stronger competitive advantage:
Markets	By investing in solving water-related challenges or water-related innovation, may put some businesses ahead of their competitors or help capture greater market share.
	Carbon management:
Other	Greater investment in water efficiency can contribute to a reduction in carbon emissions and help achieve emission reduction targets especially in industries that are water-intensive.

Estimated financial impact

Type of Opportunity	Financial Impact of Opportunities (Million INR)
Efficiency	2212.66
Markets	3008.37
Other	444.07
Products and services	32036.42
Resilience	156017.32





Case study: Water related risks and opportunities at Tech Mahindra

Tech Mahindra has a comprehensive framework for risk management with in-built mechanisms for identification, classification, mitigation and management of financial as well as non-financial risks. The company has a designated Risk Management Committee (RMC) of the Board, which periodically reviews the risk management framework & identifies critical risks along with their mitigation plans. The Chief Risk Officer (CRO) coordinates with the risk officers of each business unit to identify the risks.

The company is reported to have recycled more than 235.40 M liters of water through their STPs installed at various facilities in Noida, Chandigarh, Pune, Hyderabad, Bengaluru, Chennai, Vizag, Bhubaneswar and Nagpur, recharged 1.34 Mn+ litres groundwater through rainwater harvesting plants, installed water sensors and restrictors to conserve water, thus preventing freshwater withdrawal and saving operational costs.

The company has also made investments to upgrade STPs with MBR Technology to increase efficiency and phased deployment of water sensors and restrictors across locations helps save 25% of the water wastage.

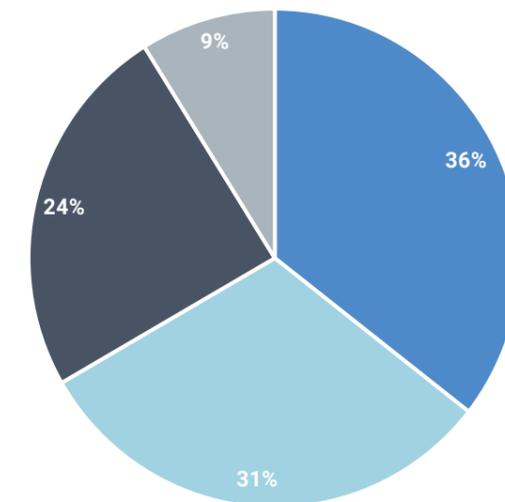
The company is using emerging technologies like AI, BI, IoT, Blockchain etc. to develop tools to detect emergency events, water contamination issues, water stress and reduce repair and maintenance time thus reducing operational expenses.

Internal water price

One of the ways to factor in the materiality of water risk is setting an internal price on water. It is defined as a metric reflecting the economic value of water to an organization in monetary terms. As the graph indicates, out of 45 companies responding to the CDP India

water security questionnaire, around 31% are using an internal price on water while another 36% are exploring water valuation practices. This scenario fares better than the global figure of 327 companies (9%) using an internal water price out of the 3903 companies responding to CDP worldwide in 2022.

Companies using internal price on water (% of companies, N=45)



▾ No, but we are currently exploring water valuation practices
 ▾ Yes
 ▾ No
 ▾ No response

An internal water price may be used in strategic, operational, or financial planning such as assessing water risks, better decision making on water-related investments, and seizing water-related opportunities. Companies also reported utilizing the fund from water pricing for uncertain/disaster management events. As

Indian markets have a wide range of exposure levels to water-related risks due to sectoral and geographical differences, setting a single price on water is challenging. However, as a general rule, an effective water price is one that is above the regulatory cost paid to water utilities or other direct costs of supply.

Forests



6

The forest sector in India has a huge potential to mitigate climate change by achieving an additional three billion tons of carbon sequestration by 2030⁴⁰. India's commitment to its 2070 net-zero targets entails that it must explore all potential nature-based interventions and leverage them to their fullest – in order to deal with the multiple global crises of climate change, biodiversity loss and land degradation.

CDP's theory of change implies that you cannot manage what you do not measure. Hence data collection – including its improvements and innovations – will be key in addressing biodiversity challenges. CDP India has therefore included a specific module on biodiversity in the Climate Change questionnaire in 2022.

CDP's forests program aims to **decouple deforestation from forest risk commodity production, working to remove commodity-driven deforestation from corporate value chains**, effectively contributing to a 1.5 degree aligned and water secure world

Biodiversity

The majority of Indian companies disclosing through CDP in 2022 are taking ownership to address the biodiversity challenge, however very few are engaging their value chain partners on it.

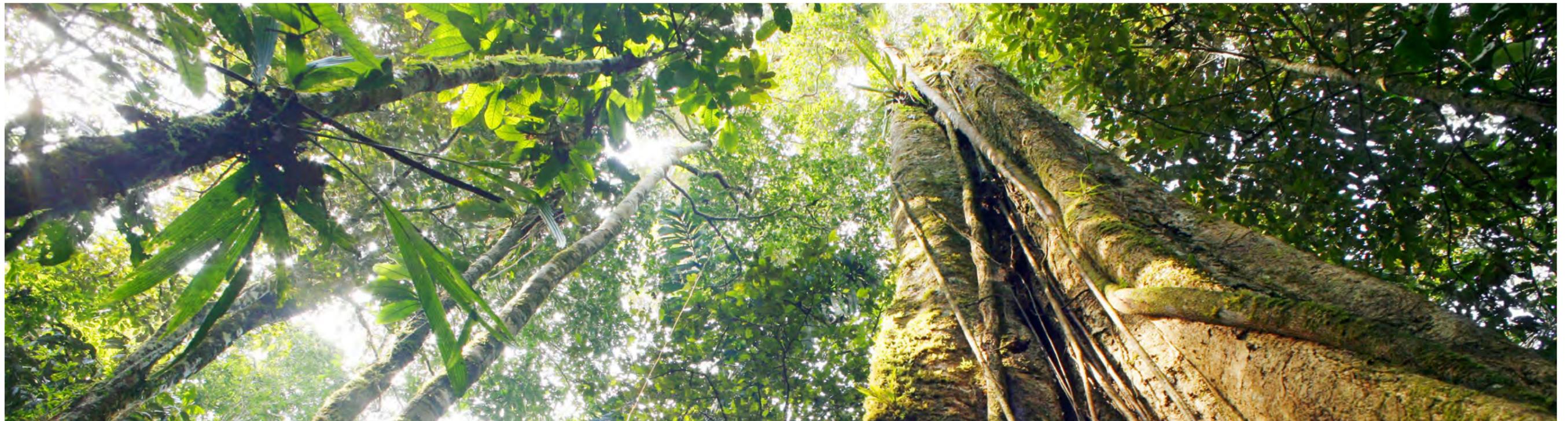
Of the 122 Indian companies responding to CDP's Climate Change questionnaire, nearly all (89%; 109 companies) chose to respond to the biodiversity module. Out of this, 66% (80) companies are considering biodiversity in their strategies, making commitments, and putting governance mechanisms in place. Most companies, (60%; 73 companies), have made public commitments and/or endorsed initiatives related to biodiversity and another 20% (24 companies) intended to do so in the next two years. If these companies follow through, by the end of 2024 around 80% companies (of the total 122 companies that responded to CDP India in 2022) will have voluntarily made commitments and/or endorsed initiatives related to biodiversity. While commitments are important, they must also be translated into tangible

actions and 66% of companies (81 companies) reported taking actions such as land or water management, education and awareness, and land or water protection.

Disclosure is an immediate and important way in which businesses can showcase and track their progress addressing the environmental dimensions. CDP India works closely with industries to help them understand how greater transparency about the environmental risks that companies face and the environmental impacts that they have can aid in setting baselines to fuel and track future progress.

However, the data also suggests that nearly three quarters (84 reporting companies) do not assess the impact of their value chain on biodiversity, indicating the results are even starker when we look at it from a sectoral lens. Sectors that are known to have the most damaging impact on biodiversity like manufacturing, have no company assessing the impact of their value chain on biodiversity. Risks from biodiversity loss cannot be fully addressed without including the whole value chain.

⁴⁰ <https://www.livemint.com/news/india/cop27-india-committed-to-create-carbon-sink-of-2-5-3-bn-tn-of-co2-equivalent-by-2030-11667910909887.html>





Addressing Deforestation Through Corporate Action

Britannia Industries

Britannia Industries is increasing the share of palm oil sourced from the Roundtable on Sustainable Palm Oil (RSPO⁴¹) members. Currently 73% of palm oil suppliers are certified by RSPO and Britannia is aiming to reaching 100% certified suppliers. There are restrictions on the sourcing of forest-risk commodities to avoid any adverse impact on ecosystems and wildlife habitats. Their manufacturing units are also in government-designated industrial zones to protect ecologically-sensitive areas.

