

BUILDING BACK GREENER

India Inc. Demonstrates Climate Resilience

CDP India Annual Report 2020

Written on behalf of 515 investors representing US\$106 trillion in assets





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CEO FOREWORD



As 2021 unfolds, we reflect on the challenging and extraordinary times of the last year. As the world worked to collectively respond to the COVID-19 pandemic, we reeled from the tragic human impact of the crisis and its impact on our health, financial and social systems. Sadly, we are still grappling with these crises, but the rollout of the vaccine provides great hope for later this year.

When it comes to climate change, water security and deforestation, we have now entered a global emergency and the decade of action, our last chance to make rapid and deep cuts to global emissions and to protect biodiversity to avoid the full force of these other global crises.

Despite the pandemic, we are bolstered by the environmental leadership from companies, investors, governments, cities, and regions worldwide. With so much at stake and the clock running down, 2020 saw record disclosures through CDP's platform, with over 10,000 entities now disclosing their data on climate change, water security and deforestation issues.

More than 9,600 companies, worth over 50% of global market capitalisation now disclose through CDP and corporate disclosures are up 70% compared to five years ago when the Paris agreement was formed. This is in addition to the cities, states and regions that disclosed to us last year.

2020 was a year of firsts for Indian corporate climate action. For the first time, Indian companies have featured on the CDP A List. Of the 220 Indian companies that disclosed through CDP, four made it onto our A List (Hindustan Zinc Limited, IndusInd Bank, Mahindra & Mahindra and Tech Mahindra). We also witnessed the first Indian company disclose on forests; a promising sign of increasing environmental ambition in the country's private sector. These leading companies join a growing league of businesses that have recognised the climate emergency and are taking steps to respond to the associated risks and opportunities.

At CDP, we are led by the latest climate science. As it evolves, so must we, ensuring that the right information is embedded into the capital markets and placed into the hands of policymakers and decision-makers worldwide. CDP's systems enable this, and it is particularly critical as capital flows seek to transition towards the Net Zero, sustainable economy.

One thing is certain, we cannot afford to go back to 'normal' from an environmental perspective. Propping up the old system, with impending climate change hazards increasing, will lock us into a pathway of even greater risk. Instead, we must reinvent and renew our economy into one with greater resilience and more inclusivity.

Disclosure, transparency, data and science will be crucial to building a more resilient society. As we've learned from this current pandemic and from climate change, the best time for action is long before the problem becomes severe. Measuring and managing environmental risks through disclosure helps companies, cities, states and regions to build resiliency and plan for the future.

We must build back better from the COVID-19 pandemic. Our economies, societies and livelihoods depend on it.

The time for action is now.

— Paul Simpson, Chief Executive at CDP



2020 was a year of firsts for Indian corporate climate action. For the first time, Indian companies have featured on the CDP A List



INTRODUCTION

In 2020, the COVID-19 pandemic tested the resilience of the global community, demanding a concerted effort to battle its fallouts. It was also the year the world celebrated the 5th anniversary of the Paris Accord, an opportunity to assess progress, establish enhanced targets and reaffirm commitment to mitigating the climate crisis.

Separately, 2020 marked CDP's 20th anniversary with our 18th disclosure request sent out on behalf of more than 515 investors representing over US\$106 trillion in assets and over 150 global organisations worth over US\$4 trillion in purchasing power. A record number of 9,600+ companies responded in a year that was likely one of the most challenging in their history.

The imminent climate emergency is already manifesting itself through extreme weather events across the world. For instance, in India and Bangladesh alone the lives of millions of poor people were devastated by the impact of floods, cyclone Amphan and COVID-19. Home to some of the most disaster-prone areas in the world, India also recorded the highest deaths due to climate crisis-led disasters in 2018, ranking it fifth in the The Global Climate Risk Index 2020¹.

The climate crisis was compounded by the unprecedented disruption caused by the pandemic that overwhelmed the world's most efficient healthcare systems and pushed the global economy into recession. However, in its wake, the pandemic offers the world the opportunity to build back better through a greener, more climate-resilient economy.

Though projections from the International Monetary Fund, the World Bank and the Reserve Bank of India show an alarming pandemic-induced contraction in a country that was till recently the fastest growing

large economy in the world, India is still uniquely positioned to build back greener. For this, it needs to adopt an inclusive developmental model that integrates environment, social and corporate governance (ESG) comprehensively into its decision-making processes, and factors in greater sustainability and resilience parameters into post COVID-19 recovery plans.

The pandemic-induced global lockdown² led to a sharp drop in emissions and India is expected to record 6-10% lower GHG emissions in 2020 compared to 2019³. This is an opportune time to build on this momentum by strategising a green COVID-19 recovery strategy with the potential to facilitate an accelerated transition away from coal and towards renewable energy. Even though India is comfortably placed to not only meet but overachieve its NDC targets aligned with the 2009 Copenhagen 2°C goal under currently implemented policies, the Climate Action Tracker suggests these efforts are insufficient to achieve the long-term climate goal of limiting temperature increase below 1.5°C in line with the Paris Agreement⁴. To achieve this crucial target, India must begin focussing on phasing out coal for power generation by 2040⁵.

However, despite setting ambitious targets and reiterating its commitment towards adoption of renewable energy and other low carbon avenues such as electric vehicles, India is walking down a parallel and inconsistent policy pathway⁶. While no

1 https://germanwatch.org/sites/germanwatch.org/files/20-2-01e%20Global%20Climate%20Risk%20Index%202020_10.pdf

2 https://unfccc.int/sites/default/files/resource/1.GCP_.pdf

3 <https://climateactiontracker.org/countries/india/>

4 <https://climateactiontracker.org/countries/india/>

5 <https://www.dw.com/en/india-coal-energy-solar-power-renewables-change/a-54688107>

6 <https://energy.economictimes.indiatimes.com/news/renewable/india-to-have-220-gw-renewable-energy-capacity-by-2022-pm-narendra-modi/78008063>

new coal power stations have been set up in 2020, we continue to promote coal mining, pursue increased coal production targets, and have lately also allowed private investors into the market despite reduced utilisation of coal power plants and declining profitability⁷. Moreover, even though a 50% decrease in the cost of solar power in two years is a major stimulus for adoption of renewable energy, by targeting the concurrent development of 90+ GW of coal-based power capacity under the 2018 National Electricity Plan⁸ (NEP), India not only risks increasing its emissions but also turning the project into a stranded asset.

Beyond the broad NDC targets, Indian policymakers have started detailed consultations with companies to prepare them for broader action.

Considering this focus on stranded assets and ESG emerging as an investment opportunity with over a third of global assets being built around ESG themes, the Securities and Exchange Board of India (SEBI) hosted a roundtable in January 2021 to deliberate upon business preparedness to align with the sustainability-focused requirements it proposed⁹. This comes on back of the 77-page consultation paper issued by the SEBI in April 2020 on business responsibility and sustainability reporting¹⁰.

The Ministry of Environment, Forests and Climate Change (MoEFCC) also held a similar India CEO Forum on climate change, in November 2020, to “forge long standing and sustainable partnership between the Government and private sector”. During the Forum, a Declaration of Private Sector on Climate Change endorsed by 24 industry leaders and MoEFCC was released¹¹. The industries included the likes of ITC, Reliance Industries, TATA, Piramal, Dalmia, Mahindra, ACC< Ambuja, JSW Steel, Renew, Vedanta, Dr Reddy's and SUN Pharma¹².

Around the same time, CDP also worked with its industry colleagues and partners (TERI, We Mean Business, World Business Council for Sustainable Development, World Resources Institute and Climate Group) to develop a ‘Call to Action’ on eight business priorities for a green recovery. This was signed by 24 business leaders and emphasised the need to:

- ▼ Invest in social infrastructure, ensuring greater access and resilience
- ▼ Accelerate power sector transition and clean mobility adoption
- ▼ Deploy solutions for growing & managing food to support growing needs
- ▼ Collaborate and invest to achieve Land Degradation Neutrality
- ▼ Pioneer green manufacturing and industrialisation
- ▼ Transform to green building as the new normal across geographies & demographics

- ▼ Invest in research for new clean energy sources to strengthen India's energy outlook
- ▼ Provide access to green finance to support emission saving measures across sectors.

To further strengthen corporate action and adopt a more structured policy approach, the Indian Government recently formed an Apex committee for the Implementation of Paris Agreement¹³ (AIPA). This committee will oversee India's NDCs and monitor the contribution made by the private sector as well as multi- and bi-lateral agencies in the field of climate change, under the chairmanship of the secretary, MoEFCC. India is also a part of the International Platform on Sustainable Finance¹⁴ launched by the European Commission in October 2019 to develop globally acceptable finance standards that can aid the mobilisation of private funds towards environmentally sustainable investments.

Most importantly, the recent initiative, “**One Solar One World and One Grid**”¹⁵ (OSOWOG) launched by the International Solar Alliance (ISA) is an endeavour to connect 140 countries through a single grid that will be used for the transfer of solar power.

▼▼ We have reduced our emission intensity by 21 per cent over 2005 levels. Our solar capacity has grown from 2.63GW in 2014 to 36 GW in 2020. Our renewable energy capacity is the fourth largest in the world. It will reach 175GW before 2022. ▼▼

- Narendra Modi, Prime Minister of India at Climate Ambition Summit¹⁶.

In response to the COVID-19 economic crisis, India also announced a large stimulus package, “**Atmanirbhar**” (self-reliant), amounting to US\$260 billion¹⁷ (10% of its GDP in 2019-20). Considered a step towards greater self-reliance, the package intends to promote sustainable development and enhance job creation through investments in local manufacturing, energy efficiency, and renewable energy generation¹⁸. For instance, while the stimulus allocates ₹30,000 crores (US\$4 billion) for agriculture and rural development, these funds can be utilised for the installation of solar pumps and solar irrigation. However, to achieve an ambitious target of 450-GW installation capacity by 2030, it will need to channel a massive investment of US\$700 billion. This ambition can be realised only through funding support by international agencies, including development finance institutions and other private players. The domestic public and private institutions alone will not suffice. Mark Carney, the Governor of the Bank of England, suggests that this is not just a financing challenge but a multi-

7 <https://climateactiontracker.org/countries/india/>

8 <https://www.carbonbrief.org/the-carbon-brief-profile-india>

9 <https://www.moneycontrol.com/news/business/markets/format-for-business-responsibility-sustainability-reporting-to-bring-in-more-transparency-ajay-tyagi-6353091.html>

10 https://www.sebi.gov.in/reports-and-statistics/reports/aug-2020/consultation-paper-on-the-format-for-business-responsibility-and-sustainability-reporting_47345.html

11 <https://pib.gov.in/PressReleasePage.aspx?PRID=1670351>

12 <https://static.pib.gov.in/WriteReadData/userfiles/Final%20Declaration.pdf>

13 <https://pib.gov.in/PressReleasePage.aspx?PRID=1677630>

14 https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/international-platform-sustainable-finance_en

15 https://www.business-standard.com/article/current-affairs/one-sun-one-world-one-grid-all-you-need-to-know-about-solar-strategy-120081500417_1.html

16 <https://www.news18.com/news/india/modi-says-india-on-track-to-achieve-paris-climate-agreement-targets-3172190.html>

17 <https://www.nrdc.org/sites/default/files/road-from-paris-202009.pdf>

18 https://niti.gov.in/sites/default/files/2020-06/India_Green_Stimulus_Report_NITI_VF_June_29.pdf

trillion business opportunity. Incidentally, an IFC report released in 2018, highlights that the potential of climate finance in India is US\$3.1 trillion.

The Indian railway has also reiterated its commitment to achieving complete electrification of its network by 2023, targeting an ambitious net zero emissions by 2030¹⁹.

While governments have poured close to US\$13 tn of public stimulus into economies so far, the recovery packages are expected to have a net positive environmental impact in only seven of the 25 major world economies analysed, stated the updated Greenness of Stimulus Index (GSI) report from Vivid Economics and Finance for Biodiversity²⁰. "A nature-based stimulus investment scenario outperforms a business-as-usual stimulus investment scenario globally, by delivering more jobs, more economic activity, more carbon sequestration, better nature outcomes and stronger resilience to extreme weather events including flood control," says report co-author Jeffrey Beyer from Vivid Economics²¹.

At the recently held Climate Ambition Summit on December 12, 2020, UN Chief Antonio Guterres called on world leaders to declare a State of Climate Emergency in their countries until carbon neutrality is achieved²². To recover better from the COVID19 pandemic, he urged countries to adhere to a green and resilient pathway by calling for investments in green jobs, refusing bail-outs to polluting industries, ending fossil-fuel subsidies, and factoring climate risks into all financial and policy decisions.

In this light, this year has witnessed unprecedented calls for commitment, action and investments not only from states but also from businesses and civil society groups. The global momentum on climate action has been building with several European countries committing to net-zero emissions. According to Blackrock²³, 88% of sustainable funds outperformed their non-sustainable counterparts from January–April 2020, highlighting the fact that ESG/sustainable investing can future-proof investments while shaping a better future.

Interestingly, this year, CDP also witnessed record-breaking disclosures — 10,000+ companies, cities, states, and regions disclosed through its platform. Of these, 9,600+ companies, with a combined worth of over 50% in global market capitalisation disclosed through CDP, resulting in a 70% rise in corporate disclosures compared to 2015, the year the Paris agreement was signed²⁴. CDP also launched its temperature ratings²⁵ in collaboration with Europe's largest asset manager, Amundi, enabling investors to access a temperature pathway for over 2,850 global companies based on company emission reduction targets.

In India, CDP witnessed a nearly 17% increase in corporate disclosure compared to 2019, with 220 Indian companies disclosing to investors and customers. Climate change disclosure to investors recorded a rise of 14%. Remarkably, water security disclosure to investors also witnessed a significant increase of 87%. Moreover, for the first time, a company responded to the forests request from investors through CDP India.

With an ever-increasing number of companies choosing to disclose through CDP, it is imperative to leverage the opportunity provided by the pandemic to transition from a grey to a green economy and join a growing league of climate leaders like Hindustan Zinc Limited, IndusInd Bank, Mahindra & Mahindra and Tech Mahindra that deserve a special mention for being among the first Indian companies to make it to the prestigious CDP A List.

Indian companies in highlight this year

Hindustan Zinc	A
IndusInd Bank	A
Mahindra & Mahindra	A
Tech Mahindra	A
Godrej Consumer Products Limited	A-
Infosys Ltd.	A-
JSW Steel Ltd.	A-
Marico	A-
Mindtree Ltd.	A-
Tata Communications	A-
Tata Consultancy Services	A-
Tata Consumer Products	A-
Tata Motors	A-
Tata Steel	A-
Wipro	A-
YES BANK Limited	A-

Today, Indian businesses realise that the risks posed by climate change are here to stay. Therefore, business leaders like Reliance Industries (a large conglomerate with businesses across oil & gas, telecom and retail amongst others) and JSW Energy (a thermal power company) have taken voluntary commitments to go net-zero (by 2035) and carbon-neutral (by 2050), respectively.

¹⁹ <https://pib.gov.in/PressReleasePage.aspx?PRID=1638269>

²⁰ <https://environment-analyst.com/global/106352/recovery-stimulus-packages-are-causing-harm-to-nature>

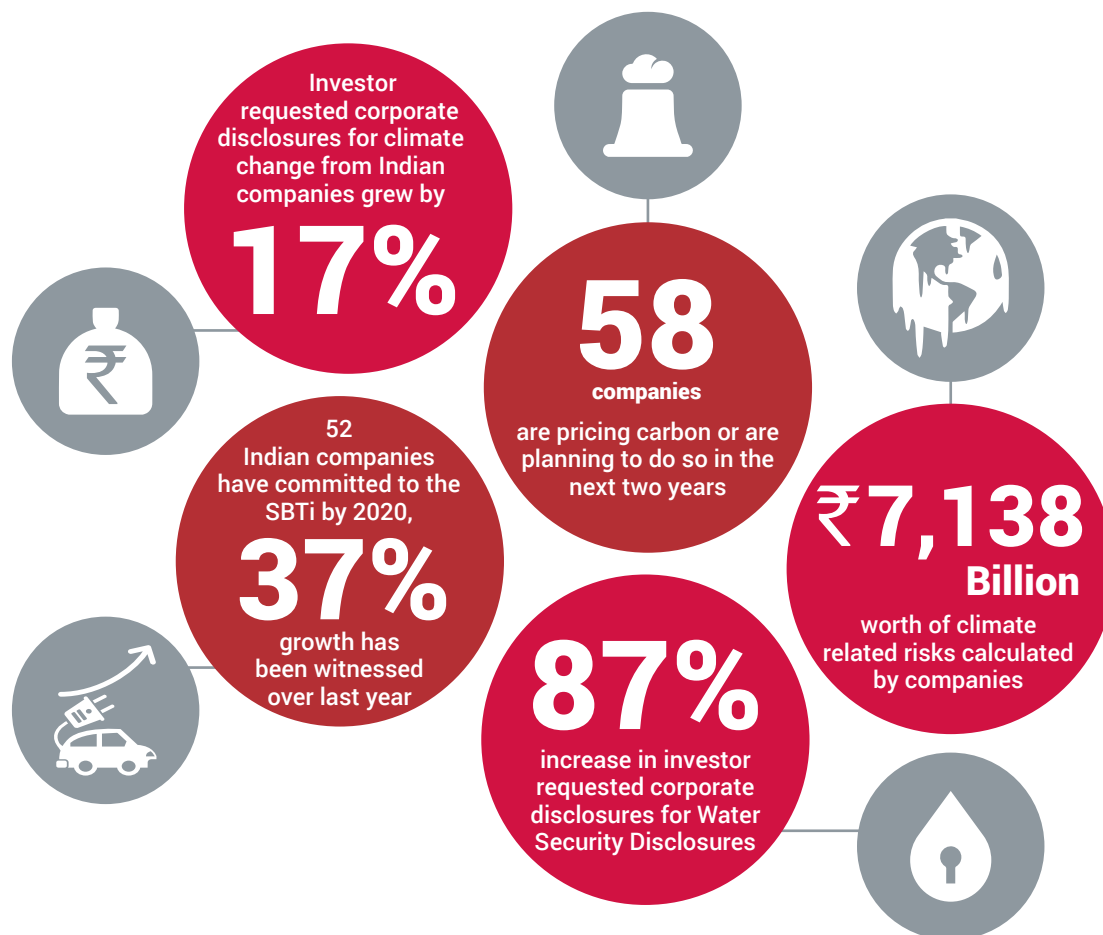
²¹ <https://environment-analyst.com/global/106352/recovery-stimulus-packages-are-causing-harm-to-nature>

²² <https://www.indiatoday.in/world/story/declare-climate-emergency-un-chief-guterres-urges-leaders-of-every-country-1749078-2020-12-13>

²³ <https://www.blackrock.com/corporate/literature/investor-education/sustainable-investing-resilience.pdf>

²⁴ <https://www.cdp.net/en/articles/climate/2020-lessons-from-an-extraordinary-year>

²⁵ <https://www.cdp.net/en/investor/temperature-ratings>



Further, the attempt to integrate climate action into business is also reflected in the disclosure responses received by CDP in the 2020 cycle.