Dabur India

Protecting biodiversity, particularly endangered plant species, is an integral part of Dabur's commitment to sustainable development. The organization has set aside funds in its financial planning exercise for various conservation and environmental sustainability programs. Dabur sources palm oil only from suppliers who are RSPO members.

Godrej Agrovet

Godrej Agrovet is committed to zero deforestation and restricts cultivation on peatland. They encourage their supply chain to adhere to sustainable cultivation of palm oil, and have taken up several initiatives in partnership with the National Bank for Agriculture and Rural Development (NABARD) to promote sustainable and equitable agriculture and rural development. In addition,

41 <https://rspo.org/>

Godrej Agrovet is committed to engaging with smallholders to implement sustainable farm management practices and ensure 100% traceability of fresh fruit until plantation level.

Godrej Consumer Products Limited (GPCL)

GCPL is a signatory of the Indian Sustainable Palm Oil Coalition (I-SPOC)⁴² and is working with the coalition to assess upcoming regulations for a deforestation-free threshold. Their 2025 vision is to achieve 50% procurement of palm oil from sustainable sources. Their short term strategic goals include promoting sustainable consumption at the consumer level and strengthening their traceability system.

Godrej Industries

Godrej Industries is a member of Action for Sustainable Derivatives (ASD)⁴³, a collaborative initiative that brings together companies in the cosmetics, home and personal care, and oleochemicals industries to collectively tackle supply chain issues around palm oil and palm kernel oil derivatives. Recognizing that one of the biggest hurdles to ensuring the sustainability of palm oil is the lack of transparency in the value chain, Godrej Industries is working towards strengthening their supply chain network by increasing the proportion of sustainably sourced material and traceability in their value chain.

42 <https://indiaspoc.org/>

43 <https://sustainablederivatives.org/>

44 https://ec.europa.eu/environment/nature/biodiversity/nnl/index_en.htm

45 <https://portals.iucn.org/library/sites/library/files/documents/Rep-2015-008.pdf>

46 <https://tnfd.global/>

47 <https://www.iucn.org/>

Hindustan Zinc (HZL)

Hindustan Zinc conducts screening assessments before the initiation of any project to identify ecologically sensitive areas and conduct risk assessments at the company level to evaluate their biodiversity-related impacts. HZL is working towards a minimum of No Net Loss (NNL)⁴⁴ of biodiversity and Net Positive Gain (NPG)⁴⁵ of biodiversity across all their operations. They have joined the Taskforce on Nature-related Financial Disclosures (TNFD)⁴⁶, which is committed to facilitating action and reporting on evolving nature-related risks. HZL is also engaged with the International Union for Conservation of Nature (IUCN)⁴⁷ to enhance the company's performance in biodiversity conservation and management.

Vedanta Ltd

Vedanta has set incremental targets in its biodiversity policy to further strengthen forest management. The company is currently conducting assessments to evaluate their operational sites on ecological parameters and identify gaps in current biodiversity management practices. Based on the findings, they will implement sustainable solutions to offset any adverse impacts on biodiversity and ecosystems. Vedanta's Biodiversity Management Plan sets out the organizational process to eliminate, minimize, mitigate and manage impact across all biodiversity attributes.

Decarbonizing Cities



India is witnessing rapid urbanization, with approximately 31% of its population living in cities (2020).⁴⁸ India's population is projected to hit 1.52 billion by 2036, with a 70% increase in urban areas.⁴⁹ Close to half (44%) of India's rapidly growing carbon emissions have urban origins, emanating from transport, industry, buildings, and waste. Within urban areas, megacities, metro cities and Class I cities generate 59% of the country's greenhouse gas (GHG) emissions.⁵⁰ At the same time, cities are also at the core of potential solutions, as sustainable urban development can be harnessed to minimize GHG emissions from cities. Cities

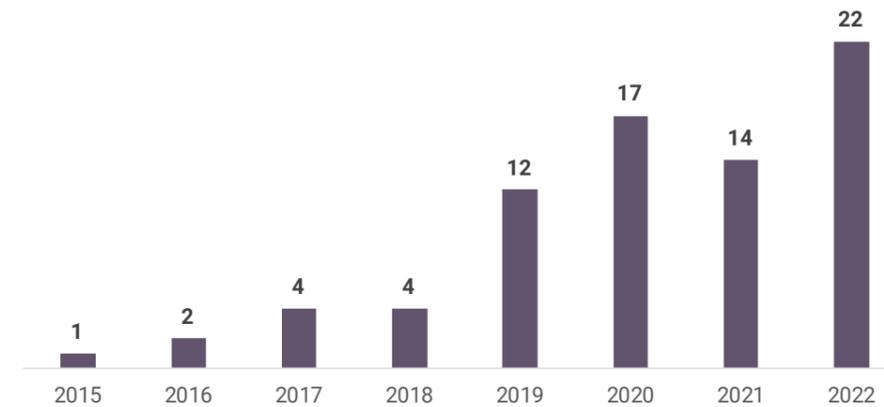
can thus play a vital role in the decarbonization journey of India and globally.

2022 cities disclosure

Climate disclosures amongst Indian cities in 2022 have also shown significant growth, equivalent to a 57% increase since 2021. A total of 22⁵¹ cities have reported their climate data and environmental information through CDP-ICLEI Track (formerly known as the CDP-ICLEI Unified Reporting System). Sixteen cities, including all large metropolitan cities – Delhi, Mumbai, Bengaluru, Chennai and Kolkata - have continued reporting, while six new cities have voluntarily opted to track their climate journey through transparent disclosure.



Indian cities disclosing through CDP



Climate threat

According to Germanwatch Global Climate Risk Index 2021, India ranked as the 7th most affected country by the impact of extreme weather events between 2000 and 2019. Indian cities are becoming extremely vulnerable to climate change which imposes a huge risk of increased water stress, air pollution, the heat island effect, and increased frequency and severity of extreme weather events such as urban floods and droughts. Amongst disclosing cities, the most common climate hazards are identified as extreme heat and urban flooding, followed by water stress, as shown in table below.

Mumbai has become the first Indian city to receive CDP's A-score (Leadership level) for its leadership in environmental action and transparency in 2022. A total of 122 cities across the globe were named on CDP's A-list in 2022. Mumbai recently released its first-ever Climate Action Plan in 2022, 'Towards a Climate Resilient Mumbai'. It outlines the city's aims to reach net-zero carbon neutrality by 2050 – the most significant step taken in its climate journey thus far.

The Climate Action Plan has laid down a 30-year roadmap for the city to tackle the challenges of climate change, by adopting inclusive and robust mitigation and adaptation strategies. The action plan sets short, medium, and long-term climate goals aimed at achieving zero emission of GHGs or a net-zero target for 2050 - which means it will incorporate just transition methodologies (towards net zero pathways); sizeable investments; and coordinated and robust governance.

Top 5 reported climate hazards by Indian cities

Climate hazard	Number of cities (out of 22 Reporting cities)
Extreme heat	7
Urban flooding	7
Water stress	6
Air pollution	4
Drought	4

48 <https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=IN>

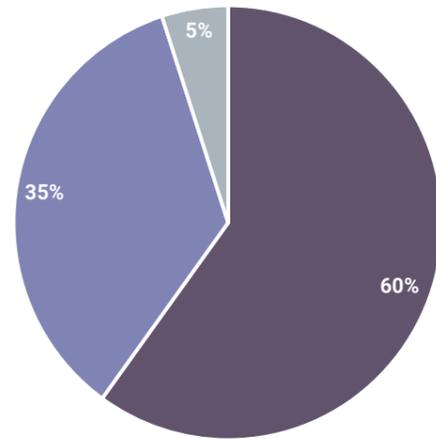
49 https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwie_qmv5q_8AhW1R2wGHQSBaEoQFnoECAKQAQ&url=https%3A%2F%2Fmain.mohfw.gov.in%2Fsites%2Fdefault%2Ffiles%2FPopulation%2520Projection%2520Report%25202011-2036%2520-%2520upload_compressed_0.pdf&usg=AOvVaw25NHHNb-_wcU_23_5TOFHg

50 https://wwfin.awsassets.panda.org/downloads/background_paper_on_cities_and_climate_change_1.pdf

51 Ahmedabad, Bengaluru, Bhavnagar, City of Delhi, City of Mumbai, Chennai, Coimbatore, Gwalior, Hinginghat, Kolkata, Nagpur, Panaji, Patna, Pune, Rajkot, Shimla, Siliguri, Surat, Tiruchirappalli, Tirunelveli, Udaipur ad Vadodara.