The business community is uniquely positioned to innovate and execute solutions with greater rigour and efficiency by integrating sustainability in the core business decision making, with or without changes to the regulatory landscape. Corporates can drive the desired change towards clean energy transitions by joining initiatives such as environmental disclosure, the Science-Based Targets initiative, RE100 and by incorporating an internal carbon price to deliver faster emission cuts in key areas. However, corporations need to be supported by governments through clearer, long-term policies on energy and climate to instil the confidence needed to invest in technologies and innovation towards a zero-carbon future²⁶.

India is endowed with high social and environmental diversity and cannot expect to formulate a one-size-fits-all solution for its climate concerns. What it requires is the coming together of all stakeholders to showcase the power of the collective, especially its 1.3 billion people, without whom no solution would be truly impactful.

As disclosure and transparency are vital in 'building back better', CDP is poised to play a pivotal role as a global environmental disclosure platform, helping companies, cities, states, and regions measure and manage their environmental risks through disclosure. The COP26 in Glasgow will be an important milestone in this direction and will enable countries to assess progress on their Paris Agreement goals and commit to more ambitious targets.

As we work towards a low carbon future, we must also pledge to build a more equitable world where vulnerable sections are no longer left to bear the brunt of tragedies triggered by climate change.

²⁶ <https://www.wemeeanbusinesscoalition.org/blog/paris-agreement-the-power-of-ingenuity-with-collaboration-is-insurmountable/>

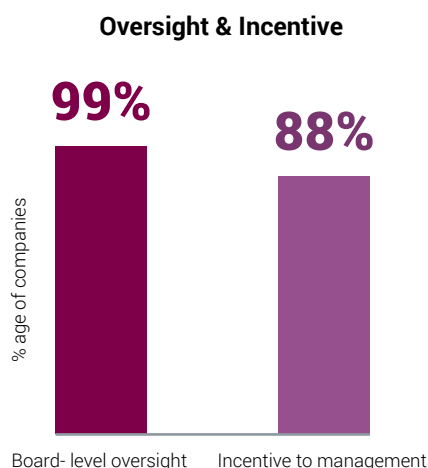
SUSTAINABILITY – HEART OF GOOD GOVERNANCE

Businesses, that currently account for 76% of the total energy consumption, are vital for the country to tread the path of sustainable development. As engines that will drive economic growth in the aftermath of the pandemic, corporates present an immense opportunity for India to meet its climate commitments (NDCs) under the Paris Agreement through large-scale emissions reduction²⁹.

Business leaders are almost unanimously deliberating on climate issues, and an overwhelming majority of companies now incentivise their managements to undertake climate action. About three-fourths of these incentives are in the form of a financial compensation. **GAIL** has a portal where staff members can give their suggestions on how to manage climate risks and employees whose suggestions are accepted are given a financial reward of ₹1,00,000. Among the various types of non-monetary rewards, **BPCL** recognises employees for undertaking initiatives in Health, Safety, Security and Environment (HSSE) through an annual performance award. **Mahindra & Mahindra** provide acknowledgement certificates to employees for energy efficiency projects as well as to those contributing to the annual sustainability reporting.

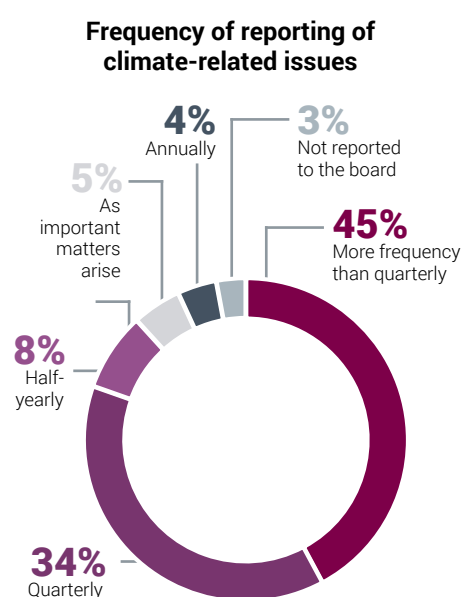
every quarter highlighting the growing importance of environmental sustainability as a core business value.

Sustainability is deeply entrenched in the financial structure of companies today, influencing access to capital, capital expenditure, direct and indirect costs, and capital allocation. Hence it comes as no surprise that 66 out of 67 companies stated that climate-related risks and opportunities have had an impact on their organisation's strategy for financial planning. Of these 66 companies, 46 have also developed a low-carbon transition plan to minimise the losses to their bottom lines.



The most commonly appointed positions that companies have chosen to place the responsibility of overseeing climate-related issues are board-level committee members, the CEO, the director, the board chair and the CSO. These individuals are also at the top of the corporate ladder which denotes the growing importance of climate change, not just as a sustainability issue but as a broader global risk that threatens to undermine financial bottom lines, erode shareholder value and tarnish brands.

More than 75% companies provide an update to their respective boards on climate change-related issues at least



27 <http://cbs.teriin.org/indiaghg.php#:~:text=The%20total%20inventory%20managed%20by,percent%20of%20India's%20total%20emissions.>

Climate-related scenario analysis allows businesses to not only project future operational emissions but also mobilise necessary resources to offset the carbon footprint in their sustainability measurement approach. It is especially important that the application of scenario analysis incorporates dynamic and unstable conditions under which companies are operating such as the COVID-19 pandemic that has resulted in mass layoffs, economic recession, and lockdowns across the world. This would enable corporations to explore a broader range of uncertainties and be more resilient to external drivers of change²⁸.

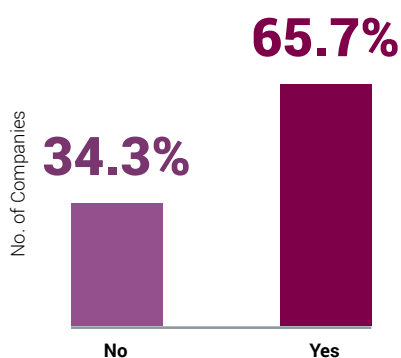
The rigorous computational analysis would provide direction to enterprises on how to set emission reduction targets in line with the 2°C scenario. About 63% of the reporting companies use climate analysis tools such as models or scenarios enumerated

under the Nationally Determined Contributions and International Energy Agency's 2 Degree Scenario (2DS) to inform their business strategy.

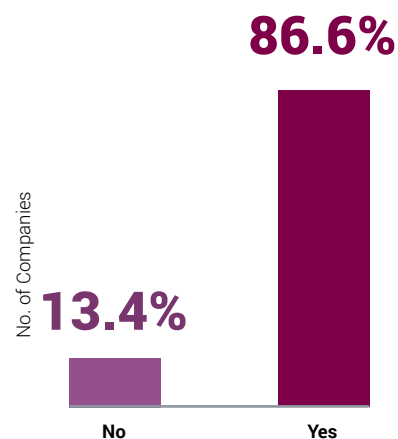
Climate-based risks and opportunities have also influenced the strategy of companies in the sphere of investment in R&D, Products & Services, Operations and Supply Chain/Value chain. Among these areas, 87% companies claimed that Operations were affected and 84% reported changes in planning for Products and Services.



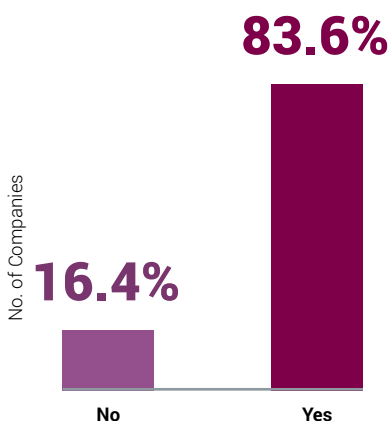
Investment in R&D



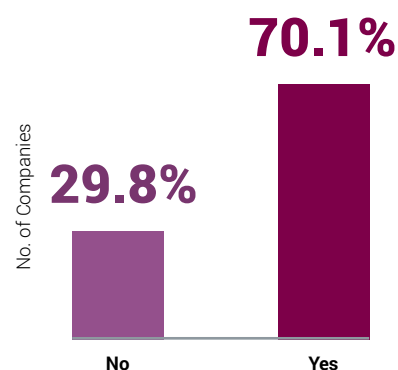
Operations



Product & Services



Supply chain/ Value chain



CLIMATE-RELATED RISKS & OPPORTUNITIES

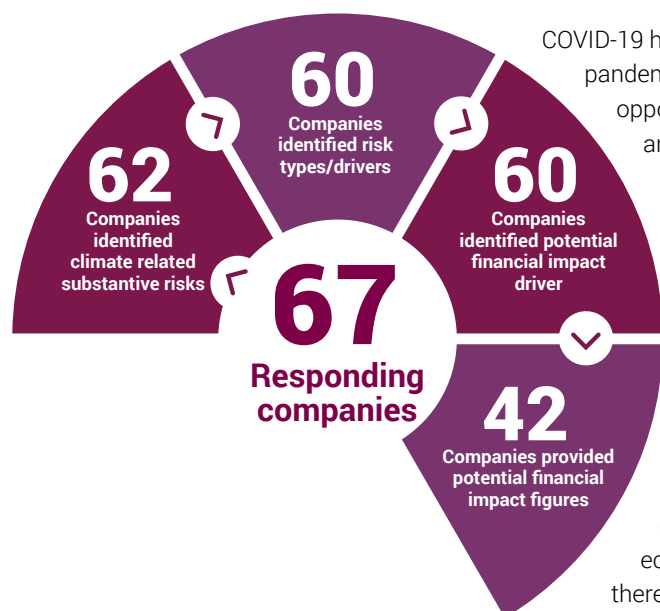
More often than not, the financial impacts of climate-related issues are not quantified and identifying them in the first place could be challenging. These issues necessitate actions. Increasingly, investors, lenders, and other financial regulators are becoming more focused on ensuring that the private sector is ready to address climate risks and grab opportunities brought by changing climate.

Climate change has already shown substantial impacts on businesses all around the world and this is expected to continue. As per a 2019 report²⁹, the total direct economic losses incurred due to climate-related natural disasters in 2019 were estimated at US\$232 billion. In India, the monsoon floods in June-October 2019 caused an economic loss of US\$10 billion and claimed 1,750 lives. Additionally, the Bank of England has estimated asset losses worth US\$20 trillion due to climate change if no action is taken now.³⁰

consciousness about the risks to the natural system from anthropogenic activities.³¹

CDP recently released a report³² on the analysis of CA100+ companies for CDP Investor Signatories. Up to 118 of 122 CA100+³³ companies report being exposed to substantive climate-related risks and opportunities. 93% companies identified climate-related risks and 91% identified climate-related opportunities as having the potential to have a substantive financial or strategic impact on their businesses.

As per CDP India's 2020 data, companies have a varied definition of what short, medium, and long-term means for them -- a rough average across the sample would be three years for short term, five years for medium term and 15-20 years for the long term, although the latter also ranges up to 100 years. These time frames are important in planning risk management processes -- contextualisation of risks in terms of potential market changes and evolving technological scenarios around risk management at enterprise level.



COVID-19 has taught the world how the pandemic can actually be used as an opportunity to better understand and mitigate climate-related risks. Investors are now, more than ever, more focussed on risk exposure. Post-COVID-19, civil society groups, governments, and business are all have aligned in trying to reduce the risks to our economy and world, going forward. As per an OECD report, despite widespread socio-economic suffering there is an increase in public

²⁹ http://thoughtleadership.aon.com/Documents/20200122-if-natcat2020.pdf?utm_source=ceros&utm_medium=storypage&utm_campaign=natcat20

³⁰ <https://www.bankofengland.co.uk/-/media/boe/files/speech/2019/avoiding-the-storm-climate-change-and-the-financial-system-speech-by-sarah-breedon.pdf>

³¹ https://read.oecd-ilibrary.org/view/?ref=136_136201-ctwt8p7qs5&title=Making-the-Green-Recovery-Work-for-Jobs-Income-and-Growth_

³² https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/005/312/original/Analysis_of_CA100_Data_for_CDP_Investor_Signatories_v5.pdf?1596046258

³³ Climate Action 100+ is an investor initiative to ensure the world's largest corporate GHG emitters take necessary action on climate change. The companies include 100 'systemically important emitters', accounting for 2/3rd of annual global industrial emissions, alongside more than 60 others with significant opportunity to drive the clean energy transition. Read more at <http://www.climateaction100.org/>

THE RISKS OF CLIMATE CHANGE

In terms of risk types, current regulation was deemed to be most relevant and always included in 97% of the organisations' climate-related risk assessments. This was followed by emerging regulation and technology. Interestingly, findings from responses submitted by global companies corroborate this trend analysis, as almost all CA100+ respondents reported policy and legal risks as potential drivers for substantive impact when it comes to transition risk.³⁴ With regular compliance checks, increased stakeholder concern and sustainably evolving consumer demands, climate-related risk assessment procedures can help companies become better equipped to handle longer-term uncertainties and liabilities.

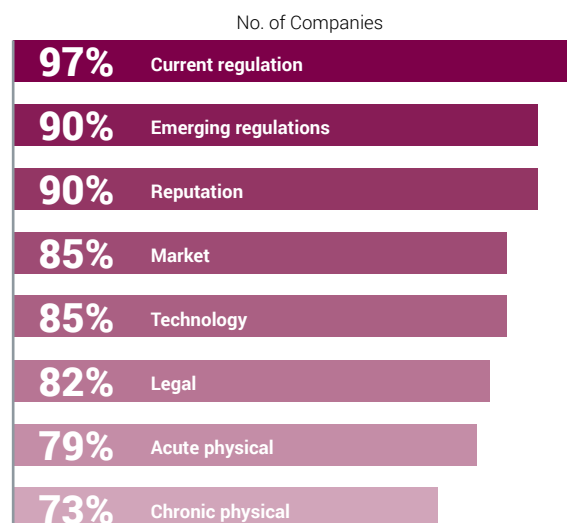
The number of companies that identified inherent climate-related risks with potential substantive financial or strategic impact on businesses rose to 94% from 88% in 2019. Up to 63% of reporting companies were able to get to the last mile of providing a financial impact figure to the risks identified. Disclosing Indian companies put the total inherent financial impact of climate risks at ₹7,138 billion with an average risk per company being ₹92 billion.

Companies have also identified climate-related risks across their value chain, with direct operations being the most severely affected and exposed most to acute physical risks, followed by emerging regulation, current regulations and chronic physical risks. Companies' 'downstream' value chain is affected the most by market risks, followed by acute physical risks. Downstream value chain refers to the third parties benefiting from the outputs, products, and services of business activities. This may be a company's customers and clients, or the organisations and projects the business invests in. This could possibly mean that changing customer behaviour could gravely affect a business operation if there is a shift in the demand for a comparatively low-carbon intensive product, as well as greater demand for product efficiency regulations and standards, providing clear evidence that there is a continuous shift towards sustainable products.

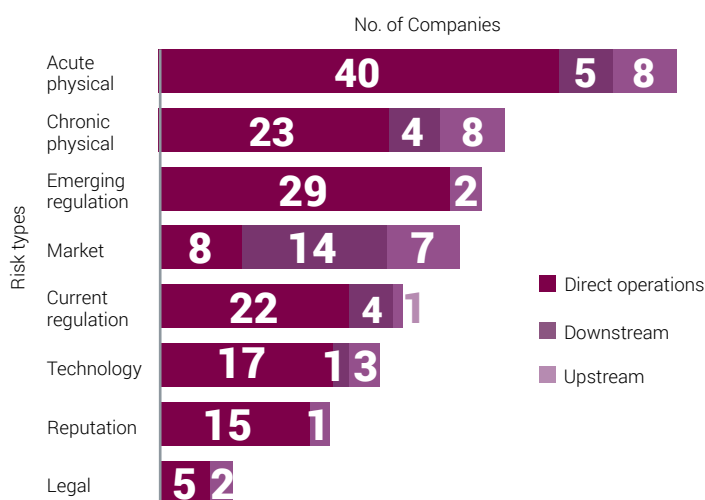
CLIMATE RISKS, AN OPPORTUNITY TO RESTRATEGISE

Up to 94% of reporting companies have identified climate-related opportunities as having the potential to make a substantive financial or strategic impact on businesses. And 63% have provided a potential financial impact figure to the opportunities related to climate change. Disclosing companies put the cost of climate-related opportunities at a total of ₹2,787 billion. The figure is a testament to the evolution of the climate change mitigation program and how organisations see this.

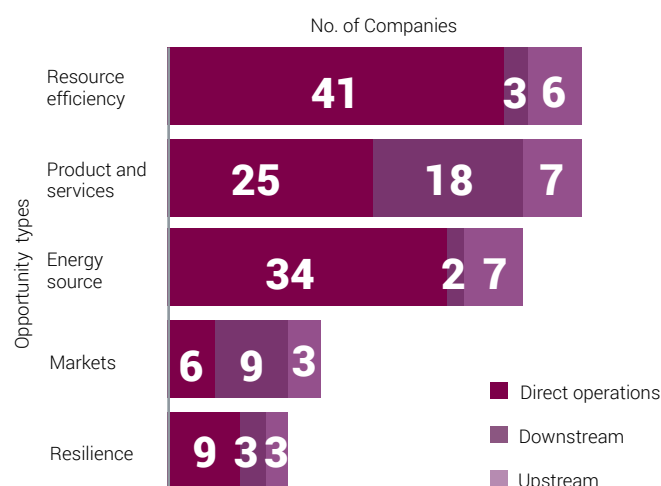
Risks relevant to Indian companies



Risk occurring in value chain



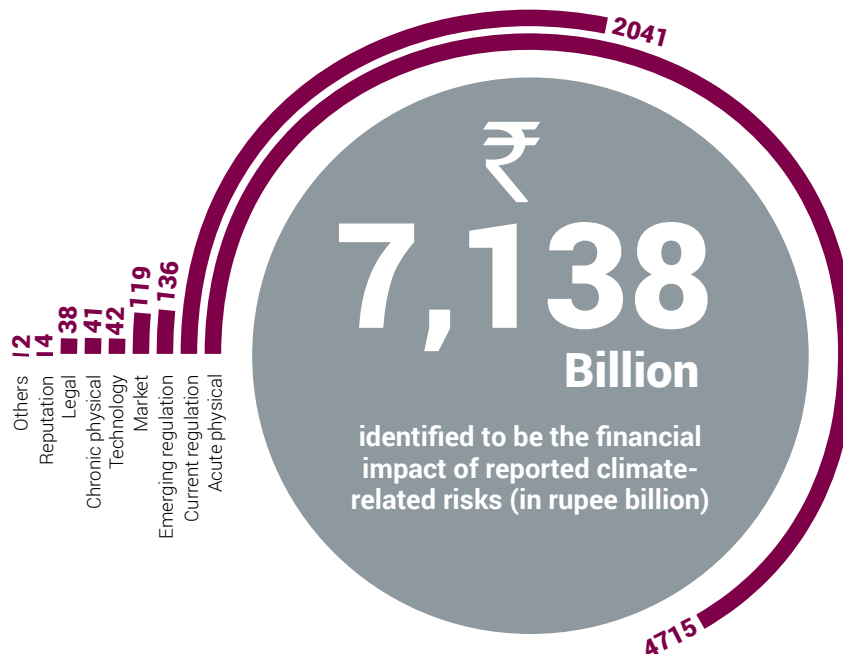
Opportunity identified in value chain



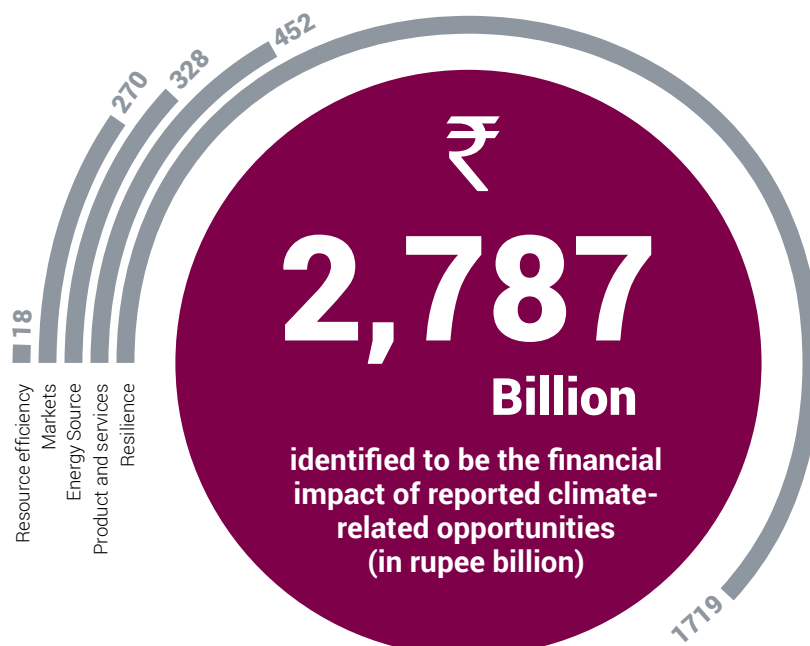
34 https://6fefcb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/005/312/original/Analysis_of_CA100_Data_for_CDP_Investor_Signatories_v5.pdf?1596046258



Similarly, most companies saw resource efficiency as a major climate-related opportunity, followed by energy source and products and services in their 'direct operations'. The main drivers behind these opportunities were use of more efficient production and distribution processes, use of lower-emission sources of energy and development and/or expansion of low-emission goods and services. In the 'downstream' value chain, products and services was majorly witnessed as an opportunity as there is growing consumer awareness and concern around sustainability related issues. As a result, companies are constantly diversifying their portfolios to address these consumer needs.



Financial impact of reported climate-related risks (in rupees billion)



Financial impact of reported climate-related opportunities (in rupees billion)

Tech Mahindra: Tapping into climate-related opportunities

Tech Mahindra's approach towards climate change mitigation strategies is a testament to the efficacy of tapping into and realising climate-related opportunities. The company has adopted Science-Based Targets to reduce its emissions and is a signatory to Business Ambition of 1.5 degree Celsius. Tech Mahindra is committed to responsibly managing its operations through continuous improvement in sustainability practices across its value chain. The company focuses on carbon emission reductions, energy consumption reduction, self-generation of energy from renewable energy sources, and encouragement for green projects through Power Purchase Agreements. The company has taken a target to increase Renewable Energy (RE) to 50% by 2025. Their sustainability report is aligned with CDSB & Task Force on Climate-related Financial Disclosures (TCFD) frameworks.

A constant focus on green energy and sustainable operations has provided a significant saving of US\$2.7 million brought about by increasing renewable energy capacity to 13.83MW leading to a saving of 28 million units of electricity, adopting energy efficient practices across their facilities.

Tech Mahindra has harnessed the power of disruptive next-generation technologies such as Artificial Intelligence (AI), analytics and blockchain to create solutions that ensure both its own and its customers' carbon footprint reduction. The company has contextualised opportunities for its customers as well by creating smart city offerings such as SMART Grid, Micro-Grid-As-A-Service, Intelligent Electric Vehicle Charging System (IEVCS), smart energy management, smart traffic management, smart lightening management, smart waste management systems, and command & control centres. These smart city offerings will help reduce carbon footprints across multiple smart cities globally, thereby reducing carbon emissions and contributing to green and sustainable solutions. It is claimed that the market size for this is expected to reach US\$463.9 billion by 2027.

At present, the risks identified by the responding companies significantly outweigh the opportunities. Opportunities are slow to emerge and companies need to focus on the use of lower-emission sources of energy, development and/or expansion of low-emissions goods and services, development of climate adaptation, resilience and insurance risk solutions, and use of more efficient production and distribution processes.

In 2015, at the request of the G20 Finance Ministers and Central Bank Governors, the Financial Stability Board (FSB) and its chair Mark Carney established the industry-led TCFD. This was set up in response to increasing demands from investors, lenders, insurers, regulators, policy makers, and other stakeholders in the financial markets for decision-useful, climate-related information. CDP has aligned its information requests with the TCFD, alongside introducing a sectoral focus and adopting a forward-looking approach to climate-risk disclosure. We are already going in the direction of mandatory disclosure of climate risks, how they are present in a company's activities, how they manage it and how resilient they are to it. The UK will be the first country in the world to make TCFD-aligned disclosures fully mandatory across the economy by 2025, going beyond the 'comply or explain approach'.³⁵

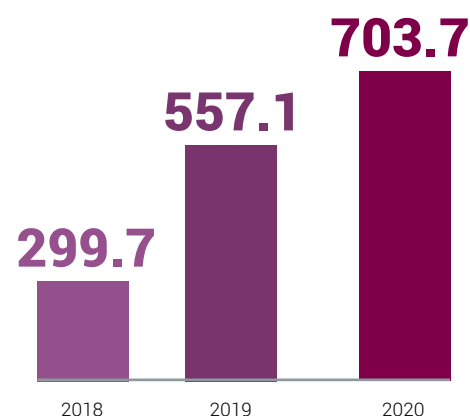
³⁵ <https://www.gov.uk/government/news/chancellor-sets-out-ambition-for-future-of-uk-financial-services>

EMISSIONS TRENDS AND VERIFICATION

India, under its NDCs, pledged to reduce its emissions intensity by 33-35% by 2030 compared to the 2005 levels. The Climate Action Tracker³⁸ rates India's NDC target as "2009 Copenhagen 2°C goal compatible" indicating that its commitment is a "fair share" of the global effort.

Under current policies, India's projected emissions for 2030 can achieve a rating of "1.5°C Paris Agreement compatible" if domestic emissions peak and start reducing with international support³⁶. This shows that India has the potential to become a world leader with enhanced 1.5-degree compatible targets through a swift transition from coal to renewable energy. Although India was already on track to meet its NDCs pre-COVID19, it has seen an even more significant drop in emissions since the onset of the pandemic. During the peak of lockdown, India's energy demand reduced by almost 30% in April 2020³⁷, i.e., each additional week of lockdown, the annual energy demand fell by 0.6%³⁸. This is mostly due to the significant reduction in energy consumption and power generation via fossil fuel. However, the impact of the pandemic on emissions is expected to be temporary and emissions are likely to rebound in 2021³⁹ as per estimations.

Scope 1 and Scope 2 Emissions reported via CDP over the years (In Million tCO₂e)



major challenge is how to translate global temperature goals into individual actions. However, various strategies can be adopted to meet the long-term goals.

The Science-Based Targets Initiative's (SBTi) Sectoral Decarbonisation Approach (SDA) allocates the well below 2°C carbon budget to different sectors taking into account inherent differences among sectors, such as how fast each sector can grow relative to economic and population growth along with its mitigation potential⁴¹. According to the Intergovernmental Panel on Climate Change (IPCC), the highest global carbon budget allocation (for the period of 2011-2050) is for the power sector (25%) followed by agriculture (24%) and industry [including steel, aluminium, chemical and paper] (14%)⁴².

13%
increase in number of organisations reporting

27%
increase in emissions reporting (Scope 1+Scope 2)

90%
increase in scope 3 emissions reporting

In comparison to the NDCs which set an overall emissions target, sectoral indicators can be more reliable in making informed decisions on mapping emissions reduction, targeting Paris-compatible goals⁴⁰. The

³⁶ Climate Action Tracker- Fair Share

³⁷ Carbon Brief: Analysis: India's CO₂ emissions fall for first time in four decades amid coronavirus

³⁸ <https://www.iea.org/reports/india-2020>

³⁹ Carbon Brief: Global Carbon Project: Coronavirus causes 'record fall' in fossil-fuel emissions in 2020, Dec 2020.

⁴⁰ <https://www.oecd-ilibrary.org/docserver/9789264273528-4-en.pdf?expires=1607881602&id=id&accname=guest&checksum=891034D10FA31A953F7924772F23966D>

⁴¹ <https://sciencebasedtargets.org/resources/legacy/2015/05/Sectoral-Decarbonization-Approach-Report.pdf>

⁴² IPCC: Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development

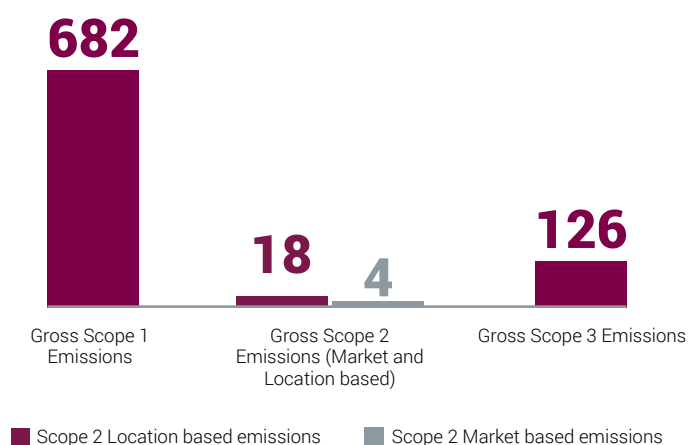
In order to allocate sector-specific questions to companies, CDP has developed an Activity Classification System (ACS)⁴³. It is a framework used to classify companies under the most relevant sectors. It focuses on the diverse activities from which companies derive revenue, associating them with the impacts to their business from climate change, water security and deforestation. This approach allows a better understanding of company actions based on their environmental risk, opportunity and impact. CDP's Climate Change questionnaire requests companies to disclose their direct and indirect emissions under different emissions categories. Although India saw an overall decrease in emission in 2020, there was an increase in CDP reporting companies and hence an overall increase in emissions reporting. For the year

2020, the companies reported 703.74 MtCO₂e of total [Scope 1+Scope 2 (location-based)] emissions which is a 27% increase in reported emissions from 2019. This is mostly because of the significant increase in emissions reporting from several sectors – electric utilities, cement, and other heavy sectors.

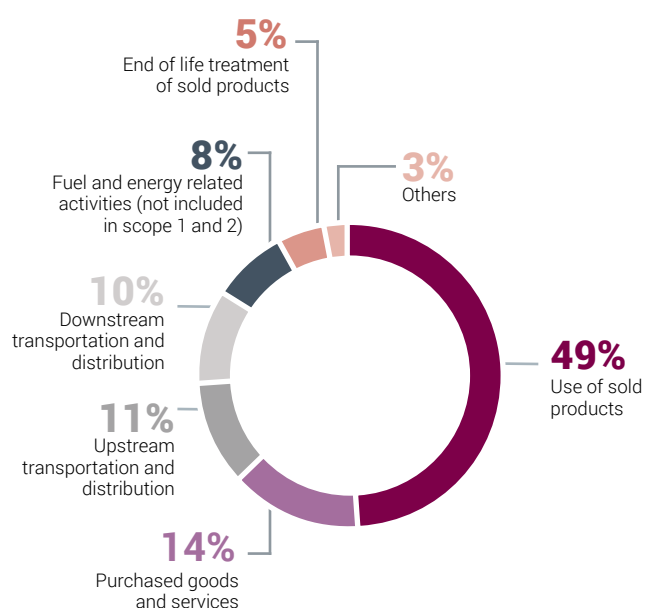
Only four companies chose a Scope 2 market-based approach, and 43 companies selected a scope 2 location-based approach⁴⁴. The total scope 2 emissions for location-based approach amounted to 18.1 MtCO₂e and market-based approach amounted to 4.14 MtCO₂e. It is clear from this breakdown that a range of sectors and processes contribute to global emissions. Focusing on any single sector alone would be insufficient. However, as can be seen in the

In 2020, companies have reported
704 MtCO₂e of total (Scope 1+2 [location-based]) emissions.

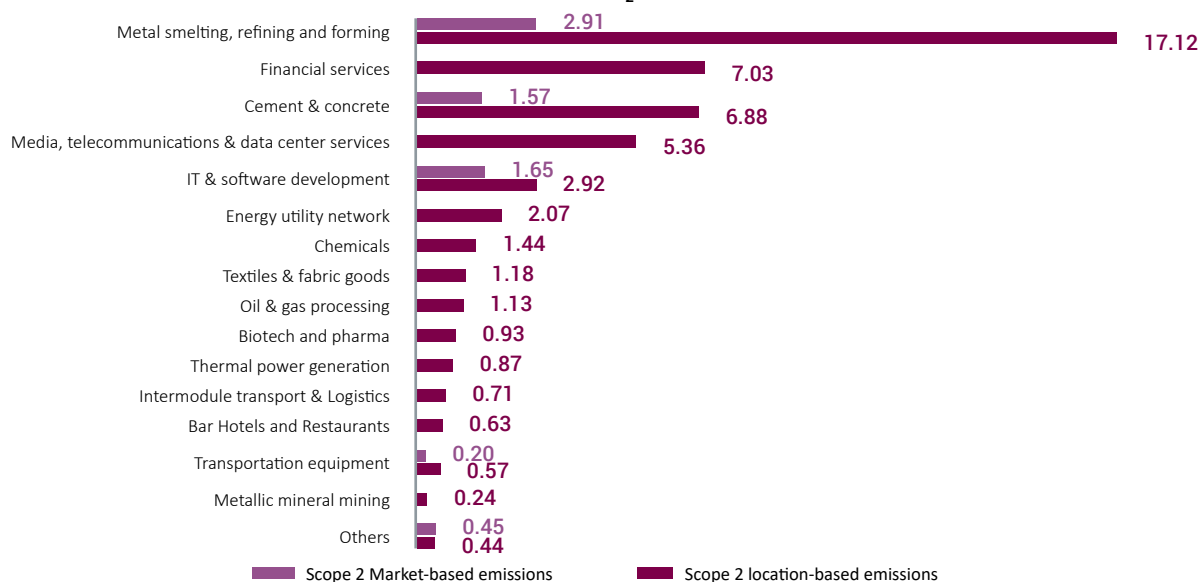
Gross Emissions Data 2020 (in MtCO₂e)



Emissions reported in Scope 3 Categories



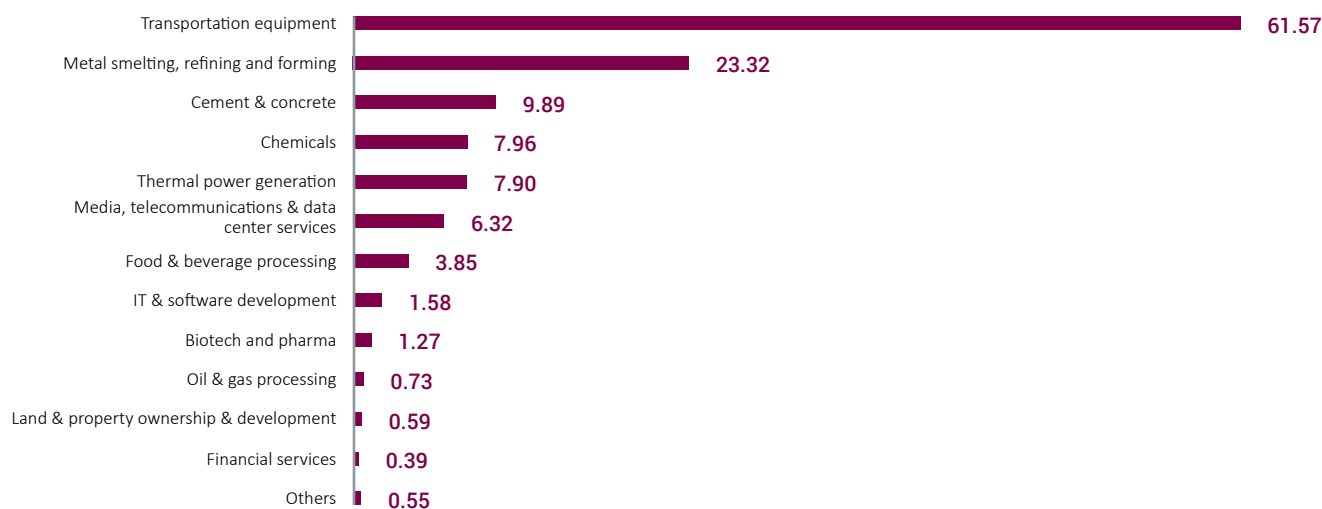
Scope 2 market-based and location-based emissions reported as per CDP's Primary Activity Group classification (in MtCO₂e)



⁴³ https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/guidance_docs/pdfs/000/001/540/original/CDP-ACS-full-list-of-classifications.pdf?1520244912

⁴⁴ The location-based method reveals what the company is physically putting into the air, and the market-based method shows emissions the company is responsible for through its purchasing decisions

Scope 3 emissions reported as per CDP's Primary Activity Group classification (in MtCO₂e)



graph for Gross Scope 2 emissions, metal smelting, refining and forming sectors contribute to the maximum emissions (17.12 MtCO₂e) followed by financial services and cement and concrete sectors.