To tackle these climate hazards, 14 cities (64%) reported that they have conducted a climate risk and vulnerability assessment which is the fundamental first step towards resilient climate action and planning.

Has a climate risk and vulnerability assessment been undertaken for your jurisdiction?



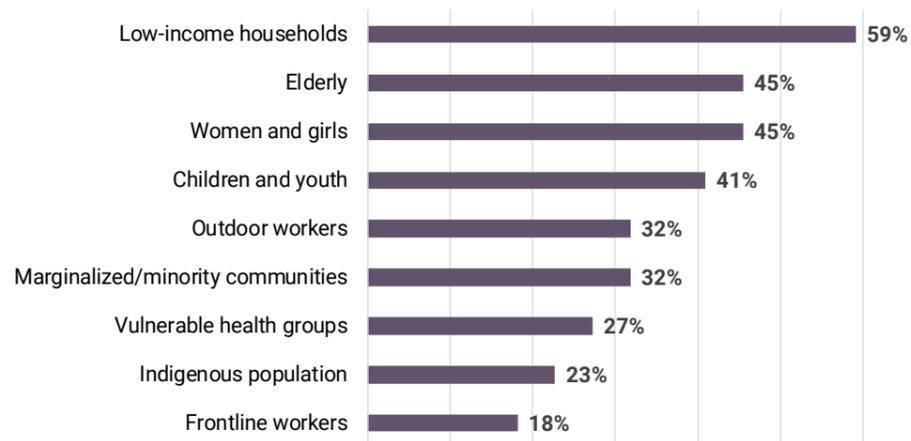
- ▼ Cities with CRVA
- ▼ Cities with no CRVA but currently undertaking and target to complete by next year
- ▼ Cities with no CRVA and not intended to undertake due to financial and technical expertise

Climate impacts

Cities and their residents have been impacted by climate change directly and indirectly. Out of 22 responding cities, 13 reported low-income households (59%) as being the most vulnerable group in society mainly due to their informal

settlements over floodplains and critical areas, and a lack of access to climate-resilient infrastructure. Women and girls (45%) and the elderly (45%) have been identified as the second and third most significant vulnerable groups impacted by climate hazards.

Vulnerable group affected by climate hazards



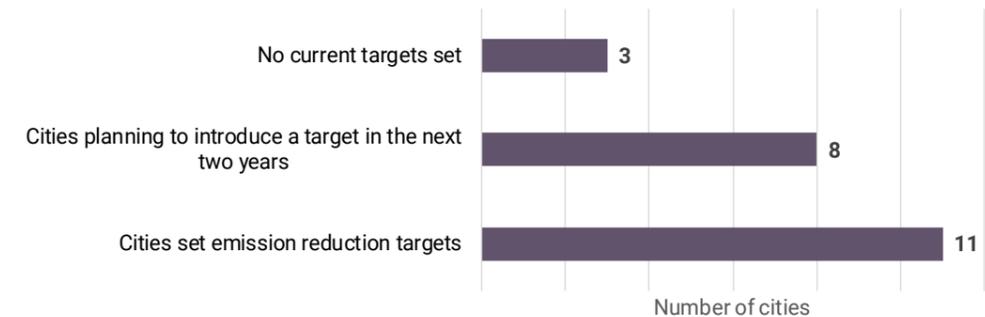
In terms of activities and sectors affected by climate hazards, 16 cities (73%) reported that accommodation and food services, conservation and water supply are the most affected sectors, followed by 13 cities (68%) that reported human health and social work activities, and sewerage, waste management and remediation activities as primary priorities.

More than half of cities (55%) identified a predicted increase in intensity of climate hazards, while another third (32%) did not know the expected future intensity or did not provide a response. **More than half of cities (54%) expected hazards to increase in frequency** while more than a third (35%) did not know or did not provide a response. This indicates a need for more complete climate risk and vulnerability assessments to enable cities to plan for the future.

Emissions reduction targets

As cities account for the largest contributions to global emissions and are on the frontline of the climate crisis, they have a vital role to play in building a zero-emissions and resilient planet. Cities must take urgent actions to reduce GHG emissions and achieve net-zero by 2050, in order to limit global warming to 1.5 °C above pre-industrial levels. In a similar vein, 11 cities (52%) reported that they have set an emissions reduction target while another eight cities (18%) reported that they are planning to introduce one within the next two years. This still leaves almost half of reporting cities with no current or planned target. Only one city (Mumbai) has reported a valid science-based target (SBT), and four cities have reported having targets as ambitious as India’s Nationally Determined Contributions (NDC). For Mumbai, the targets are conditional based on the decarbonization of the electricity grid and reduction in emissions from air travel.

Emission reduction target set by Indian Cities



The most common sectoral target set by cities is related to renewable energy or electricity generation and/or consumption with 13 cities (60%) reporting related targets.

Decarbonization actions in cities

As growing climate change impacts are experienced across the globe, the need for

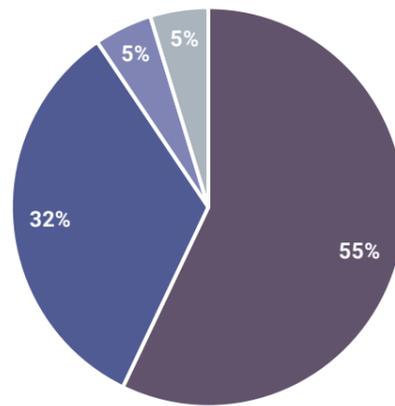
GHG gas to significantly decrease is stark. The United Nations Environment Programme (UNEP) Emissions Gap Report 2022 finds cities are falling far short of the Paris Goals, with no credible pathways to 1.5°C in place. Urgent and bold system-wide sectoral transformations are required to bend the emissions trajectory by 2030 and achieve zero emissions in the longer term.⁵²

52 <https://www.unep.org/resources/emissions-gap-report-2022>

City climate action plans are crucial to building on the information gathered from climate risk and vulnerability assessments and from baseline GHG emission inventories to identify the priority actions that would help cities adapt to climate change impacts, while significantly reducing GHG emissions from cities' activities. 12 cities (55%) reported that they have a climate action plan, while seven cities (31%) are currently undertaking one to be completed in

the next year, and one city planning to complete one in the next two years. In 2022, Mumbai launched India's first climate action plan to set net-zero targets for 2050. The plan is committed to a net-zero and climate-resilient Mumbai by 2050, which means it will incorporate just transitions methodologies (towards net-zero pathways); significant financial investments; and coordinated and robust governance.

Status of climate action plans in Indian cities



- ▼ Yes, our jurisdiction has a climate action plan or strategy
- ▼ No, but we are currently undertaking one and it will be complete in the next year
- ▼ No, but we are intending to undertake one in the next two years
- ▼ No, and we are not intending to undertake due to lack of expertise/technical capacity

All cities reporting through CDP-ICLEI Track have disclosed their mitigation actions and targets expected to last for the short term (2022 to 2050) or long term (2050 or later) target years. The top three mitigation actions are in **stationary energy (almost 50% of actions)**, which includes actions such as smart meters, smart lighting, building codes and standards; action to advance net-zero carbon municipal buildings and more, followed by an equal number of actions reported for **transportation and waste management**. These actions are also co-benefits in terms of economic, social, environmental, and public

health benefits. Enhanced resilience to shocks and disasters, job creation, improved air quality, better preparedness for health service delivery and increased energy security are the most commonly reported co-benefits.

Likewise, cities have also reported their adaptation actions and goals. The top three adaptation actions which cities are undertaking include - ecosystem-based actions, engineered and built environment actions, and educational/informational actions to make cities more robust and climate resilient.

Conclusion



The CDP India Disclosures of 2022 saw encouraging results as 40% more companies disclosed in areas related to climate change, water security and forests compared to 2021.

This year's disclosures also saw more companies taking efforts to set targets for mitigating climate change, take more accountability by increasing board level oversight as well as paying attention to adopting significant climate and water security targets. We also saw a positive increase in the number of companies dedicating themselves to the SBTi's in order to be able to measure their climate change impact.