Companies reported 125.9 MtCO₂e of Scope 3 emissions in 2020, a 90% increase from 2019 figures due to higher disclosure as well as more companies disclosing their Scope 3 GHG inventories. Almost half of the Scope 3 emissions were reported in the following categories: use of sold products (49%), followed by purchased goods and services (14%), upstream transportation and distribution (11%) and downstream transportation and distribution (10%).

The ACS sectoral analysis shows that the transportation equipment activity group has the maximum reported scope 3 emissions at 61.5 MtCO₂e, followed by metal smelting, refining and forming activity group at 23.32 MtCO₂e, and cement and concrete activity group at 9.89 MtCO₂e.

Of the responding companies, 33 have reported an approximately 11% of reduction in their gross global emissions (Scope 1 and 2 combined) from 2019, and 26 companies reported an approximate 57% increase in their gross global emissions from 2019. Responding companies have identified change in boundary⁴⁵ as a major reason for a 62% increase in emissions, from 2019, followed by acquisitions which led to a 30% increase. Amongst all sectors, the electric utilities sector accounts for 83% of total increased emission values, and up to 73% of these were due to change in boundary.

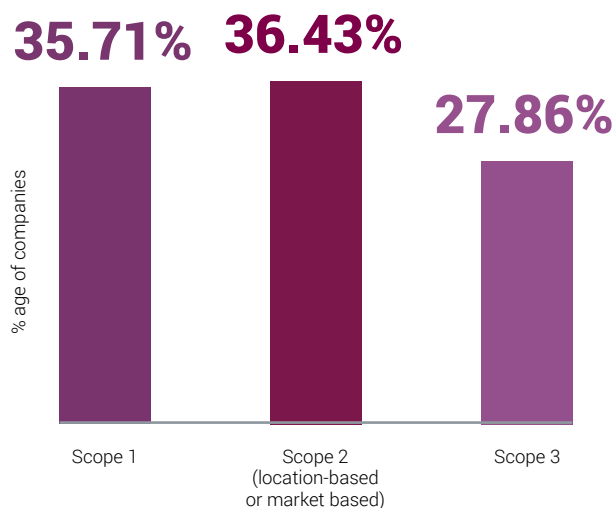
Amongst all sectors, reduction in emissions values since 2019 were mostly caused by emissions reduction initiatives (43%), followed by change in output (30%) and change in emission estimation methodology (23%).

Amongst all sectors, steel saw the highest reduction (around 48%) in emission values, and approximately half of this was achieved only from change in emission estimation methodology through recalibrating the GHG emissions for the reporting period. This is followed by cement, which reported a 29% reduction in emission values from implementing emissions reduction initiatives. It is also noted that more than 30% of responding companies have adopted a change in renewable energy consumption, but this accounts for only 3.5% of total reduction in emission values.

62% of increased emissions in 2020 attributed to 'Change in boundary'

32% attributed to acquisitions

Third-party verification or assurance in place for Scope 1, 2 & 3 emissions



⁴⁵ This refers to changes in the boundary used for inventory calculation, i.e. changing from financial control to operational control. This option could also apply if organisation has incorporated facilities into its inventory that were excluded in previous years.

Third-party verification is one of the significant components of emission reporting. An independent verification of self-reported data provides credibility and assurance. It helps companies improve their internal processes, identify risks and opportunities, increase the reliability of their data, reduce operational costs and building a strong reputation⁴⁶. When an organisation monitors and verifies its emissions it can accurately identify and understand the true proportions of emissions from its sources and this can help it realise the major opportunities for emission reduction along with cost benefits.

In 2020, 50 companies reported third-party verification or assurance for Scope 1 emissions, 51 companies for Scope 2 emissions and 39 companies for Scope 3 emissions. Compared to 2019, there is an 18% increase in companies that have verified Scope 3 GHG emissions. This indicates that Indian companies are becoming increasingly aware of their emission management/accounting. Amongst all sectoral companies which opt for third-party verification of their reported emissions, around 25% are from IT & software development and financial services. Cement and concrete sectors rank the lowest on the list. CDP encourages companies to have verified data submitted.

Building a stronger reputation via third party verification:

- Increase confidence in data for internal and external use
- Develop and demonstrate an effective carbon reduction strategy; Improve business processes
- Reduce operational costs
- Full-fill one of the mandatory criteria for entry to the CDP A-list by gaining full points on CDP's Scope 1 and 2 verification questions
- Provide credibility for products, services and internal processes
- Counteract claims of greenwashing.



⁴⁶ The business benefits of third party verification of climate data A CDP Guide

DECARBONISING ACROSS VALUE CHAIN

Scope 3 emissions typically arise from the supply chain and the consumers using the product. It has been found that the emissions from the supply chain are 5-6 times more than the carbon footprint of a company's direct operations and hence account for lion's share of an organisation's overall emissions⁴⁷.

88%

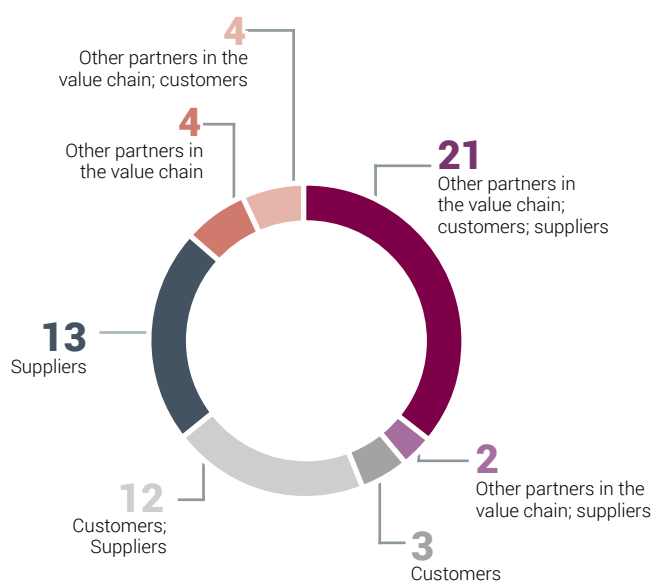
of companies engage with their value chain partners on climate related issues, an improvement of 5% from 2019

Walking the extra mile in terms of engaging with stakeholders, especially suppliers and customers on climate issues allows an organisation to consider the whole gamut of emissions and have better control over their emissions inventory. For example, metal companies can improve their supply chain's environmental performance through adoption of a circular economy model which leads to an increased use of recycled materials in products, reduces the emissions by lowering the overall burden on the manufacturing plant to produce from scratch and creates a closed-loop system with consumers⁴⁸. This year's data indicates that 88% of companies engaged with their value chain partners on climate-

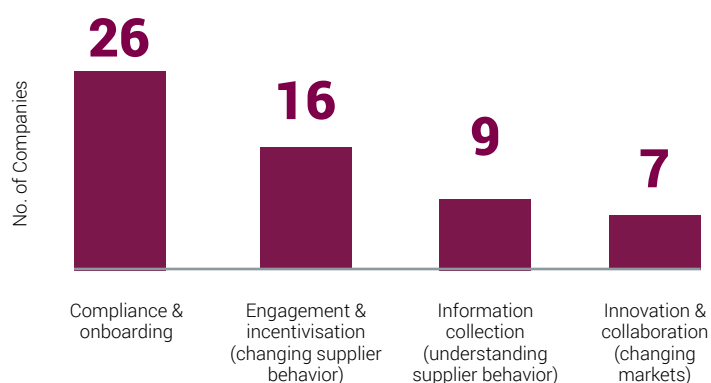
related issues, an improvement of 5% over 2019. There was also an increase in absolute numbers -- 59 business entities collaborated with value chain partners against 49 last year.

The main forms of engagement with suppliers are compliance and onboarding followed by incentivisation and information collection. Education/information sharing, collaboration and innovation are the most common customer engagement processes.

No. of Companies engaging with value chain on climate-related issues



Types of engagement with suppliers

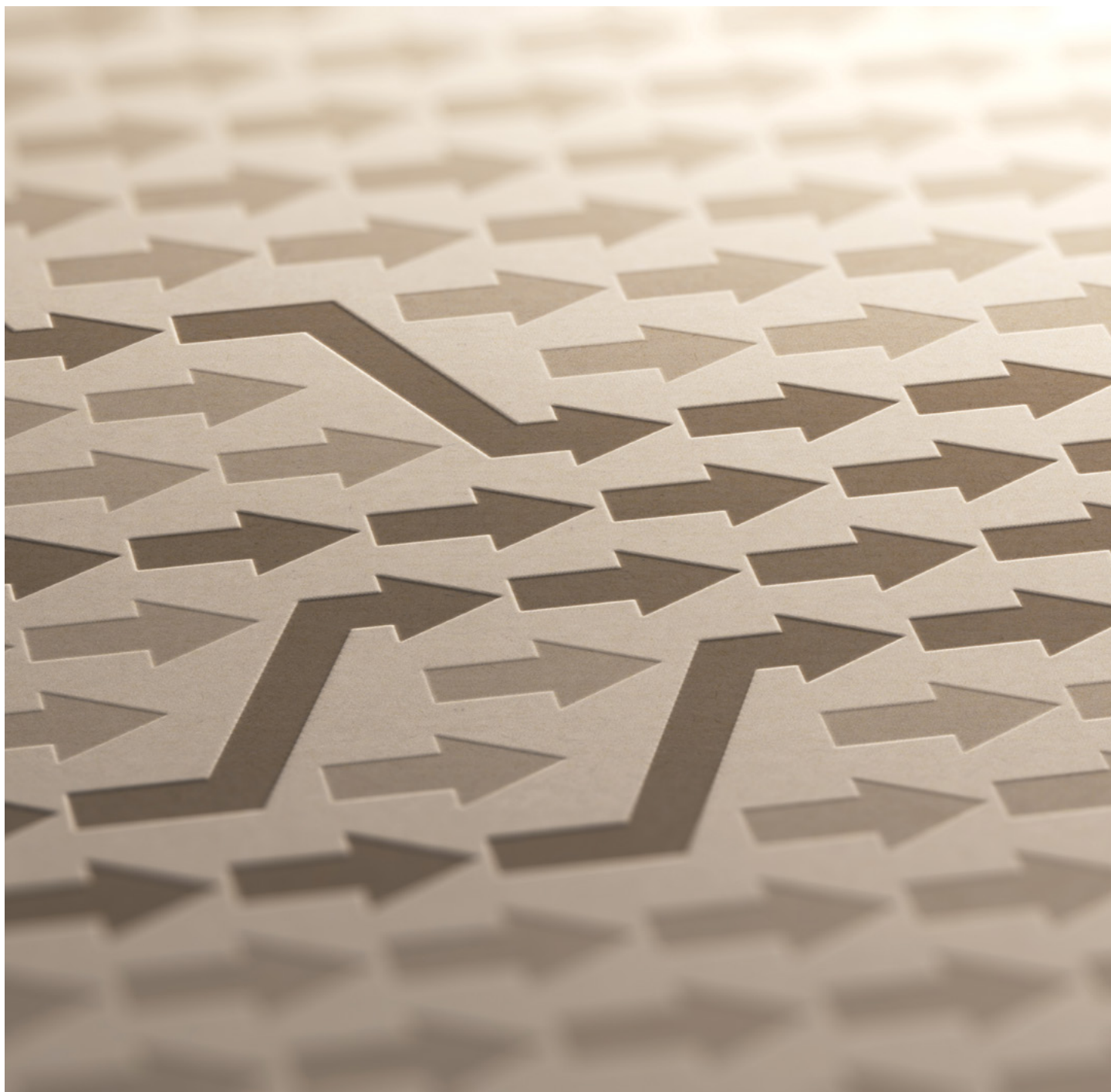


⁴⁷ <https://www.cdp.net/en/articles/supply-chain/supplier-engagement-leaderboard-2019>

⁴⁸ <https://www.bcg.com/en-in/publications/2020/supply-chain-needs-sustainability-strategy>

Organisations are mindful of the fact that climate issues need to be dealt using a participatory approach that encompasses all partners in the value chain as well as engages other external stakeholders. Companies are thus getting serious about engaging in a comprehensive dialogue on climate change as this will allow them to have inputs in shaping public policy. In their attempt to influence climate policies, organisations are establishing communication channels with stakeholders like policymakers, trade associations and research funding organisations. A positive sign emerging is that majority of the businesses are agreeing to comply with environmental legislations unconditionally. Energy efficiency and clean energy generation have garnered the support of 71% and 68% of responding companies respectively. Mandatory carbon reporting and increased climate resilience have also found acceptance.

With the COVID-19 pandemic wreaking havoc across the world and leading to the first-ever recorded recession in India, it is important that companies view this as an opportunity to build a more resilient economy, one in harmony with nature and encouraging of a more inclusive environment for supplier engagement that would expedite decarbonising. Engaging with the value chain offer a strategic advantage as it allows companies to take a lead on corporate sustainability and puts them in a position to set the blueprint for other businesses to follow.



TARGETS & PERFORMANCE

Emission reduction targets and initiatives

Targets

In recent years, accelerated climate change has forced businesses to set more ambitious climate goals and commit to advocating for a low-carbon economy. Today, it is considered a standard practice for businesses to report their annual emissions and undertake efforts to reduce their carbon footprint. Of the 67 Indian companies responding to investor requests, 57 have undertaken a total of 95 emissions reduction targets including absolute targets, intensity targets and both absolute and intensity targets; 24 of these were approved SBTs.

The global pandemic has reinforced the need for business resilience in operations, and corporate leaders have started recognising that science-based climate action goes hand-in-hand with building business success.⁴⁹ Companies are looking science-based targets as guiding lights with a defined pathway to future-proof growth, and with impending climate change hazards, more companies have doubled down on their commitments towards a low-carbon transition.⁵⁰ The momentum for SBTs has reached across a range of industries, including cement,

automobiles, pharmaceuticals, metals & mining, real estate, and information technology.

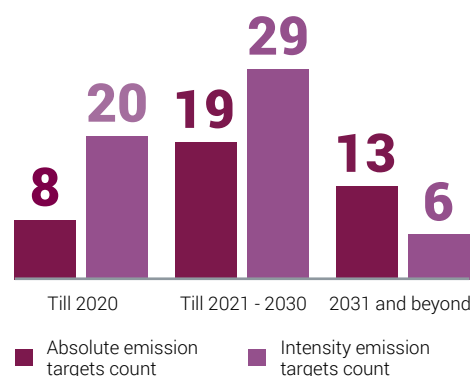
As more companies are striving toward commitments, this year witnessed an increase in the number of approved SBTs, from seven targets last year to 24 targets this year.

Leading companies are moving forward by setting long-term emissions reduction targets to mitigate climate-related risks. Compared to 2019, this year more targets

More than **three times** increase in the number of approved science-based targets

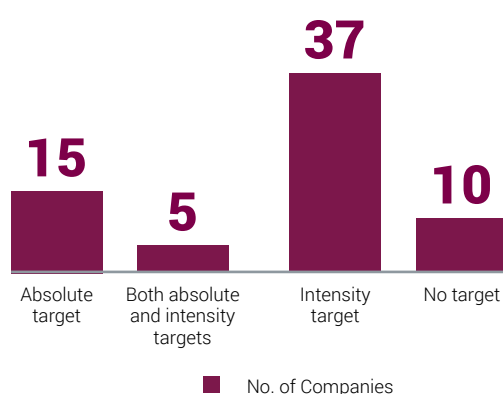
50% of the responding companies set long-term targets (i.e. till 2030)

Types of targets based on time-frame of target year



were set under a long-term time frame till 2030 and a lesser focus had been given on short-term targets i.e. till 2020. Most of the companies selected a base year of 2018 and had gone for the intensity targets. Hence in upcoming years, long-term targets can play a major role for companies to support their sustainability visions and their journey towards low-carbon transition. Apart from these, companies also reported 83 other targets, which included 38% energy consumption targets, 13% energy productivity targets and 11% waste management targets, amongst others.

GHG Emission Reduction Target Types



⁴⁹ The new normal: 1,000 companies are now setting science-based climate targets - Science Based Targets

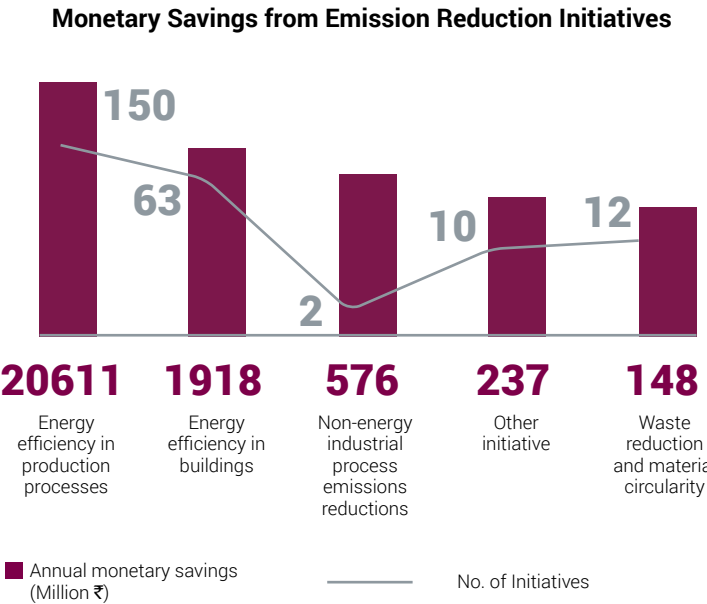
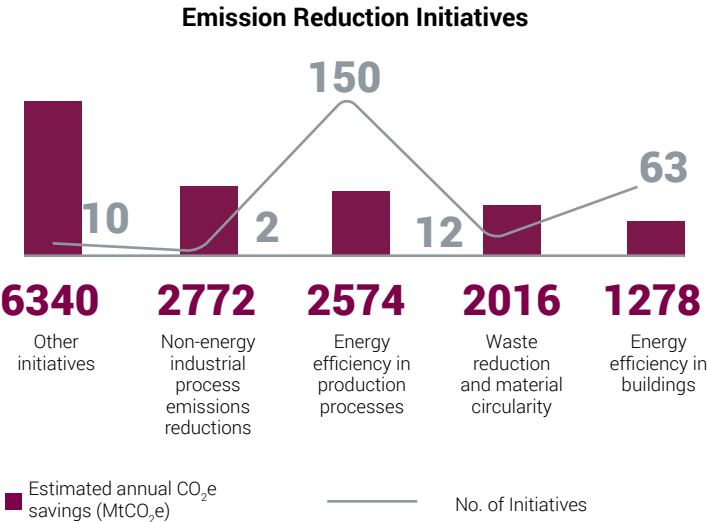
⁵⁰ <https://www.cdp.net/en/articles/climate/2020-lessons-from-an-extraordinary-year>

Emission reduction initiatives

While the number of companies taking up Emission Reduction Initiatives (ERI) has grown from 53 to 58, the number of initiatives has declined from 293 to 287, resulting in a 13% decrease in the estimated annual CO₂e savings this year.

Energy efficiency in production processes and in buildings continue to account for most ERIs; non-energy industrial process emission reductions have been outweighed in their CO₂e saving potential.

Other emission reduction initiatives such as upgrading equipment with high-efficiency alternatives and digitisation initiatives undertaken by banks accounted for the highest estimated CO₂e savings. In terms of the highest monetary savings, energy efficiency in production processes contributed to 76% of monetary savings, followed by energy-efficiency in building services.



The steel sector had the highest number of initiatives for energy efficiency in production process and accounted for

88%
of total estimated annual CO₂e savings.

SCIENCE-BASED TARGETS: AMBITIOUS CORPORATE CLIMATE ACTION

What is a 'Science-Based Target'?

Science Based Targets are the GHG emissions reduction targets consistent with the level of decarbonisation that, according to climate science, is required to limit global temperature increase to 1.5- 2°C compared to pre-industrial temperature levels.

Science Based Target ensures that the company is taking shorter-term action to reduce emissions at a pace that is consistent with keeping warming below 1.5°/ well-below 2° C.

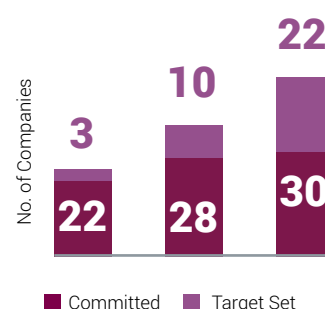
The rise in climate consciousness among Indian companies is evident from the growing number of those committed to the Science Based Target Initiative (SBTi). By 2020, 52 companies have committed to it, with a significant growth of more than 37% over last year. India is now the leader from emerging economies for having the maximum number of companies committing to SBTi and globally it stands at the sixth position.

Of the 52 committed companies, 22 have further approved SBTs in 2020 compared to 10 in 2019. The initiative champions SBT setting as a powerful way of future-proofing companies' growth in the transition towards a low-carbon economy⁵¹. The initiative's overall aim is for SBT setting to become a standard business practice and for companies to play a major role in driving down global GHG emissions. Embedding SBTs as a fundamental component of sustainability management practices is crucial for achieving this.

The Sectoral analysis of the Indian SBTi companies highlights the number of companies that are committed to the initiative and the number of those with approved set targets across each sector.

Compared to last year, the automobiles and components sector is still leading with the highest commitment and targets set. The automobile sector is one of the fastest growing sectors which represents 23% of all energy-related global emissions⁵². Decarbonising the automobile sector is possible through disruptive technological innovation, land-use planning and transport demand management, modal shift and

Status of SBTi Companies in India

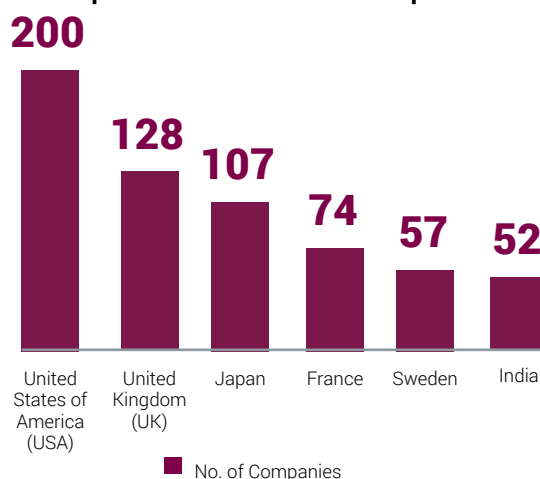


shifting to electric mobility. Companies that set ambitious SBTs can send a strong signal for local, regional, and national policies to increase the level of ambition and steer the transition.

In 2020, 28 SBTi committed companies responded to CDP's Investor request to disclose to the Climate Change questionnaire. The emissions profile shows that the overall Scope 1+ Scope 2 emissions of SBTi companies responding to CDP represent almost 20% of the total Scope 1+ Scope 2 emissions and 71% of the total Scope 3 emissions in the overall CDP India Investor sample.

A greater share of Scope 3 emissions reported by SBTi companies indicate that there is now a greater focus on the Scope 3 GHG Inventory as the companies are planning to set SBTs in coming years. As per the SBTi, a complete Scope 3 screening or inventory is required for the validation of the SBTs and it is not acceptable to exclude any relevant categories.

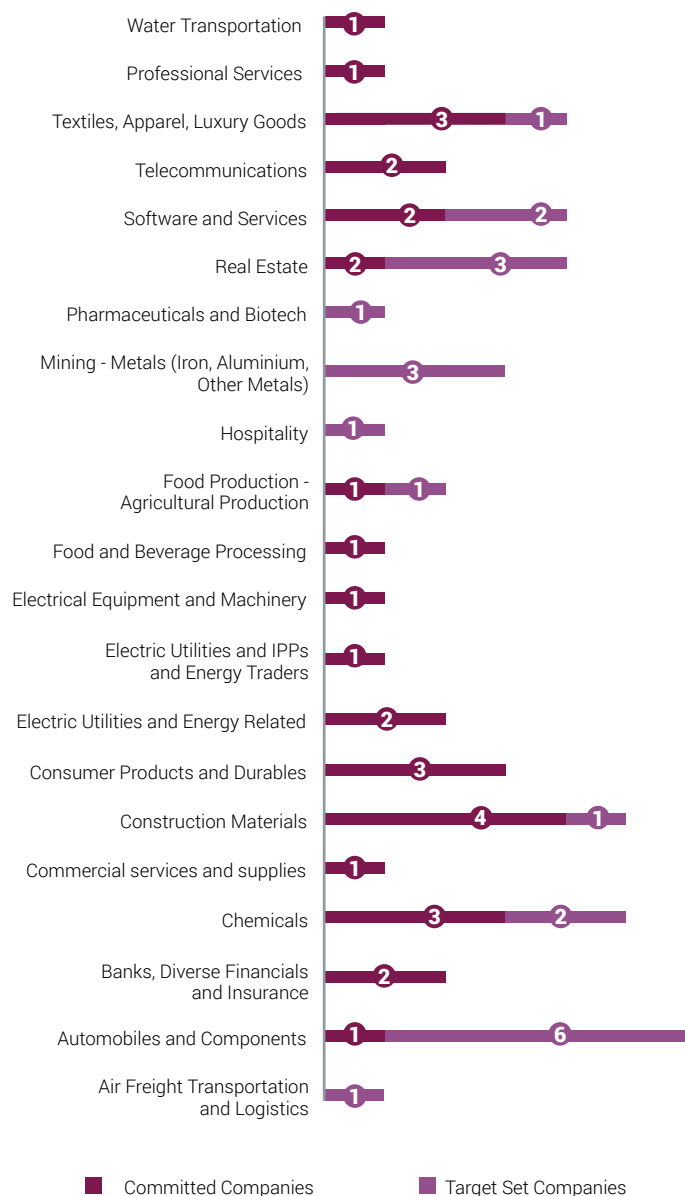
Top 5 countries with SBTi companies



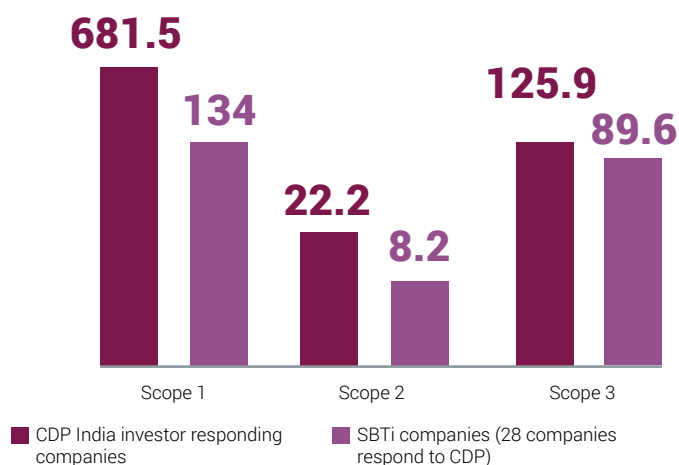
⁵¹ <https://sciencebasedtargets.org/resources/files/SBTi-manual.pdf>

⁵² <https://sciencebasedtargets.org/resources/legacy/2018/05/SBT-transport-guidance-Final.pdf>

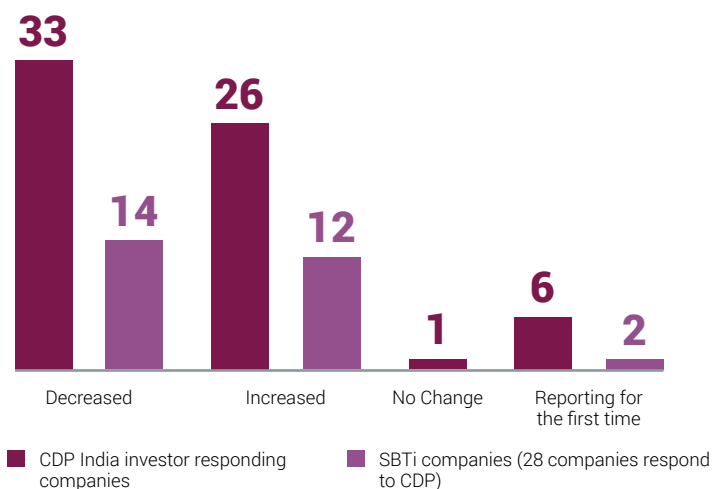
Sectoral Analysis of Indian SBTi companies



Emissions Profile (MtCO₂e)

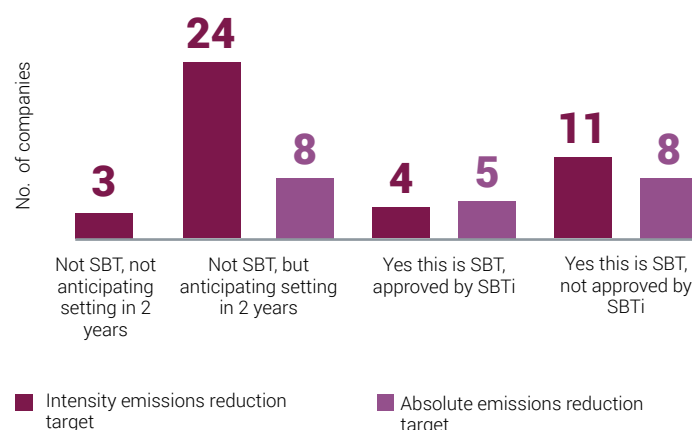


Comparison of change in gross Scope 1+2 emissions from previous year for SBTi companies vis-à-vis CDP reporting companies



CDP India data shows that 33 companies have reported reduction in their gross global emissions (Scope 1 and 2 combined) from the previous reporting year whereas 26 companies have their gross global emissions increased for this reporting year.

Emission Reduction Targets Reported by Companies in 2020



CDP's data shows that there are 32 companies that are considering setting a SBT in the next two years compared to 29 companies in the previous reporting year. There are 11 intensity and eight absolute targets that companies consider to be SBT, but this has not been approved by SBTi yet.

The increase in these target number highlights that there are more companies which seek to commit to SBTi and get their targets validated in the coming years.

Growth in ambition

CDP's five-year data shows a rise in the number of Indian companies committing to the SBTi. Their reported emissions increased by 144% due to increased commitment from energy intensive companies this year which includes companies from cement and metal and mining sectors.

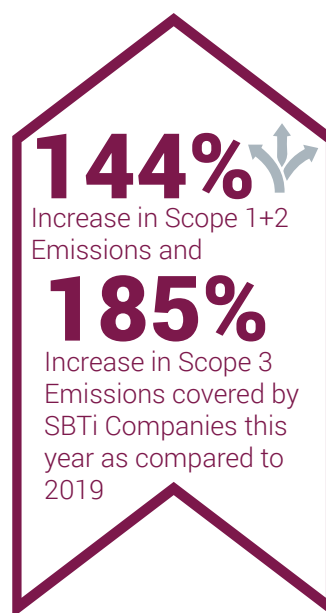


54%

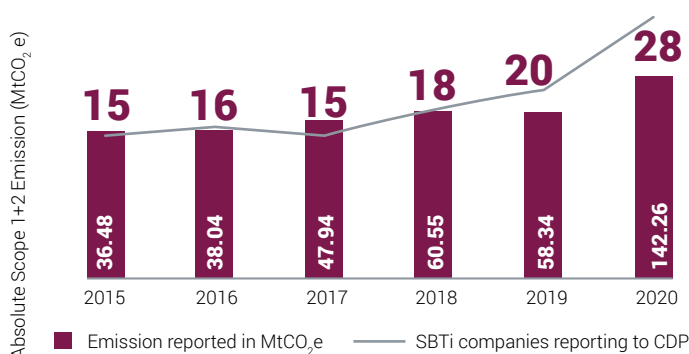
Indian SBTi companies responded to CDP Climate Change Investor Program 2020

40%

Increase in SBTi companies responding to CDP via 2020 climate Change Investor Disclosure Program compared to previous year



Comparison of Absolute Scope 1+2 emissions (MtCO₂e) for SBTi companies reporting to CDP



We witnessed the highest number of SBTi companies responding to CDP India this year which is a 40% growth from last year. This further proves that companies are becoming more responsible towards disclosing their GHG Inventory with greater transparency.

The graph for the estimated annual carbon savings shows the top three emission reduction initiatives undertaken by SBTi companies reporting to CDP. It is evident that over the years, low carbon energy purchase and energy efficiency process have gained momentum in reducing GHG emission with an increase in the number of SBTi committed companies implementing these initiatives. Maximum carbon savings of 7.91 MtCO₂e have been reported from the cement and concrete sector. The metal smelting, refining & forming sector has reported 59,237 tons CO₂e savings this year with a significant decrease from 70,422 tons CO₂e savings in the last year. There has been a reduction of 4.43 MtCO₂e of estimated annual carbon savings reported by SBTi companies in 2020 as compared to the last year.

Data shared by three reporting companies that have also committed to the SBTi (Ambuja Cement Ltd, ACC Limited, and Ultratech Cement Limited) shows that improving energy efficiency in their production processes has led to cement being the leading sector in reducing GHG emissions.

About SBTi

The Science Based Targets initiative champions science-based target setting as a powerful way of boosting companies' competitive advantage in the transition to the low-carbon economy.

It is a collaboration between CDP, the United Nations Global Compact (UNGC), World Resources Institute (WRI), and the World-Wide Fund for Nature (WWF) and one of the We Mean Business Coalition commitments.

The initiative:

- Showcases companies that set science-based targets through case studies, events and media to highlight the increased innovation, reduced regulatory uncertainty, strengthened investor confidence and improved profitability and competitiveness generated by science-based target setting.
- Defines and promotes best practice in science-based target setting with the support of a Technical Advisory Group
- Offers resources, workshops and guidance to reduce barriers to adoption
- Independently assesses and approves companies' targets

Advantages:⁵³**1. Reducing regulatory risks and uncertainties**

As the government continues to work on implementing the Paris Agreement and meeting the ambition of the country-level pledges, Science Based Targets initiative can prove out to be a resilience against the upcoming regulations.

2. Strengthening Investor Confidence

SBTi can help in strengthening the investor confidence as the investors are highly taking interest in businesses' environmental policies.

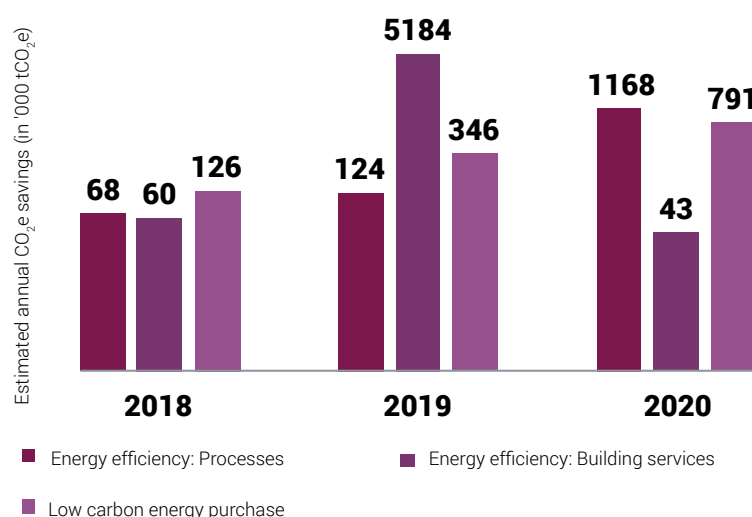
3. Competitive Edge:

Companies are getting ahead of their peers by succeeding in the low-carbon transition with increased innovation, reduced uncertainty, strengthened investor confidence and improved profitability.

4. Brand Reputation

SBTi is a global Initiative which shows robustness, confidence, and credibility which further helps in building up the brand reputation.

Estimated annual CO₂e savings of SBTi companies (in '000 tCO₂e)

**Joining Call to Action**

We look forward to companies taking action by committing to develop Science-based Targets.



⁵³ <https://sciencebasedtargets.org/blog/six-business-benefits-of-setting-science-based-targets>



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

Value Proposition:

1. There will be no financial implication on the company.
2. Case studies of businesses with validated targets will be shared with the participating companies for peer-to-peer learning.
3. Capacity Building workshops and webinars based on recent developments and various other nitty-gritty of SBTi.
4. In house trainings and one-on-one meetings with companies where CDP India will explain all stages of the SBTi and provide answers to all the technical queries.

BUSINESS AMBITION FOR 1.5°C

'Business Ambition for 1.5°C' is an urgent call to action from a global coalition of UN agencies, business, and industry leaders. Businesses can make a critical contribution to limit the worst impacts of climate change by setting a net-zero target in line with 1.5°C future⁵⁷.

So far, over 300 companies, representing more than \$3.6 trillion in market cap, have responded to the open letter from global leaders, and signed the Business Ambition for 1.5°C commitment.

- In India, 13 companies⁵⁵ have already aligned and set their target with the most ambitious aim of the Paris Agreement, to level global temperature rise to 1.5°C above preindustrial levels.
- Automobiles and Components and Real Estate are the top sectors that have approved targets aligning with 1.5°C Ambition.
- In India, 13 companies are further committed to Business Ambition for 1.5°C.
- All the companies in the Real Estate sector from India have approved targets aligning with 1.5°C Scenario.

Net zero: a north star for climate action

According to the latest report by the IPCC, to limit global warming to 1.5°C above pre-industrial levels and to avoid the most disastrous impacts of climate change, the world must halve CO₂ emissions by around 2030 and reach net-zero CO₂ emissions by 2050.