One of the key achievements for CDP India in 2022 has been the launch of the Supply Chain Program, whose main focus is to encourage companies to request their suppliers to disclose through the CDP climate change questionnaire, which in turn helps the customer to make an informed and most sustainable procurement decision. CDP India helps companies to identify strategic partners and further facilitates the process of assisting them in setting up their KPI's for the next reporting years. The program also includes hosting capacity building training, addressing disclosure related queries and resource sharing such as guidance documents, recorded webinars and technical notes. The program already witnessed 164 value chain companies engage actively as a response to the active engagement of supply chain members in its year of inception.

On the one hand, it is heartening to see Indian industries making a conscious effort to mitigate climate change. But on the other hand, one cannot ignore the fact that the if we are to achieve a net-zero target by 2050, the pace needs to be picked up, as is the number of companies taking accountability and reporting to CDP.

The financial sector is a major stakeholder in addressing risks arising from climate change. **In 2022, CDP India took steps to support mobilization of sustainable finance** and undertook numerous discussions with the representatives of its Financial Institutions Working Group in order to submit their response to the RBI about their new discussion paper. CDP India also held a roundtable conference in collaboration with UNDP to present its key findings of the rapid assessment study of capacity building needs for the financial sector ecosystem. Apart from these, CDP India is constantly engaging with the industry through workshops, capacity building training programs, online platform support and sharing of CDP resources.

2022 disclosures have yielded promising results and we hope that with our continued support, the future disclosures will be even more robust and encouraging.

Annexures



Appendix I:

Table of emissions, scores, and sector by company

Primary sector	Organization	Final Score	2022 Response Permission Status	Scope 1 Emissions (metric tonnes CO ₂ e)	Total Scope 2 Emissions (Location + Market Based) (metric tonnes CO ₂ e)	Scope 3 Emissions (metric tonnes CO ₂ e)	Number of Scope 3 categories reported
Bars, hotels & restaurants	Indian Hotels Co. Ltd.	D-	Public	205958	Not reported	Not reported	Not reported
	Aragen Life Sciences Private Limited	C	Public	11158.39	36875.39	246.67	1
	Aurobindo Pharma	C	Public	359387	543983	Not reported	Not reported
	Biocon	C	Public	61508	76254	4517834.11	4
	Cipla	Not Scored	Private	Private	Private	Private	Private
	Dr. Reddy's Laboratories	A-	Public	302466	166246.6	470262.39	8
Biotech & pharma	Glenmark Pharmaceuticals	C	Private	Private	Private	Private	Private
	Granules India Limited	Private	Private	Private	Private	Private	Private
	IOL Chemicals and Pharmaceutical Limited	Private	Private	Private	Private	Private	Private
	Jubilant Pharmova Limited	B	Private	Private	Private	Private	Private
	Lupin	C	Private	Private	Private	Private	Private
	Piramal Pharma Limited	C	Public	66459	91801	Not reported	Not reported

Primary sector	Organization	Final Score	2022 Response Permission Status	Scope 1 Emissions (metric tonnes CO ₂ e)	Total Scope 2 Emissions (Location + Market Based) (metric tonnes CO ₂ e)	Scope 3 Emissions (metric tonnes CO ₂ e)	Number of Scope 3 categories reported
Biotech & pharma	Stelis Biopharma Limited	Private	Public	14393.158	11826.618	2021	1
	Sun Pharmaceutical Industries Limited	Private	Private	Private	Private	Private	Private
Cement & concrete	ACC	A-	Public	15612067	674939	2449077	6
	Ambuja Cements	B	Public	16180247	601907	1941999	6
	Dalmia Bharat Ltd	B	Public	12548160	445378	1253889.41	5
	Grasim Industries	C	Public	4564194	1393024	4814882	8
	JK Cement Ltd	B	Public	7784307	238321	1365156	6
	JSW Cement Limited	B	Public	1776102.3	745673.1	680490	6
	Shree Cement	A-	Public	15735202	330477	264367	7
	Ultratech Cement	A-	Public	61453953	1049149	4547816.11	7
Chemicals	Aarav Frances & Flavours Private Limited	D	Public	Not reported	Not reported	Not reported	Not reported
	Aarti Industries Ltd	B	Public	599557	104577	1556241.06	9
	Asian Paints	Private	Public	12407	32739	Not reported	Not reported
	Atul Ltd.	Private	Public	856434	83179	Not reported	Not reported
	Dabur India	D	Public	15427	49758	Not reported	Not reported
	Deepak Nitrite Limited	Not Scored	Private	Private	Private	Private	Private

Primary sector	Organization	Final Score	2022 Response Permission Status	Scope 1 Emissions (metric tonnes CO ₂ e)	Total Scope 2 Emissions (Location + Market Based) (metric tonnes CO ₂ e)	Scope 3 Emissions (metric tonnes CO ₂ e)	Number of Scope 3 categories reported
Chemicals	Galaxy Surfactants Ltd.	B-	Public	18937	38693.25	134069.275	7
	Godrej Consumer Products Limited	B	Public	35879	50671	Not reported	Not reported
	Godrej Industries	B	Public	38994	41831	426274.432	8
	Jubilant Ingrevia Limited	B	Private	Private	Private	Private	Private
	Mamta Polycos	D	Public	71.704	526.032	33.75	1
	Oriental Aromatics Ltd.	B	Private	Private	Private	Private	Private
	Oriental Carbon & Chemicals Ltd	C	Private	Private	Private	Private	Private
	SRF Ltd.	D	Private	Private	Private	Private	Private
Commercial & consumer services	Tata Chemicals	B	Public	4466547	55029.23	138943.5	5
	Quess Corp Ltd	C	Private	Private	Private	Private	Private
Construction	VA Tech Wabag Ltd	D	Private	Private	Private	Private	Private
Discretionary retail	Trent Ltd.	Private	Private	Private	Private	Private	Private
Electrical & electronic equipment	Dixon Technologies India	D	Private	Private	Private	Private	Private
	Graphite India Ltd	Private	Public	131136	345449	Not reported	Not reported

Primary sector	Organization	Final Score	2022 Response Permission Status	Scope 1 Emissions (metric tonnes CO ₂ e)	Total Scope 2 Emissions (Location + Market Based) (metric tonnes CO ₂ e)	Scope 3 Emissions (metric tonnes CO ₂ e)	Number of Scope 3 categories reported
Electrical & electronic equipment	Samsung Display Noida Private Limited	Private	Private	Private	Private	Private	Private
	Sterlite Technologies Limited	C	Public	15235	211171	11187	6
	Tata Power Co.	B	Public	27334113	285388	16580690	6
Energy utility networks	Adani Gas Ltd	Private	Private	Private	Private	Private	Private
	Adani Transmission Ltd	D	Public	2691062	557775	4089557.08	8
	GAIL	C	Public	4401466	434135	24008444	2
	KEC International Ltd	Not Scored	Private	Private	Private	Private	Private
Entertainment facilities	Mahindra Holidays and Resorts	Not Scored	Private	Private	Private	Private	Private
Financial services	Axis Bank	C	Public	13849.31	163552.16	44763.24	4
	Embassy Office Parks REIT	B	Public	8827	104959	901	1
	Firstsource Solutions	D	Public	218.67	10460.27	1180.431	3
	HDFC Bank Ltd	C	Public	20877	287667	42697	3
	Housing Development Finance Corporation	B	Public	3115.381	11700.078	7002.05	6
	ICICI Bank Limited	C	Private	Private	Private	Private	Private

Primary sector	Organization	Final Score	2022 Response Permission Status	Scope 1 Emissions (metric tonnes CO ₂ e)	Total Scope 2 Emissions (Location + Market Based) (metric tonnes CO ₂ e)	Scope 3 Emissions (metric tonnes CO ₂ e)	Number of Scope 3 categories reported
Financial services	IndusInd Bank	B	Public	9017.02	58896.99	13423.44	3
	Kotak Mahindra Bank	C	Public	7820.33	76064.28	55496.21	7
	L&T Finance Holdings Limited	B	Public	87.32	4370.81	7295.43	3
	Mahindra & Mahindra Financial Services	B	Public	2518.41	14957.33	1809.81	3
	Mindspace REIT	Not Scored	Public	1162	56603	Not reported	Not reported
	State Bank of India	B	Public	547	1144641	200390	5
	YES Bank Limited	A-	Public	3217.14	44284.5	1986669.72	5
Food & beverage processing	Britannia Industries	Private	Public	77309.04	47096.07	Not reported	Not reported
	Foods and Inns Limited	C	Public	1398.86	6903.9	4325.47	2
	Godrej Agrovet	B	Public	41167	78440	2636911	5
	Marico	B	Public	621.9	10309	561192	9
Intermodal transport & logistics	Tata Consumer Products Ltd	B	Public	11145	43201.76	160371	7
	Adani Enterprises	B	Private	Private	Private	Private	Private
	Adani Ports & Special Economic Zone	B	Public	129437.6	193061.7	471648	8

Primary sector	Organization	Final Score	2022 Response Permission Status	Scope 1 Emissions (metric tonnes CO ₂ e)	Total Scope 2 Emissions (Location + Market Based) (metric tonnes CO ₂ e)	Scope 3 Emissions (metric tonnes CO ₂ e)	Number of Scope 3 categories reported
IT & software development	HCL Technologies	B	Public	19857	138953	202921	8
	Infosys Limited	A	Public	8965.18	51717.08	183596	6
	Larsen & Toubro Infotech Ltd	B	Public	176.52	9760.5	3147.27	2
	Mindtree Ltd	A-	Private	Private	Private	Private	Private
	Mphasis	D	Public	83	18697	Not reported	Not reported
	Persistent Systems Ltd	D	Private	Private	Private	Private	Private
IT & software development	Sonata Software North America Inc	B	Public	40.91	1105.58	864.66	4
	Tata Consultancy Services	A-	Public	16683	357261	358453	7
	Tech Mahindra	A-	Public	8995.81	57851.87	22212.98	6
Land & property ownership & development	Wipro	A	Public	9571	72973	410203.05	7
	Godrej Properties Limited	B	Public	447.97	2966.22	1332074.56	9
	Mahindra Lifespace Developer Limited	A	Public	302.59	2719.38	595998.57	8
Leisure & home manufacturing	Welspun India Ltd	C	Private	Private	Private	Private	Private
Light manufacturing	Apollo Tyres Ltd	B	Public	354921.45	385615.26	148012.16	3
	JK Tyres & Industries	C	Public	293333.34	166075.08	72384.6	6

Primary sector	Organization	Final Score	2022 Response Permission Status	Scope 1 Emissions (metric tonnes CO ₂ e)	Total Scope 2 Emissions (Location + Market Based) (metric tonnes CO ₂ e)	Scope 3 Emissions (metric tonnes CO ₂ e)	Number of Scope 3 categories reported
Media, telecommunications & data center services	Bharti Airtel	B	Private	Private	Private	Private	Private
	Reliance Jio Infocomm Limited	B	Public	494731	6731568	4552329	7
	Tata Communications	B	Public	4744	88308	97393	8
Metal products manufacturing	AIA Engineering Ltd.	B-	Private	Private	Private	Private	Private
	ARGL Limited	Private	Private	Private	Private	Private	Private
	Sundram Fasteners Limited	C	Public	1300	2054.2	Not reported	Not reported
Metal smelting, refining & forming	SUNBharat Forge Ltd.	B-	Public	70304	168568	Not reported	Not reported
	Hindalco Industries	C	Private	Private	Private	Private	Private
	Hindustan Zinc	A	Public	4320182	491403	4012094.366	9
Metal smelting, refining & forming	JSW Steel Ltd.	A	Public	41643138	2568176	4827912.205	6
	Sanyo Special Steel Manufacturing India Pvt. Ltd.	B	Public	40187	230608	125713	8
	Tata Metaliks Ltd	B	Public	1153433	3282	216331	5
Metal smelting, refining & forming	Tata Steel	A-	Public	75665682	8504561	13535951	14
	Vedanta Ltd	B	Public	59486747	3342745	34526656	9

Primary sector	Organization	Final Score	2022 Response Permission Status	Scope 1 Emissions (metric tonnes CO ₂ e)	Total Scope 2 Emissions (Location + Market Based) (metric tonnes CO ₂ e)	Scope 3 Emissions (metric tonnes CO ₂ e)	Number of Scope 3 categories reported
Oil & gas processing	Bharat Petroleum Corporation	B-	Public	5049760	405850	1004250	2
	Hindustan Petroleum Corporation	D	Private	Private	Private	Private	Private
	Indian Oil Corporation	C	Private	Private	Private	Private	Private
	Reliance Industries	Not Scored	Public	999999	Not reported	Not reported	Not reported
Other materials	PGP Glass Private Limited	B-	Private	Private	Private	Private	Private
	Suven Pharmaceuticals Ltd	Not Scored	Private	Private	Private	Private	Private
Powered machinery	Apar industries Limited	Not Scored	Public	17774	72716	Not reported	Not reported
	Escorts Ltd	C	Public	12796.24	37960	14022.19	1
Renewable power generation	Adani Green Energy	C	Public	1272	30535	1349731	4
	Azure Power	D	Public	1464	182	25500	3
	Greenko Group	Not Scored	Private	Private	Private	Private	Private
	ReNew Energy Global PLC	B	Public	627.94	35333	432300.23	7
Specialized professional services	Larsen & Toubro	D	Public	615035	274028	4976910	4

Primary sector	Organization	Final Score	2022 Response Permission Status	Scope 1 Emissions (metric tonnes CO ₂ e)	Total Scope 2 Emissions (Location + Market Based) (metric tonnes CO ₂ e)	Scope 3 Emissions (metric tonnes CO ₂ e)	Number of Scope 3 categories reported
Textiles & fabric goods	Arvind Ltd	B	Public	363942	283654	418568.89	7
	Indo Count Industries Ltd	B	Public	91509	60972	149093.82	9
Thermal power generation	Adani Power Ltd	B	Public	47528068.41	15288	3156795.394	2
	JSW Energy	A-	Public	15086661.31	33292.43	1219298.83	8
	NTPC Ltd	D	Public	304146024.1	16400.34	1101885.06	3
Tobacco	ITC Limited	A-	Public	1257786	389703	328194	6
Transportation equipment	Hero Motocorp Ltd	D	Private	Private	Private	Private	Private
	Mahindra & Mahindra	B	Public	55451.024	500577.372	65829032.37	11
	Tata Motors	B	Public	54793	302511	7353430	9
Web & marketing services	IndiaMart InterMesh Ltd	Not Scored	Public	5.108	310.718	Not reported	Not reported

Appendix II:

List of companies invited to respond to CDP

Climate change – investor requested companies

CDP Activity group	Company name	Response status
Air transport	InterGlobe Aviation Ltd	Not submitted
	Jet Airways (India) Ltd.	Not submitted
Bars, Hotels & Restaurants	Jubilant Foodworks Ltd	Not submitted
	Indian Hotels Co. Ltd.	Submitted
Biotech & Pharma	Ajanta Pharma Ltd.	Not submitted
	Alembic Pharmaceuticals Limited	Not submitted
	Alkem Laboratories Ltd	Not submitted
	Aurobindo Pharma	Submitted
	Biocon	Submitted
	Cadila Healthcare	Not submitted
	Cipla	Submitted
	Divi's Laboratories	Not submitted
	Dr. Reddy's Laboratories	Submitted
	GlaxoSmithKline Pharmaceuticals	Not submitted
	Glenmark Pharmaceuticals	Submitted
	Granules India Limited	Submitted
	Ipca Laboratories Ltd	Not submitted
	J.B. Chemicals and Pharmaceuticals Ltd.	Not submitted
	Jubilant Pharmova Limited	Submitted
	Laurus Labs Ltd	Not submitted
	Lupin	Submitted
	Natco Pharma Ltd	Not submitted
	Piramal Pharma Limited	Submitted
	Sun Pharmaceutical Industries Limited	Submitted
Torrent Pharmaceuticals	Not submitted	
Wockhardt	Not submitted	

CDP Activity group	Company name	Response status
Chemicals	ACC	Submitted
	Ambuja Cements	Submitted
	Dalmia Bharat Ltd	Submitted
	Grasim Industries	Submitted
	India Cements	Not submitted
	JK Cement Ltd	Submitted
	Lucky Cement	Not submitted
	Orient Cement Limited	Not submitted
	Shree Cement	Submitted
	The Ramco Cements Ltd	Not submitted
Chemicals	Ultratech Cement	Submitted
	Aarav Frances & Flavors Private Limited	Submitted
	Aarti Industries Ltd	Submitted
	Alkyl Amines Chemicals	Not submitted
	Asian Paints	Submitted
	Atul Ltd.	Submitted
	BASF India Ltd	Not submitted
	Berger Paints India Ltd	Not submitted
	Castrol India	Not submitted
	Chambal Fertilizers & Chem	Not submitted
	Deepak Nitrite Limited	Submitted
	EnGro Corporation Limited	Not submitted
	Fine Organics Industries (India)	Not submitted
	Galaxy Surfactants Ltd.	Submitted
	GHCL Limited	Not submitted
	Godrej Industries	Submitted
	Gujarat Fluorochemicals	Not submitted
	Jubilant Ingrevia Limited	Submitted
	Kansai Nerolac Paints Limited	Not submitted
	Linde India Ltd	Not submitted
	Mamta Polycoats	Submitted
	Navin Fluorine International Ltd	Not submitted