Companies are increasingly adopting the net-zero climate targets by recognising the importance of keeping global warming to 1.5°C. Between July 2019 and June 2020, over 230 companies committed to reach net-zero emissions as part of the Business Ambition for 1.5°C campaign, an urgent call-to-action for companies to set emissions reduction targets in line with a 1.5°C future. The campaign is led by the SBTi and supported by a global coalition of UN leaders, business organisations and NGOs⁵⁶.

⁵⁴ <https://sciencebasedtargets.org/business-ambition-for-1-5c>

⁵⁵ Mahindra Logistics Ltd., Mahindra Heavy Engines Ltd, White House, Dr. Reddy's Laboratories Ltd., Mahindra EPC Irrigation Limited, Swaraj Engines Limited, Gromax Agri Equipment Limited, Mahindra Accelo, Mahindra Holidays and Resorts India Limited, Mahindra Lifespaces Developers Limited, Mahindra World City (Jaipur) Ltd., Mahindra World City Developers Ltd and Polygenta Technologies Limited

⁵⁶ <https://sciencebasedtargets.org/net-zero>

INTERNAL CARBON PRICE— ROBUST CLIMATE STRATEGY

A carbon price is a cost applied to carbon pollution to discourage polluters. Economists agree a carbon price is the single most effective tool for countries to reduce their emissions⁵⁷. Corporations have been using internal carbon pricing (ICP) as a strategy to manage climate-related business risks and prepare for the transition to a low-carbon economy. Carbon pricing policies create strong, transparent incentives for firms to internalise the social costs of carbon emissions⁵⁸. Major investors and financial regulators are calling for businesses to disclose their climate risks and their policies to mitigate emissions.⁵⁹ The most sought-after benefits are that a company can use ICP both as a risk management tool and as a part of its decarbonisation strategy.

To see how fast carbon pricing is spreading, consider Paragraph 136 of the decision text of the Paris Agreement: “providing incentives for emission reduction activities, including tools, such as domestic policies and carbon pricing”. The final agreement recognised carbon pricing’s importance as a powerful incentive to cut emissions by companies, and regional, state and local governments.

The IPCC special report on the impacts of global warming of 1.5 °C above pre-industrial levels states that an explicit carbon pricing mechanism can theoretically achieve cost-effective emission reductions. Along with best practice policies, a moderate carbon pricing can help reduce global CO₂ emissions significantly⁶⁰. Parties are encouraged to set prices consistent with Carbon Pricing Leadership Coalition’s

(CPLC) high-level commission on carbon pricing which states that an explicit-price range of US\$50–100/tCO₂ by 2030 will be consistent with delivering the Paris Agreement⁶¹.

Carbon prices have varied widely across existing schemes. Success stories such as that of Sweden, which currently has the highest carbon price in the world at US\$123/tCO₂ demonstrate that it is indeed possible to make carbon pricing work: while the Swedish economy grew by 78% since the introduction of the Swedish carbon tax in 1991, carbon emissions have decreased by 26%⁶². Other countries like The UK

Sweden
US\$123/tCO₂

UK
US\$42.29/tCO₂

Netherlands
US\$36.38/tCO₂

(US\$42.29), Netherlands (US\$36.38/tCO₂) have also committed to increasing their carbon prices in the coming decade⁶³. The world’s top three emitters – US, China and India – however, have put negligible prices on carbon.

As part of the ‘Build Back Better’ strategy, carbon pricing can be a valuable tool

⁵⁷ What is a carbon price and why do we need one?

⁵⁸ Energy, the Environment, and Technological Change

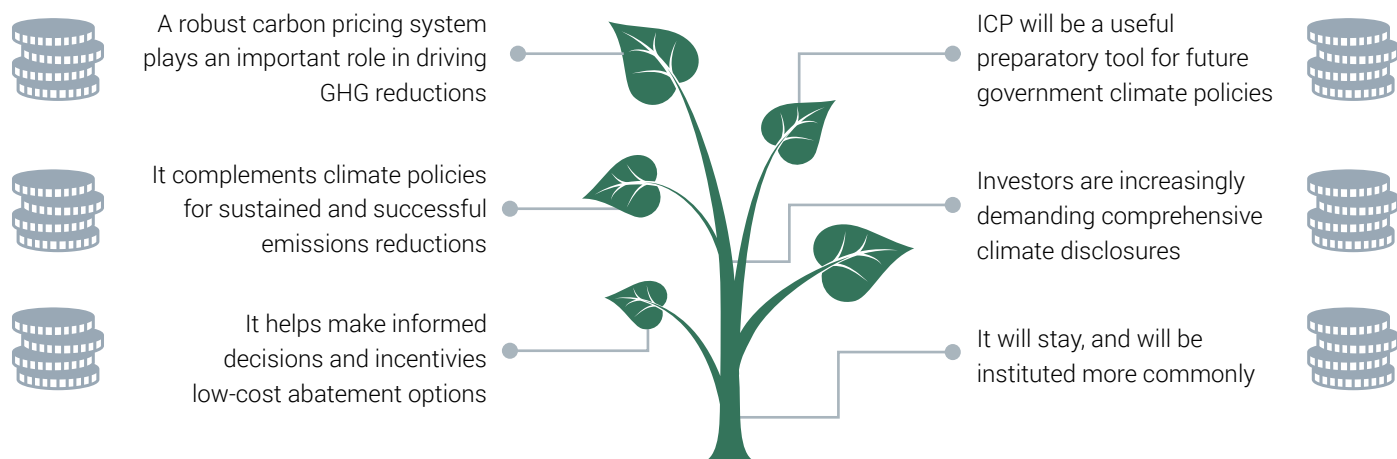
⁵⁹ Firms ignoring climate crisis will go bankrupt, says Mark Carney

⁶⁰ An, I. P. C. C. “Special Report on the impacts of global warming of 1.5 °C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty,” Intergovernmental Panel on Climate Change (2018).

⁶¹ Carbon Pricing WBCSD policy paper 2019: <https://docs.wbcsd.org/2019/09/Carbon-Pricing-WBCSD-Policy-Paper-2019.pdf>. WBCSD, 2019.

⁶² SHOULD EVERY COUNTRY ON EARTH COPY SWEDEN’S CARBON TAX?

⁶³ <https://www.edie.net/registration/regwall>.



Business case for pricing carbon

to guide investment decisions. It can help focus on a green stimulus package to recover from the old economy which promotes a carbon-intensive future. Different stimulus measures can help clean energy technologies compete with carbon-intensive alternatives and encourage more efficient energy use. India is witnessing this momentum – a Declaration on Climate Change was signed by 24 key industry captains and Ministry of Environment, Forest and Climate Change (MoEFCC) at the virtual India CEO forum on Climate Change on 5th December 2020. Shri Javadekar further said that this declaration by private sector companies, voluntarily, is a historic step.

Mr. Ravi S. Prasad, Additional Secretary, spoke about **"a coordinating structure for implementation of Paris Agreement which will incorporate internal carbon pricing"**.⁶⁷

To guide companies in the implementation of climate-related financial disclosures, the TCFD⁶⁵ developed four recommendations mimicking an organisational structure: Governance, Strategy, Risk Management, and Metrics and Targets. An ICP is a proposed metric through which entities can safeguard their businesses by internalising market signals. The TCFD specifically lists ICP as a key metric to assess climate-related risks and opportunities in line with its strategy and risk management process. By attributing a financial cost to risks associated with carbon emissions and translating them into a uniform metric, financial decision-makers can integrate transition risks into their business decisions and fill the analysis gap for assets of various time horizons.

The MoEFCC also constituted a high-level inter-ministerial Apex Committee for Implementation of Paris Agreement (AIPA) in December 2020 under the chairmanship of the Secretary, MoEFCC. The purpose of AIPA is to generate a coordinated response on climate change matters that ensures India is on track towards meeting its obligations under the Paris Agreement including its NDC.

Senior officials from 14 ministries will serve as Members to AIPA who will oversee the progress in implementation of India's NDC and receive periodic information updates to monitor, review and revisit climate goals to fulfil the requirements of the Paris Agreement. Another key function of AIPA would be to operate as a National Authority to regulate carbon markets in India under Article 6 of the Paris Agreement, formulate guidelines for consideration of projects or activities under the article, issue guidelines on carbon pricing, market mechanism, and other similar instruments that have a bearing on climate change and NDCs.

It will take note of the contributions of the private sector as well as multi-/bi-lateral agencies in the field of climate change and provide guidance for aligning their climate actions with national priorities.

⁶⁴ <http://nbrienvs.nic.in/ViewGeneralLatestNews.aspx?Id=9829&Year=2020>

⁶⁵ <http://nbrienvs.nic.in/ViewGeneralLatestNews.aspx?Id=9829&Year=2020>

⁶⁶ Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures, The Taskforce on Climate-related Financial Disclosures, June 2017

The Task Force defines an internal carbon price as **“an internally developed estimated cost of carbon emissions,”** which can be used as a planning tool to help identify revenue opportunities and risks, as an incentive to drive energy efficiencies to reduce costs, and to guide capital investment decisions.⁶⁹

When disclosing on ICP, the TCFD recommends that companies should disclose on the following:

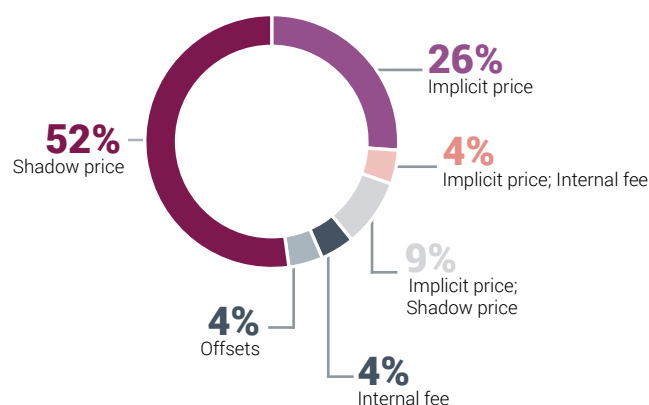
- what assumptions are made about how carbon price(s) would develop over time (within tax and/or emissions trading frameworks),
- geographic scope of implementation,
- whether the carbon price would apply only at the margin or as a base cost,
- whether the price is applied to specific economic sectors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



Earlier this year, BP, one of Europe's oil supermajors, announced a carbon price of US\$100/tonne of CO₂, a giant increase from their previous price of US\$40⁶⁷, and walked away from three US-based oil and gas trade organisations - American Fuel and Petrochemical Manufacturers, (AFPM), the Western States Petroleum Association (WSPA) and the Western Energy Alliance (WEA) over differences regarding policy positions on carbon pricing⁶⁸.

CDP has been asking companies to disclose their practice of using ICP since 2013. In 2020, 23 of the investor responding companies have reported putting a price on carbon, as compared to last year's 19 while the number of companies planning to price in the next two years reduced to 21 from 23 in 2019. After adding Supply Chain responding companies, a total of 58 companies are pricing or are planning to price carbon in the next two years in 2020, a 12% increase from 2019. It was further seen that of the 23 companies that are pricing carbon in 2020, 52% use a shadow price, followed by implicit price.

Types of ICP used by Indian companies



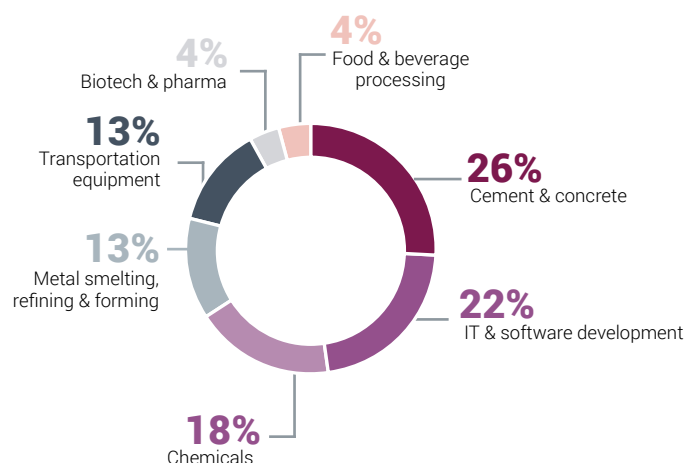
⁶⁷ <https://www.greentechmedia.com/articles/read/european-oil-majors-ready-to-scale-up-energy-transition-investment>

⁶⁸ <https://www.greenbiz.com/article/bp-walks-away-three-us-trade-groups-over-carbon-pricing>

⁶⁹ Convention on Biological Diversity – Markets for Carbon Offsets. Accessible at <https://www.cbd.int/financial/offsets/g-offsetclimatecarbon.pdf> page 8

Type of ICP	Shadow price	Carbon fee	Implicit price	Internal trading
Description	Hypothetical cost of carbon emissions	A per-unit fee based on the amount of GHG the company emits (eg ₹700 per tCO ₂ e)	Helps quantify the capital investments required to meet climate-related targets	Allows business units within a company to trade their allocated carbon credits based on respective emissions
Objectives/ usage	<p>The most common form of ICP is a shadow price helps organisations better understand the impacts of climate-related risks such as technological shifts or future regulations. It can help a company with both risk management as well as internal strategic planning.</p> <p>It allows companies to model or test how a range of carbon prices affect their divisions, capital investments and other planned projects. It is similar to forecasting with a range of energy prices.</p>	<p>Putting a fee on carbon helps create an actual pool of funds, generating a revenue stream to help pave the way for greener projects and further R&D. This prepares a company for a carbon-resilient world. This tool has the ability to encourage a business to transform into an environmental leader. It allows for the creation of internal funds to invest into energy efficiency or renewable energy projects in order to cut energy costs.</p> <p>It also builds awareness of the importance of emission reductions within different business units.</p>	An implicit price helps companies understand their initial carbon footprint and is also used as a benchmark to implement a more strategic internal price.	Internal trading helps create awareness. It allows companies to prepare for stringent forms such as shadow prices or internal fees.
Method	<p>An additional criterion is introduced in investment analysis during the calculation of the internal rate of return (IRR).</p> <p>The additional criterion is the carbon value which is incorporated into each investment decision and applied to resulting GHG emissions. This carbon price is assumed the same way assumptions are made about exchange rates or commodity prices.</p>	<p>It is implemented by voluntarily adding a cost to GHG emissions in relation to operational costs.</p> <p>It increases the operating expenses (OPEX).</p> <p>There are short-term emissions reductions. Transfers of actual funds within the company are done through two mechanisms. First, by offsetting GHG emissions by purchasing offset credits externally. Second, by providing internal financing for emission reduction projects, low-carbon products & services and R&D.</p> <p>The carbon fee also provides monetary incentives for pro-environment initiatives/ activities.</p>	Some companies with emissions reduction or renewable energy targets calculate their 'implicit carbon price' by dividing the cost of abatement/ procurement by the tonnes of CO ₂ e abated.	<p>Trading is driven by the allocation of a fixed number of carbon dioxide emission 'allowances' for individual business units, with each allowance equivalent to 1 metric tCO₂. If business units exceed their cap, they must purchase additional allowances to offset their excess emissions.</p> <p>Where business units under-emit, they may sell allowances. Business units may also choose to invest in carbon offsets outside their own units in order to sell on the internal trading scheme.⁷²</p>

A sectoral analysis of the data finds two high emissions intensive sectors: cement and concrete, followed by IT and software development. An increasing number of companies from cement and IT sectors are now committing to the SBTi and moving towards aligning emissions in line with 1.5-degree; an ICP in such cases can be effectively used as a tool for mitigating climate risks and achieving the greater goal of a SBT or a net-zero target. It helps companies build their internal capacity and measure their progress.



Below are the ICP disclosed by Indian companies in 2020:

Company	Price in INR (₹)	Price in USD (\$)	Type of ICP used
ACC	2541	33.94	Implicit price; Shadow price
Ambuja Cements	2163.9	30.74	Implicit price
Dalmia Bharat Ltd	773.34	11	Shadow price
Dr. Reddy's Laboratories	937	13.32	Implicit price
Godrej Consumer Products Limited	750	10	Shadow price
Godrej Industries	740	10	Shadow price
Hero Motocorp Ltd	private	private	private
Hindustan Zinc	1118.46	15.9	Implicit price
Infosys Limited	1001.82	14.25	Implicit price
JSW Cement Limited	1566	21	Shadow price
JSW Steel Ltd.	1400	20	Shadow price
Mahindra & Mahindra	982.42	13.97	Internal fee
Mindtree Ltd	private	private	private
Shree Cement	private	private	private
Tata Chemicals	1406.07	20	Shadow price
Tata Consultancy Services	1131	16.08	Implicit price; Shadow price
Tata Consumer Products Ltd	315	4.48	Offsets
Tata Motors	980	14	Shadow price
Tata Steel	975 - 2720	15 -38.68	Implicit price, Shadow Price
Tech Mahindra	703.03	10	Implicit price; Internal fee
Ultratech Cement	750	10.66	Shadow price
Wipro	3522.91	50.11	Shadow price

*Since these companies did not provide a conversion rate, the average conversion rate for the 2019 calendar year was taken (1₹ = 0.014224USD)

Managing climate risk with Internal Carbon Price and Science Based Targets:

By integrating ICP into ambitions targets set by SBT, companies can achieve greater emissions reduction. SBTs empower companies to engage internal teams with a common data-driven goal and integrate their carbon reduction strategies with other business objectives⁷⁰. A step that organisations can take to implement TCFD recommendations as well as achieve their SBTs is putting an internal price on carbon. It is observed that having an internal carbon price can enhance an organisation's competitiveness⁷¹. Several companies are already using ICP to highlight their progress towards targets and inform a business case for low-carbon investments. Of the 25 companies that have disclosed to CDP in 2020, 13 that committed to SBTi also have an ICP.

Setting a carbon price can be a strong commitment towards driving change and action. Clear goals for the ICP enable

companies to make better decisions regarding the type and price of carbon⁷². A high-level commitment can provide a company's perspective and insight on how other companies have been able to adopt innovative financing practices such as ICP and carbon taxes which are spurred by setting ambitious targets in line with the SBT initiative.

In January 2020, in partnership with TERI, CDP India released a second handbook in ICP - 'Putting a Price on Carbon: A Handbook for Indian Companies 2.0'⁷³, a second edition to the handbook released in October 17⁷⁴. The first handbook was prepared to lay out the landscape of carbon pricing and help companies understand about external and ICP along with guidance on how to approach an internal carbon price. The aim of the second handbook was to further mobilise the adoption of internal carbon price by companies. The handbook discusses steps to arrive at a price and use it in an organisation, including details on indicative pricing levels.