CDP Activity group	Company name	Response status
Chemicals	PI Industries Ltd	Not submitted
	Pidilite Industries Ltd	Not submitted
	SRF Ltd.	Submitted
	Tata Chemicals	Submitted
	UPL Limited	Not submitted
	Vinati Organics Ltd	Not submitted
	Dabur India	Submitted
	Emami Ltd.	Not submitted
	Godrej Consumer Products Limited	Submitted
Clothing & textile manufacturing	Arvind Ltd	Submitted
Coal mining	Coal India	Not submitted
	Gujarat Mineral Devp. Corpn.	Not submitted
	NLC India Ltd	Not submitted
Commercial & consumer services	Quess Corp Ltd	Submitted
Construction	Bharti Infratel Limited	Not submitted
	Voltas	Not submitted
	GVK Power & Infrastructure	Not submitted
Convenience retail	Avenue Supermarts Ltd	Not submitted
Crop farming	Coromandel International	Not submitted
	Venky's India Ltd	Not submitted
Discretionary retail	Aditya Birla Fashion and Retail Ltd	Not submitted
	Trent Ltd.	Submitted
	Vaibhav Global Ltd	Not submitted
Electrical & electronic equipment	Amara Raja Batteries Ltd	Not submitted
	Bharat Electronics	Not submitted
	Havells India	Not submitted
	V-Guard Industries Ltd	Not submitted
	Tata Power Co	Submitted
	Bajaj Electricals Ltd	Not submitted
	Crompton Greaves Consumer Electricals Ltd	Not submitted
	Dixon Technologies India	Submitted

CDP Activity group	Company name	Response status	
Energy Utility Networks	Adani Transmission Ltd	Submitted	
	CESC Ltd	Not submitted	
	Indian Energy Exchange Ltd	Not submitted	
	KEC International Ltd	Submitted	
	K-Electric Ltd	Not submitted	
	Power Grid Corpn. of India	Not submitted	
	Reliance Infrastructure	Not submitted	
	Torrent Power	Not submitted	
	Adani Gas Ltd	Submitted	
	GAIL	Submitted	
	Gujarat State Petronet	Not submitted	
	Indraprastha Gas Ltd	Not submitted	
	Mahanagar Gas Ltd	Not submitted	
	Financial services	Aavas Financiers Ltd	Not submitted
		Aditya Birla Capital	Not submitted
AU Small Finance Bank Ltd		Not submitted	
Axis Bank		Submitted	
Bajaj Finance Limited		Not submitted	
Bajaj Finserv		Not submitted	
Bandhan Bank		Not submitted	
Bank of Baroda		Not submitted	
Bank of India		Not submitted	
Canara Bank		Not submitted	
Cholamandalam Investment and Finance Company Ltd		Not submitted	
City Union Bank Ltd.		Not submitted	
CreditAccess Grameen Ltd	Not submitted		
Federal Bank	Not submitted		
Firstsource Solutions	Submitted		
General Insurance Corporation of India	Not submitted		
Habib Bank Ltd	Not submitted		
Hdfc Asset Management	Not submitted		

CDP Activity group	Company name	Response status
Financial services	HDFC Bank Ltd	Submitted
	HDFC Life Insurance Company Ltd	Not submitted
	Housing Development Finance Corporation	Submitted
	ICICI Bank Limited	Submitted
	ICICI Lombard General Insurance Company Ltd	Not submitted
	ICICI Prudential Life Insurance Company Ltd	Not submitted
	ICICI Securities Ltd	Not submitted
	IDBI Bank Ltd	Not submitted
	IDFC First Bank Ltd	Not submitted
	Indiabulls Housing Finance Ltd	Not submitted
	Indian Overseas Bank	Not submitted
	IndusInd Bank	Submitted
	Kotak Mahindra Bank	Submitted
	L&T Finance Holdings Limited	Submitted
	LIC Housing Finance	Not submitted
	Mahindra & Mahindra Financial Services	Submitted
	Manappuram General Finance & Leasing	Not submitted
	Max Financial Services	Not submitted
	Mcb Bank Limited	Not submitted
	Muthoot Finance Limited	Not submitted
	PNB Housing Finance Ltd	Not submitted
	Power Finance Corporation	Not submitted
	Punjab National Bank	Not submitted
	REC Ltd	Not submitted
	Reliance Nippon Life Asset Management Ltd	Not submitted
	SBI Cards and Payment Services Limited	Not submitted
	SBI Life Insurance Company Ltd	Not submitted
	State Bank of India	Submitted
	Sundaram Finance Limited	Not submitted
	The New India Assurance Company Ltd	Not submitted
	Union Bank of India	Not submitted
	United Bank Ltd	Not submitted

CDP Activity group	Company name	Response status
Financial services	Wadia Group (Bombay Burmah, Britannia Industries)	Not submitted
	YES BANK Limited	Submitted
	Embassy Office Parks REIT	Submitted
	Mindspace REIT	Submitted
Fish & animal farming	Suguna Foods	Not submitted
Food processing	Britannia Industries	Submitted
	Marico	Submitted
	United Breweries	Not submitted
	United Spirits	Not submitted
Food & beverage processing	Foods and Inns Limited	Submitted
	Godrej Agrovet	Submitted
	Tata Consumer Products Ltd	Submitted
	Varun Beverages Ltd	Not submitted
Health care provision	Zydus Wellnes Ltd	Not submitted
	Fortis Healthcare Ltd.	Not submitted
	Max Healthcare Institute Ltd	Not submitted
	GMR Infrastructure Limited	Not submitted
Industrial support services	Adani enterprises	Submitted
	Birlasoft Inc	Not submitted
	Coforge Ltd	Not submitted
	HCL Technologies	Submitted
	Infosys Limited	Submitted
	Larsen & Toubro Infotech Ltd	Submitted
	Mindtree Ltd	Submitted
	MphasiS	Submitted
	Persistent Systems Ltd	Submitted
	Sonata Software North America Inc	Submitted
	Tanla Platforms Ltd	Not submitted
	Tata Consultancy Services	Submitted
IT & software development	Tata Elxsi Ltd	Not submitted
	Tech Mahindra	Submitted

CDP Activity group	Company name	Response status
	Wipro	Submitted
	WNS Holdings ADR	Not submitted
Land & property ownership & development	DLF	Not submitted
	Oberoi Realty	Not submitted
	Prestige Estate	Not submitted
	Rajesh Exports Ltd	Not submitted
Leisure & home manufacturing	Titan Company Limited	Not submitted
	TTK Prestige Ltd	Not submitted
	Welspun India Ltd	Submitted
Light manufacturing	Apollo Tyres Ltd	Submitted
	Balkrishna Industries Ltd	Not submitted
	Ceat Ltd	Not submitted
	JK Tyres & Industries	Submitted
	MRF Ltd	Not submitted
Media, telecommunications & data center services	Bharti Airtel	Submitted
	Vodafone Idea Ltd	Not submitted
	Reliance Communications	Not submitted
	Sun TV Network	Not submitted
	Tata Communications	Submitted
	Zee Entertainment Enterprises	Not submitted
Metal products manufacturing	3M India Ltd	Not submitted
	AIA Engineering Ltd.	Submitted
	APL Apollo Tubes Ltd	Not submitted
	Endurance Technologies Ltd	Not submitted
	Gillette India	Not submitted
	Minda Industries Ltd	Not submitted
	Motherson Sumi Systems	Not submitted
	Polycab India Ltd	Not submitted
	Schaeffler India Ltd	Not submitted
Sundram Fasteners Limited	Submitted	

CDP Activity group	Company name	Response status
	Bharat Forge Ltd.	Submitted
	Hindalco Industries	Submitted
	Hindustan Zinc	Submitted
	National Aluminium Co.	Not submitted
	Vedanta Ltd	Submitted
Metal smelting, refining & forming	Essar Steel Limited	Not submitted
	Jindal Stainless Ltd	Not submitted
	Jindal Steel & Power	Not submitted
	JSW Steel Ltd.	Submitted
	Sanyo Special Steel Manufacturing India Pvt. Ltd.	Submitted
	Steel Authority of India	Not submitted
	Tata Metaliks Ltd	Submitted
	Tata Steel	Submitted
Metallic mineral mining	NMDC	Not submitted
Oil & gas extraction & production	Gujarat Gas Company Limited	Not submitted
	Oil & Gas Development	Not submitted
	Oil India Ltd.	Not submitted
	Pakistan Oilfields Limited	Not submitted
	Pakistan Petroleum Limited	Not submitted
	Attock Refinery Ltd	Not submitted
Oil & gas processing	Bharat Petroleum Corporation	Submitted
	Chennai Petroleum Corporation	Not submitted
	Hindustan Petroleum Corporation	Submitted
	Indian Oil Corporation	Submitted
	Mangalore Refinery and Petrochemicals	Not submitted
	Nayara Energy Limited	Not submitted
	Oil & Natural Gas Corporation	Not submitted
	Reliance	Not submitted
	Reliance Industries	Submitted
Oil & gas retailing	National Refinery Limited	Not submitted
	Pakistan State Oil Co Ltd	Not submitted

CDP Activity group	Company name	Response status
Oil & gas storage & transportation	Aegis Logistics Ltd	Not submitted
	Petronet LNG	Not submitted
Other materials	Kajaria Ceramics Ltd	Not submitted
	PGP Glass Private Limited	Submitted
Other services	Apollo Hospitals Enterprises	Not submitted
	Dr Lal PathLabs Ltd	Not submitted
	Gland Pharma Ltd	Not submitted
	Metropolis Healthcare Ltd	Not submitted
	Suven Pharmaceuticals Ltd	Submitted
	The Phoenix Mills Ltd	Not submitted
Plastic product manufacturing	Astral Limited	Not submitted
	Finolex Industries Ltd	Not submitted
	Supreme Industries Ltd	Not submitted
Powered machinery	Bharat Heavy Electricals	Not submitted
	Escorts Ltd	Submitted
	Thermax	Not submitted
Rail transport	Indian Railway Catering and Tourism Corporation Ltd	Not submitted
	Indian Railway Finance Corp Ltd	Not submitted
Real estate owners & developers	Godrej Properties Limited	Submitted
Renewable energy equipment	Exide Industries	Not submitted
Renewable power generation	Adani Green Energy	Submitted
	Azure Power	Submitted
	ReNew Energy Global PLC	Submitted
	SJVN Ltd	Not submitted
Specialized professional services	Bajaj Holdings & Invst. (BHIL)	Not submitted
	Cholamandalam Financial Holdings Ltd	Not submitted
	CRISIL LTD	Not submitted
	L&T Technology Services Ltd	Not submitted
	Larsen & Toubro	Submitted
	Murugappa Group	Not submitted

CDP Activity group	Company name	Response status
Specialized professional services	Paytm	Not submitted
	Vakrangee Limited	Not submitted
Textiles & fabric goods	KPR Mill Ltd	Not submitted
	Page Industries Ltd	Not submitted
	Relaxo Footwears Ltd	Not submitted
Thermal power generation	Adani Power Ltd	Submitted
	Hub Power Company Ltd	Not submitted
	JSW Energy	Submitted
	Kot Addu Power Co Ltd	Not submitted
	KSK Energy Ventures Limited	Not submitted
	National Hydroelectric Power Corporation Ltd (NHPC)	Not submitted
Tobacco	NTPC Ltd	Submitted
	Reliance Power	Not submitted
	ITC Limited	Submitted
Trading, wholesale, distribution, rental & leasing	Bombay Burmah Trading Co	Not submitted
	Redington India Limited	Not submitted
	Shriram Transport Finance Co.	Not submitted
Transportation Equipment	Ashok Leyland	Not submitted
	Bajaj Auto	Not submitted
	Eicher Motors Ltd	Not submitted
	Hero Motocorp Ltd	Submitted
	Hindustan Aeronautics Ltd	Not submitted
	Mahindra & Mahindra	Submitted
	Maruti Suzuki India	Not submitted
Tata Motors	Submitted	
Transportation services	TVS Motor Company Ltd	Not submitted
	Adani Ports & Special Economic Zone	Submitted
	Container Corporation of India	Not submitted
Web & marketing services	IndiaMart InterMesh Ltd	Submitted
	Info Edge (India) Ltd.	Not submitted
	TEAM LEASE SERVICES	Not submitted
Wood building materials	Carborundum Universal Ltd	Not submitted

Climate change – self selected companies

CDP Activity group	Company name	Response status
Bars, Hotels & Restaurants	Chalet Hotels	Not submitted
	Aragen Life Sciences Private Limited	Submitted
Biotech & pharma	IOL Chemicals and Pharmaceutical Limited	Submitted
	Stelis Biopharma Limited	Submitted
Cement & concrete	JSW Cement Limited	Submitted
Chemicals	Oriental Aromatics Ltd.	Submitted
	Oriental Carbon & Chemicals Ltd	Submitted
Clothing & Textile Manufacturing	Indo Count Industries Ltd	Submitted
Construction	VA Tech Wabag Ltd	Submitted
	Graphite India Ltd	Submitted
Electrical & electronic equipment	Samsung Display Noida Private Limited	Submitted
	Sterlite Technologies Limited	Submitted
Entertainment facilities	Mahindra Holidays and Resorts	Submitted
Media, telecommunications & data center services	Reliance Jio Infocomm Limited	Submitted
Metal products manufacturing	ARGL Limited	Submitted
Powered machinery	Apar industries Limited	Submitted
Real estate owners & developers	Mahindra Lifespace Developer Limited	Submitted
Renewable power generation	Greenko Group	Submitted
Textiles & fabric goods	Sapphire Textile Mills Limited	Submitted

Water security – investor requested companies

CDP Activity group	Company name	Response status
Bars, Hotels & Restaurants	Indian Hotels Co. Ltd.	Not submitted
	Ajanta Pharma Ltd.	Not submitted
	Alkem Laboratories Ltd	Not submitted
	Aurobindo Pharma	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	Not submitted
	Ipca Laboratories Ltd	Not submitted
	Jubilant Pharmova Limited	Submitted
	Lupin	Not submitted
	Natco Pharma Ltd	Not submitted
	Piramal Pharma Limited	Submitted
	Sun Pharmaceutical Industries Limited	Not submitted
Torrent Pharmaceuticals	Not submitted	
ZCL Chemicals	Not submitted	
Biotech & Pharma	ACC	Submitted
	Ambuja Cements	Submitted
	Dalmia Bharat Ltd	Submitted
	Grasim Industries	Not submitted
	India Cements	Not submitted
	JK Cement Ltd	Submitted
	Lucky Cement	Not submitted
	Orient Cement Limited	Not submitted
	Shree Cement	Submitted
	The Ramco Cements Ltd	Not submitted
Ultratech Cement	Submitted	
Cement & concrete	Arvind Ltd	Submitted
	Aarav Frances & Flavors Private Limited	Submitted
Clothing & Textile Manufacturing	Aarti Industries Ltd	Not submitted
Chemicals		