⁷⁰ Science-Based Targets: How Aligning Carbon Reduction Targets With Climate Science Can Drive Business Growth, S&P Dow Jones Indices. 2017

⁷¹ <https://www.greenbiz.com/article/managing-climate-risk-carbon-pricing-and-science-based-targets>

⁷² CDP Handbook on Carbon Pricing

⁷³ <https://www.cdp.net/en/reports/downloads/4918>

⁷⁴ <https://b8f65cb373b1b7b15feb-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/002/771/original/CDP-Carbon-Pricing-Handbook.pdf?1508927220>



ACC Ltd. are using internal carbon price as a tool to drive and incentivise low-carbon initiatives and emission/energy reduction projects. We have observed that ICP helps ROI to look attractive and helps us make informed decisions.

ACC Ltd. has already committed and published their 2030 targets for specific CO₂ emission reduction and use of waste derived resources (as a part of SD 2030 plan). We have also committed to SBTi and are working on setting stricter targets aligning with below 2 DS. To achieve these commitments and relevant targets, we believe that ICP may play an important role in prioritising our future actions and investments. Going forward, we also plan to use the ICP for managing risk and leveraging opportunities.



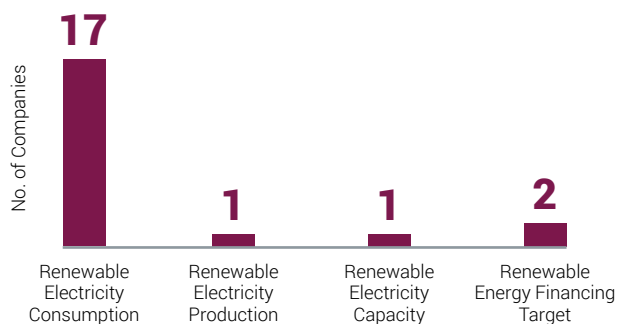
— **ACC Ltd**

THE RENEWABLE ENERGY THRUST

In 2020, the 67 companies headquartered in India have reported a total of 291 Terra Watt hours (TWh) electricity consumption, more than double the previous year's number. Notably, the significant increase in total electricity consumption is attributed to just one company – Vedanta Limited, with 151 TWh of electricity consumption for its global operations.

The total electricity consumption excluding Vedanta is 140 TWh, 48% higher than the previous year. The rise in the total reported electricity consumption is primarily due to an increase in the number of responding companies from the energy intensive sectors. These 67 companies have consumed about 16 TWh renewable electricity which is 6% of the total electricity consumption reported in 2020. The share of renewable electricity is 11% without counting Vedanta in the sample. This is 6% higher than the previous year.

Renewable Energy Targets



Type of renewable energy targets

The 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). In 2020, 18 companies from India have reported various types of renewable energy targets. Some of these companies have taken more than one renewable energy target type. These 18 companies have reported 9.8 TWh of electricity consumption, of which 13% is from renewable energy sources. The level

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 and in partnership with CDP, RE100's mission is to accelerate change towards zero carbon grids at scale. There are 4 companies headquartered in India that have committed to the RE100 initiative - Dalmia Bharat Ltd, Infosys Ltd., Mahindra Holidays & Resorts India Ltd., and Tata Motors Ltd.

The RE100 membership continues to grow and diversify - with 42% of new members coming from the Asia-Pacific region in 2020. With 260+ members and >278 TWh of electricity consumption, aggregated electricity demand of RE100 members is higher than Australia's. The share of renewable electricity is 42% of total consumption, showing strong progress towards 100% goal.

Over 70 global RE100 members have operations in India – with >2 TWh of electricity consumption in the country. About 39% of electricity consumed in India came from renewable energy sources, largely sourced through unbundled energy attribute certificates and power purchase agreements.

Visit [RE100.org](https://re100.org) and follow #RE100 on Twitter.

of ambition i.e., a share of renewable energy in the target year, for most of the companies varies between 20-100%. Showing the leadership in renewable electricity sourcing, 3 companies⁷⁵ have committed to source 100% renewable electricity across their operations and joined RE100 initiative.

GHG emission reduction targets are popular among companies in India, and 57 companies have reported absolute, intensity or both absolute and intensity targets. Among these, 30 companies have committed to science-based targets Initiative, and their targets are in line with climate science. Six companies have dedicated scope 2 emission reduction targets. Scope 2 emissions are indirect emissions from the generation of purchased energy consumed by the reporting company. Companies with GHG emission reduction targets tend to source renewable energy to reduce their emissions, primarily scope 2 emissions. The Majority of these companies have taken exclusive renewable energy targets to support meeting their GHG emission reduction targets.

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. About 34 companies have identified opportunities related to shifting energy usage towards low-carbon energy sources across the value chain. Of these, 32 have identified opportunities in the direct operations, followed by 6 companies in the upstream and 2 in the downstream of the value chain. These companies have estimated energy related opportunities worth ₹317 billion, mainly in the direct operations. Half of these companies anticipate short time frame (1-5 years) to tap these

opportunities. Companies have not just identified energy related opportunities but implemented energy related initiatives in the reporting year across their operations. About 31 companies have implemented low-carbon energy consumption or production related initiatives in the reporting year that resulted in an estimated annual carbon savings of 1.8 million tCO₂ and ₹2.7 billion of annual monetary savings.

Companies from the manufacturing and materials sectors have reported the highest volume -14 TWh of renewable electricity consumption. Manufacturing sector companies are relatively performing better than companies from the materials sector in terms of the share of renewable energy in total electricity consumption. There are 25 companies from these two sectors, mainly energy intensive business such as cement, metals and mining, steel and transport original equipment manufacturers (OEMs). The aggregate electricity consumption of these companies is over 100 TWh. The companies from the fossil fuel-based energy generation are not included in the following charts.

A detailed breakdown shows that self-generation of renewable electricity is the most preferred sourcing option among companies followed by purchase of renewable electricity through unbundled Energy Attribute Certificates (EACs) and Power Purchase Agreement (PPA) with an onsite/offsite generator. Up to 10 companies have reported 0.3 TWh of total renewable electricity consumption via PPA (on-grid and off-grid), which has declined from 1.1 TWh of consumption reported in the previous year.

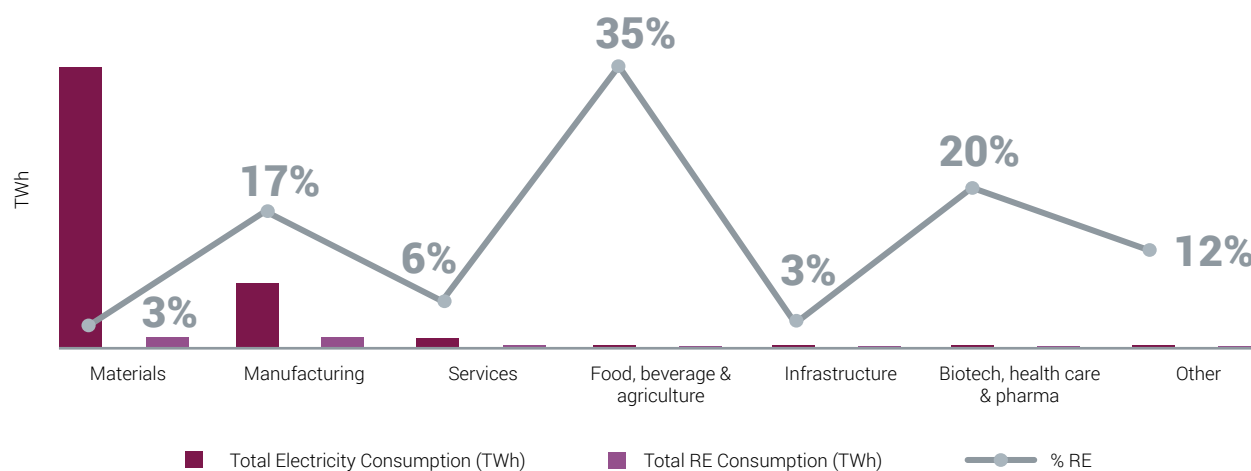
Renewable Electricity Sourcing Methods (TWh)



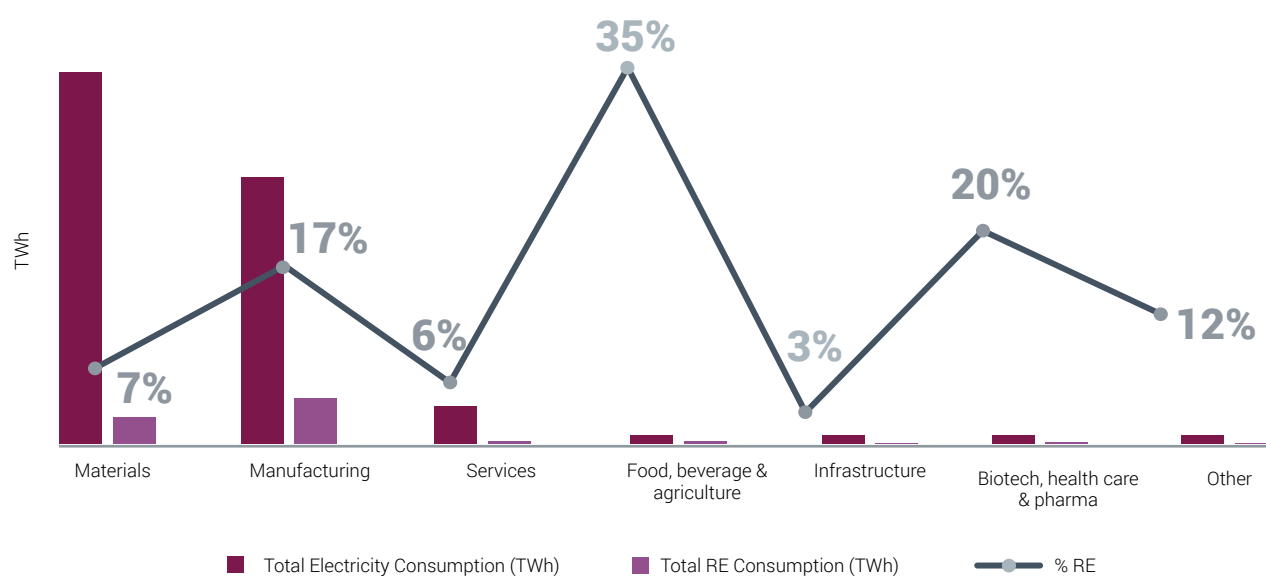
Note: Some companies have reported renewable electricity consumption total, instead of break-down details as per the sourcing method. Data for those companies is not included in the above chart.

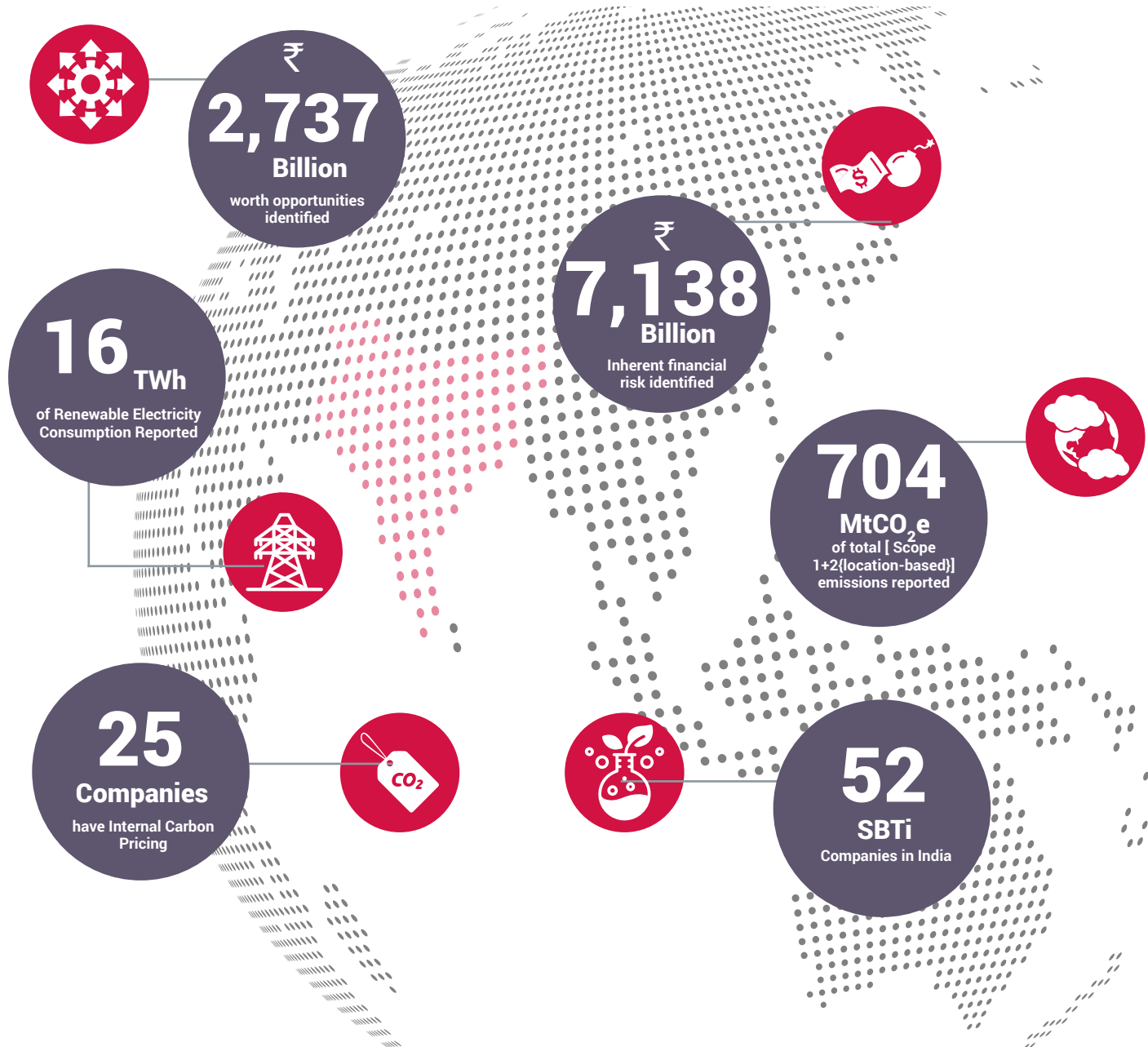
⁷⁵ 4 India headquartered companies are committed to the RE100 initiative. 3 of them report to CDP's climate questionnaire.

Electricity consumption by sector, with Vedanta Limited included in the analysis



Electricity consumption by sector, excluding Vedanta Limited





WATER SECURITY

The way out of water crisis

Five of the world's largest cities under water stress are in India, with Delhi ranked second on the list.⁷⁶ The water crisis is more alarming than imagined – 600 million people in India face high-to-extreme water stress.⁷⁷ India's water demand is projected to increase by two times the available supply by 2030, putting hundreds of million people at the risk of water scarcity, and ultimately losing the country 6% of its GDP.⁷⁸ In 2019, the country witnessed the worst droughts in recorded history.

Over 500 million people were affected across the country, and major cities such as Chennai experienced 'zero day' scenarios wherein water literally ran out. Since improvements in water security are essential for India's development, investing in water merits a sound business case.

Though 80% of Indian states have legislations on water conservation and prevention of encroachment of water bodies⁷⁹, poor data management, absence of water pricing, inefficient irrigation techniques and the lack of adequate sewage treatment curb the country's ability to manage water sustainably.⁸⁰ In recent times, companies have become more aware of the risks of increased water consumption, pollution, and unstable precipitation aggravated by climate change.⁸¹ A 2019 World Bank Report (Quality Unknown)⁸² warned of the economic, health and environmental damage caused by contaminated water, highlighting water quality as an **"invisible crisis"** that is under-appreciated and underestimated. It warned that poor water quality, driven by industrial, agricultural, and urban pollution could lead to a reduction by 1/3rd of economic growth in some places.

Water stress in India remains a key challenge: Aqueduct⁸³ ranked India 13th in the world on high water stress score – 4.12 out of 5.⁸⁴ The private sector is vital to delivering a water secure future. Companies in the food, textile, retail, energy, industrial, chemicals, pharmaceuticals and mining sectors account for and wield influence over 70% of the world's water use and pollution. The decisions one takes about how to grow and expand can make or break one's ability to tackle the global water crisis.

1/3rd

Reduction in Economic Growth caused by power water in some countries

56%

Water stress by 2030-ratio of withdrawals to renewable supply

WRI 2020



x6



Increase in water demand in last 100 years

UN World Waterdevelopment Report 2020



1 in 2

People will live in water stress area by 2030

UNEP

87%

increase in Water Security investor responding companies in India

CDP's Water Security program requests companies to disclose critical information on water parameters which are crucial to the business. It helps companies monitor and benchmark their performance on these critical parameters to ensure adequate water availability for their businesses. Investors and customers are increasingly keen to know how companies respond and adapt to water-related risks. The Non-Disclosure Campaign (NDC) is an annual CDP initiative, where investors can target companies that have been requested to respond but failed to do so.⁸⁵ Globally, for water security, Indian companies achieved the highest response rate to the NDC campaign, with 50% of engaged companies submitting a response on this critical issue – 2.8 times higher than their control group. Responding through CDP's Water Security questionnaire will help businesses understand the risks and opportunities associated with water-related issues,

⁷⁶ http://social.niti.gov.in/uploads/sample/water_index_report2.pdf

⁷⁷ <https://niti.gov.in/sites/default/files/2019-06/Final%20Report%20of%20the%20Research%20Study%20on%20Composite%20Water%20Resources%20Management%20Index%20for%20Indian%20States%20conducted%20by%20Dalberg%20Global%20Development%20Advisors%20Pvt.%20Ltd.%20New%20Delhi.pdf>

⁷⁸ <https://niti.gov.in/sites/default/files/2019-06/Final%20Report%20of%20the%20Research%20Study%20on%20Composite%20Water%20Resources%20Management%20Index%20for%20Indian%20States%20conducted%20by%20Dalberg%20Global%20Development%20Advisors%20Pvt.%20Ltd.%20New%20Delhi.pdf>

⁷⁹ http://social.niti.gov.in/uploads/sample/water_index_report2.pdf

⁸⁰ <https://www.cdp.net/en/articles/companies/indias-looming-water-crisis-a-call-to-action-for-companies>

⁸¹ Think globally, act locally: new guidance for companies on sustainable water use - CDP

⁸² <https://openknowledge.worldbank.org/handle/10986/32245>

⁸³ <https://www.wri.org/aqueduct/>

⁸⁴ Aqueduct Country Ranking (wri.org)

⁸⁵ The objective of the campaign is to drive further corporate transparency around climate change, deforestation and water security, by encouraging companies to respond to CDP's disclosure request.

helping them capitalise on actions to safeguard water resources.⁸⁶ The number of disclosing companies increased from 15 last year to 28 companies this year, an increase of approximately 87%.