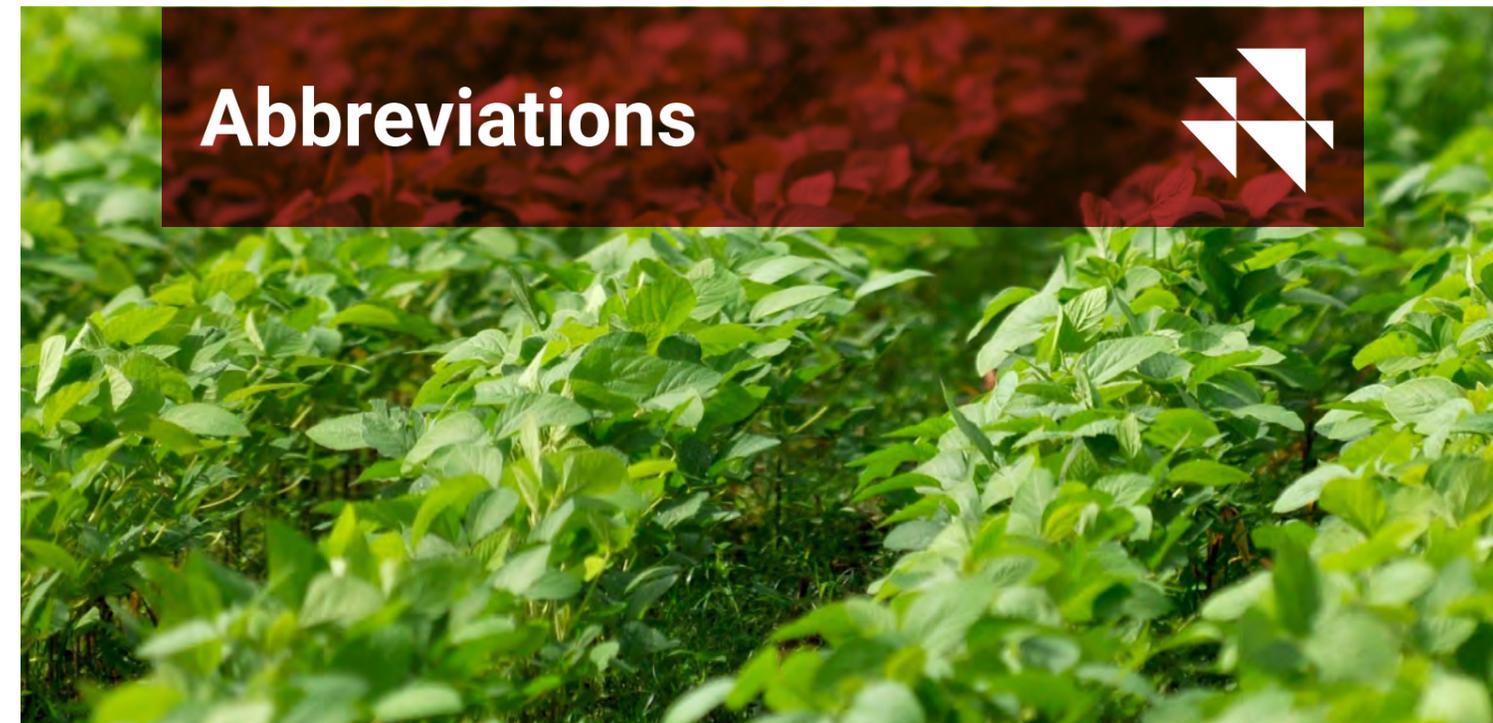
CDP Activity group	Company name	Response status
Chemicals	Asian Paints	Not submitted
	Atul Ltd.	Not submitted
	Berger Paints India Ltd	Not submitted
	Castrol India	Not submitted
	Dabur India	Submitted
	Emami Ltd.	Not submitted
	EnGro Corporation Limited	Not submitted
	GHCL LIMITED	Not submitted
	Godrej Consumer Products Limited	Submitted
	Godrej Industries	Submitted
	Gujarat Fluorochemicals	Not submitted
	Jubilant Ingrevia Limited	Submitted
	Kansai Nerolac Paints Limited	Not submitted
	PI Industries Ltd	Submitted
	Pidilite Industries Ltd	Not submitted
	SRF Ltd.	Not submitted
	Tata Chemicals	Submitted
	UPL Limited	Not submitted
Coal mining	Coal India	Not submitted
Crop farming	Allanasons Pvt. Ltd.	Not submitted
	Coromandel International	Not submitted
	Gokul Agro Resources Ltd	Not submitted
Discretionary retail	Aditya Birla Fashion and Retail Ltd	Not submitted
Electrical & electronic equipment	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
Food & beverage processing	Godrej Agrovet	Submitted
	Tata Consumer Products Ltd	Submitted
Food Processing	Marico	Submitted
Intermodal transport & logistics	Adani Enterprises	Not submitted
IT & software development	Tech Mahindra	Submitted
	Wipro	Submitted
Leisure & home manufacturing	Welspun India Ltd	Submitted

CDP Activity group	Company name	Response status
Light manufacturing	Apollo Tyres Ltd	Not submitted
	JK Tyres & Industries	Submitted
	MRF Ltd	Not submitted
Media, telecommunications & data center services	Tata Communications	Not submitted
	Bharat Forge Ltd.	Submitted
Metal smelting, refining & forming	Essar Steel Limited	Not submitted
	Hindalco Industries	Submitted
	Hindustan Zinc	Submitted
	Jindal Steel & Power	Not submitted
	JSW Steel Ltd.	Submitted
	National Aluminium Co.	Not submitted
	Sanyo Special Steel Manufacturing India Pvt. Ltd.	Not submitted
	Steel Authority of India	Not submitted
	Tata Steel	Submitted
	Vedanta Ltd	Submitted
Metallic mineral mining	NMDC	Not submitted
Other materials	PGP Glass Private Limited	Submitted
	Gujarat Gas Company Limited	Not submitted
Oil & gas extraction & production	Oil & Gas Development	Not submitted
	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 & Natural Gas Corporation	Not submitted
Reliance Industries	Not submitted	
Oil & gas storage & transportation	Petronet LNG	Not submitted
Plastic product manufacturing	Supreme Industries Ltd	Not submitted

CDP Activity group	Company name	Response status
Powered Machinery	CG Power and Industrial Solutions Limited	Not submitted
	Escorts Ltd	Submitted
	Jain Irrigation Systems	Not submitted
Renewable energy equipment	Exide Industries	Not submitted
Specialized professional services	Larsen & Toubro	Not submitted
Textiles & fabric goods	Page Industries Ltd	Not submitted
	Relaxo Footwears Ltd	Not submitted
Thermal power generation	Adani Power Ltd	Submitted
	JSW Energy	Submitted
	NTPC Ltd	Submitted
Tobacco	ITC Limited	Submitted
	Ashok Leyland	Not submitted
	Bajaj Auto	Not submitted
Transportation Equipment	Hero Motocorp Ltd	Submitted
	Mahindra & Mahindra	Submitted
	Maruti Suzuki India	Not submitted
	Tata Motors	Not submitted
Transportation services	Adani Ports & Special Economic Zone	Submitted

Water security – self selected companies

CDP Activity group	Company name	Response status
Biotech & Pharma	Aragen Life Sciences Private Limited	Submitted
Chemicals	Oriental Aromatics Ltd.	Not submitted
Construction	VA Tech Wabag Ltd	Submitted
Real estate owners & developers	Mahindra Lifespace Developer Limited	Submitted



ASD	Action for Sustainable Derivates	NNL	No Net Loss
CGWA	Central Ground Water Authority	NPG	Net Positive Gain
CO ₂	Carbon dioxide	PPA	Power Purchase Agreement
CO ₂ e	Carbon dioxide equivalent	RBI	Reserve Bank of India
EACs	Energy Attribute Certificates	RE	Renewable Energy
FI	Financial Institution	RPO	Renewable Energy Purchase Obligations
GHG	Greenhouse Gas	RSPO	Roundtable on Sustainable Palm Oil
ICP	Internal Carbon Pricing	SBTi	Science Based Target initiative
IPCC	Intergovernmental Panel on Climate Change	SBT	Science Based Target
IRENA	International Renewable Energy Agency	SMEs	Small and Medium Enterprises
ISPO	Indonesia Sustainable Palm Oil	TCFD	Task Force on Climate-related Financial Disclosures
I-SPOC	Indian Sustainable Palm Oil Coalition	tCO ₂	Total Carbon dioxide
IUCN	International Union for Conservation of Nature	TNFD	Taskforce on Nature related Financial Disclosures
LT LEDS	Long-Term Low Emission Development Strategy	TWh	Terra Watt hours
MSPO	Malaysian Sustainable Palm Oil	UNEP	United Nation Environment Programme
MtCO ₂ e	Million tonnes CO ₂ equivalent	UNFCCC	United Nations Climate Change Conference
NABARD	National Bank for Agriculture & Rural Development	UNGC	United Nations Global Compact
NbS	Nature - based Solutions	WRI	World Resource Institute
NDC	Nationally determined contributions	WWF	World Wildlife Fund for Nature

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. More than 680 investors with over US\$130 trillion in assets, and 280+ large purchasers with US\$6.4 trillion in buying power requested thousands of companies to disclose through CDP in 2022. This resulted in a record-breaking 18,700+ corporate disclosures, a 233% increase since 2015 when the Paris Agreement was signed.

CDP India

Active since 2012, CDP India has evolved to become one of the most effective disclosure platforms. 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 to those looking to improve sustainability and make commitments to reduce environmental impact. Every year the number of Indian stakeholders disclosing has steadily increased. CDP India helps stakeholders in the decarbonization journey through Supply Chain Engagement, Science-Based Targets (SBT) and Internal Carbon Pricing (ICP). 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. Recently, CDP India also contributed towards driving climate action during COP27.



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