Measuring, Monitoring and Verification

Regular measuring and monitoring of water-related parameters across all operations and the entire value-chain is the first step in laying the path for efficient water management. In 2020, 28 companies measured a total of 268 water related parameters. It was found that amongst volumetric water metrics, water discharge was the most monitored, accounting for 41% of all measurements. Water withdrawals accounted for 29% of all measurements, water consumption for 10% and water recycling and reuse accounted for 10% each. Although these metrics were being continuously monitored and measured by companies, a sector-wide analysis shows that significant growth in some water-intensive sectors has put pressure on the demand for industrial water. The electric utilities sector, for example reported an increased water demand of 7,71,174 megalitres in 2020, which was the highest amongst all sectors. **Adani Power Ltd** highlighted new acquisitions and increased power generation as major reasons for rise in water demand this year. The chemicals sector showed the second highest rise in water demand this year – 1,95,832 megalitres this year.

Some companies have shouldered the responsibility of having audits conducted on their reported water metrics for greater

39% of companies believe that availability of good quality freshwater is vital for the success of their business.

64% of companies measured all water aspects (withdrawals, discharge and consumption) across 100% of facilities.

transparency and credibility. Amongst the verification standards that were employed, 26% of the responding organisations used ISAE 3000, with **Tata Chemicals** being the sole company to apply both ISAE 3000 and AA1000AS to meet assurance standards.

WATER ASPECTS

Water Consumption – the amount of water a company has drawn into its boundaries and has permanently removed from the local water cycle.⁹⁰

Of the 28 respondents, three did not disclose water consumption data or were in their first year of measurement; 9 increased their water consumption over the previous reporting year; 12 decreased it and 4 reported no change.

Water Withdrawals – the amount of water the company has temporarily removed from the local water cycle and returned as discharge water.⁹¹

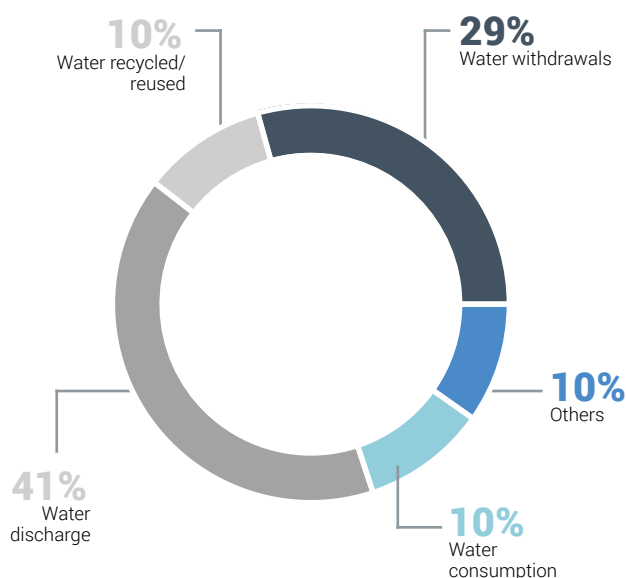
Of the 28 respondents, three did not disclose water withdrawal data or were in their first year of measurement; 7 reported an increase over the previous year, 14 had lowered their withdrawal; and 4 reported no change.

Water Discharges – the amount of water that leaves a company's facility, and if left untreated, could be a source of pollution.⁹²

Of the 28 respondents, three did not disclose water discharge data or were in their first year of measurement; 9 reported an increase in water discharge over the previous year, 6 lowered it and 10 reported no change. CDP's data highlights new acquisitions, increased production activities, and project expansions as the primary reasons for increased water demand amongst the companies.

In 2020, 25 responding companies withdrew, consumed, and discharged 7,933,064 megalitres, 1,403,171 megalitres, and 6,625,032 megalitres of water, respectively. However, in 2019, these figures stood at 217,736 megalitres, 860,517 megalitres, and 67,686 megalitres, respectively for 15 responding companies.

Measured and monitored water aspects



86 <https://b8f65cb373b1b7b15feb-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/000/893/original/CDP-india-business-case-for-water-disclosure.pdf?1472051621>

87 https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/005/312/original/Analysis_of_CA100_Data_for_CDP_Investor_Signatories_v5.pdf?1596046258

88 https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/005/312/original/Analysis_of_CA100_Data_for_CDP_Investor_Signatories_v5.pdf?1596046258

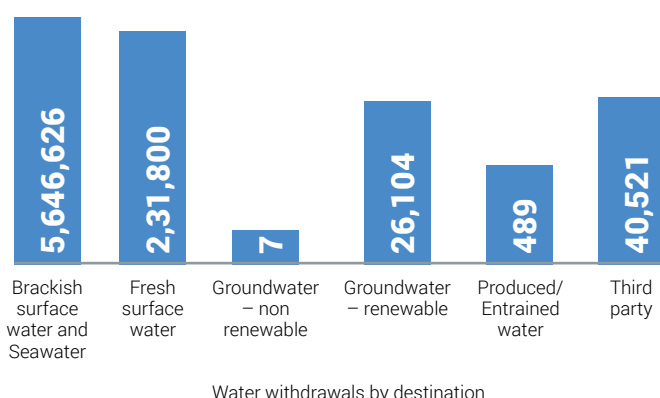
89 https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/005/312/original/Analysis_of_CA100_Data_for_CDP_Investor_Signatories_v5.pdf?1596046258

Data further shows that brackish surface water and seawater were the primary water sources for industries, followed by fresh surface water source. The electric utilities sector was the most reliant on brackish surface water and seawater, accounting for 72% of the sector's total water withdrawals. At 59%, fresh surface water was the primary source of withdrawal for the chemicals sector. Of the 28 companies, 13 had implemented water conservation measures to reduce water withdrawals from groundwater sources this year. Water withdrawals from groundwater - renewable accounted for less than 0.5% of total withdrawals.

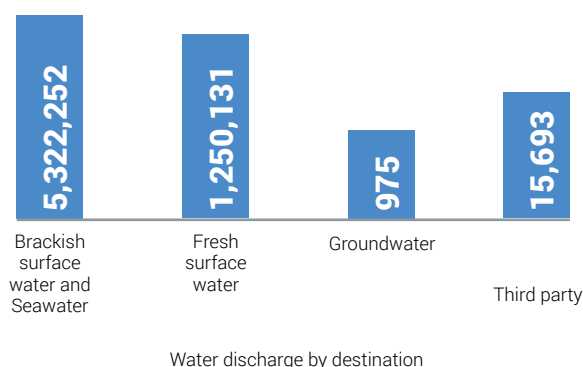
In terms of water discharge, most (81%) was released into brackish surface water and seawater environments. Discharges into fresh surface water accounted for the remaining 19% of the total discharges. Our data suggests more companies are installing zero liquid discharge units and water harvesting techniques across their facilities, leading to less groundwater discharge.

Fresh surface water accounted for 29% of total water withdrawals by source in 2020. India's major river basins - Ganges, Brahmaputra, Godavari, Indus, and Cauvery are the primary source of freshwater for the industries. Around 15% of total freshwater demand from CDP responding companies was supplied by the

Water withdrawals (megaliters/year)



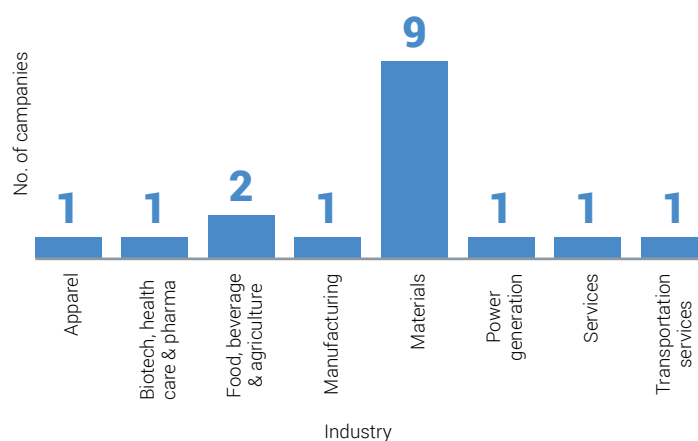
Water discharge (megaliters/year)



53 facilities out of a total of 83 from the responding companies were in areas with water-stress.

Ganges and Brahmaputra river basins, another 15% came from the Godavari basin, followed by Cauvery, Indus, Banas, and Sabarmati river basins. The demand for water has increased over the years, causing these basins to rank among the most water-stressed catchments in the world.⁹⁰ Of the 83 facilities in India, 53 were in water-stressed regions. Our data shows that around 60% of total responding companies withdrew water from water-stressed regions. Of these, nine were from the materials industry and two were from the food, beverage & agriculture industry.

Industry-wise water withdrawals from water-stressed areas

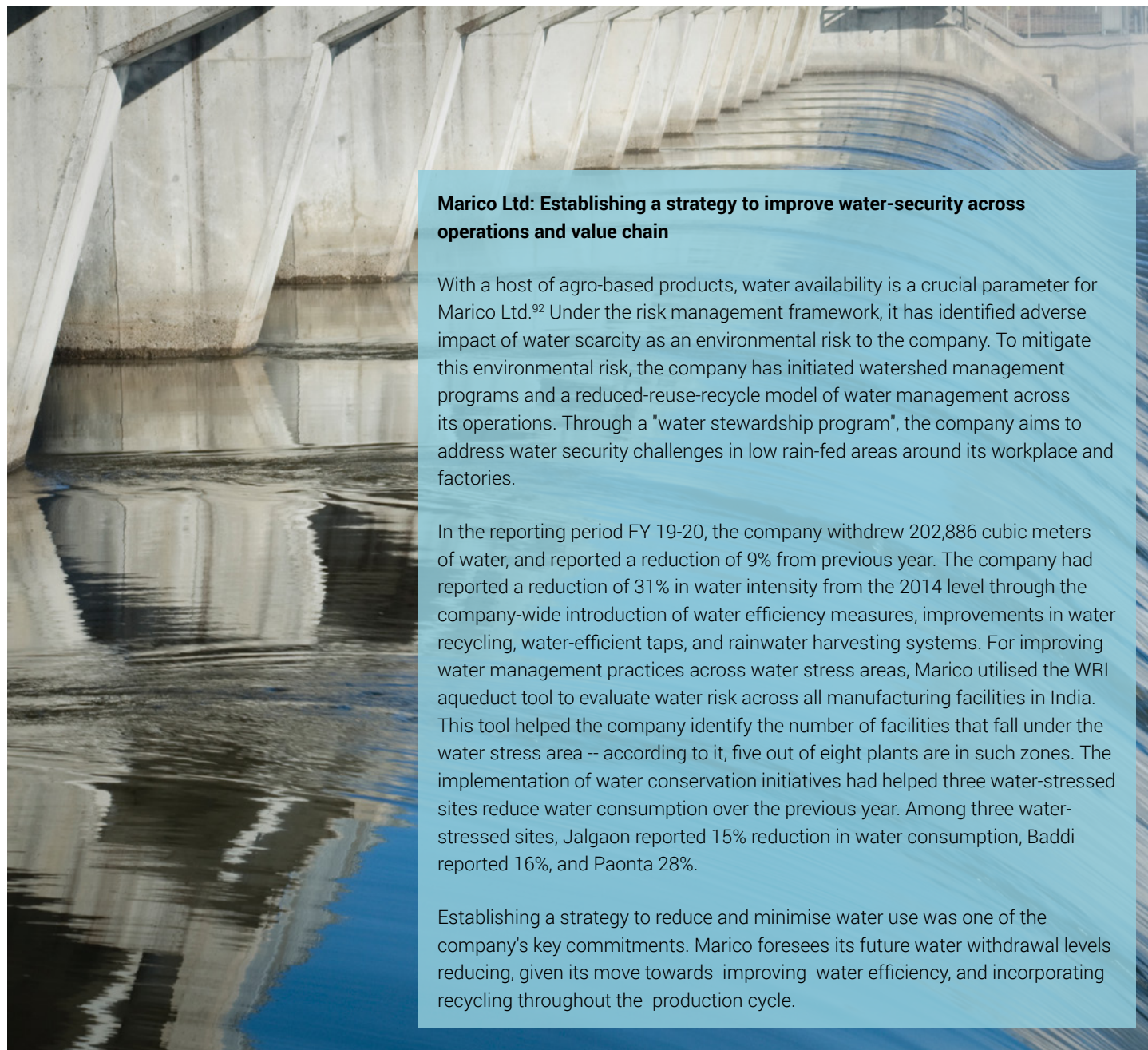


Governance and Business Strategy

For a long time, corporate sustainability strategies have focused on measurable and manageable challenges such as product footprint, efficiency in supply chain, water conservation and others. Businesses have begun to take stock of water security by innovating for improved efficiency, measuring direct withdrawals, assessing risk to neighbours, and considering leakages.

CDP's data shows that corporate leaders across India are responding to this crisis by focusing on their water policy to monitor risks and opportunities and integrate it in their strategies. Around 71% companies report having a documented water policy that is accessible to the public. Up to 93% companies indicated that they have a board-level oversight of water related issues within the organisation, observed either by the Chief Executive Officer (CEO) or the director on board followed by the board-level committee.

Around 43% of the responding companies report on water-related issues quarterly and 33% more frequently. This shows the increasing self-awareness among companies on water-related issues. Further, 63% of these companies offer some form of



Marico Ltd: Establishing a strategy to improve water-security across operations and value chain

With a host of agro-based products, water availability is a crucial parameter for Marico Ltd.⁹² Under the risk management framework, it has identified adverse impact of water scarcity as an environmental risk to the company. To mitigate this environmental risk, the company has initiated watershed management programs and a reduced-reuse-recycle model of water management across its operations. Through a "water stewardship program", the company aims to address water security challenges in low rain-fed areas around its workplace and factories.

In the reporting period FY 19-20, the company withdrew 202,886 cubic meters of water, and reported a reduction of 9% from previous year. The company had reported a reduction of 31% in water intensity from the 2014 level through the company-wide introduction of water efficiency measures, improvements in water recycling, water-efficient taps, and rainwater harvesting systems. For improving water management practices across water stress areas, Marico utilised the WRI aqueduct tool to evaluate water risk across all manufacturing facilities in India. This tool helped the company identify the number of facilities that fall under the water stress area -- according to it, five out of eight plants are in such zones. The implementation of water conservation initiatives had helped three water-stressed sites reduce water consumption over the previous year. Among three water-stressed sites, Jalgaon reported 15% reduction in water consumption, Baddi reported 16%, and Paonta 28%.

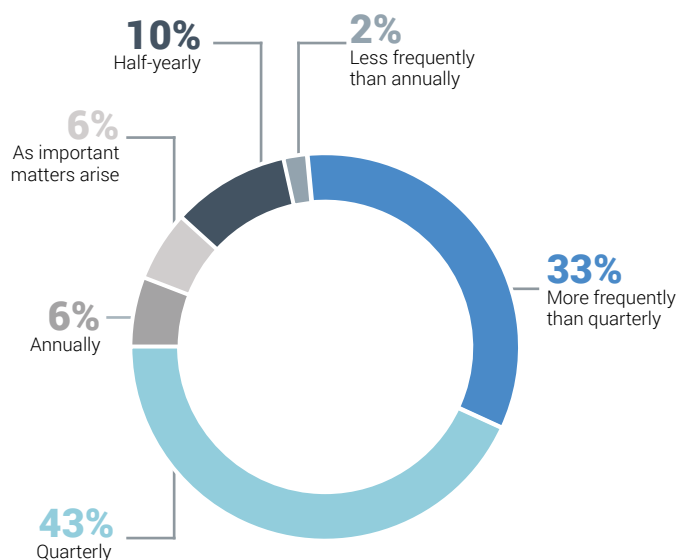
Establishing a strategy to reduce and minimise water use was one of the company's key commitments. Marico foresees its future water withdrawal levels reducing, given its move towards improving water efficiency, and incorporating recycling throughout the production cycle.

incentive to their employees – monetary or otherwise -- for the management of water related issues.

Businesses are stepping up and playing a vital role in developing water initiatives that can ease the stress on crucial watersheds. Companies are also looking into water security related long-term business objectives and financial planning as a part of their overall business plans. Almost 70% companies prefer short to mid-term (5-10 years) over long-term (11-30 years) planning. This does not come as a surprise as water effects are felt locally and require more immediate strategic planning. Of the 28 reporting companies, 12 use climate-related scenario analysis to inform its water-related business strategy and eight anticipate doing so in the next two years. A majority of these companies belong to the chemicals and the electric utilities sector.

In 2019, about 13% companies were pricing their water; this increased in 2020 to 18% and 50% are now exploring the its possibilities. Companies such as Ambuja Cement (US\$110/ ₹7800

Frequency of reporting on water-related issues



to US\$8240/ ₹579800 per megalitre), Dr. Reddy's Laboratories (US\$0.88/₹67 to US\$5.91/₹449 per KL), Piramal Glass, and Tata Steel use an internal price on water.

Risks & opportunities

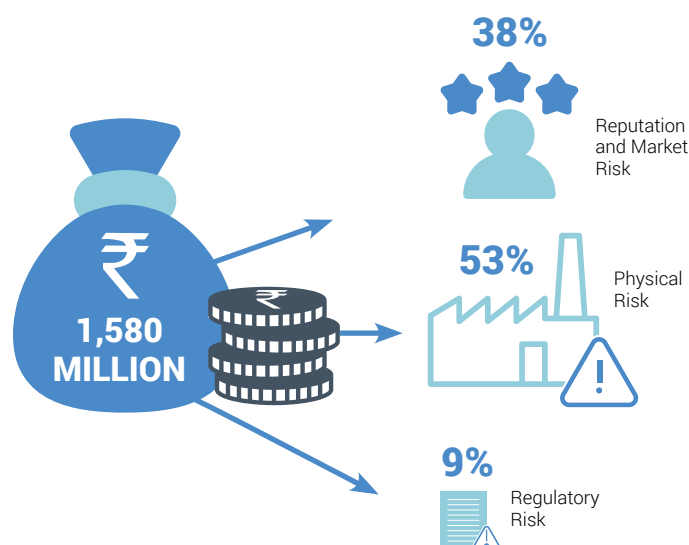
Dwindling water supply is a major cause of concern for businesses since it poses significant direct and indirect impacts. Visible risks such as droughts have a more explicit impact as they ruin vegetation and severely undermine the agriculture sector. But subtle impacts present challenges to other sectors. Water shortages also threaten the long-term viability of businesses by leading to higher costs, eventually borne by the consumers. Without proper management, the economic repercussions of water scarcity will be felt in myriad ways⁹².

In 2020, companies that experienced detrimental water-related impacts have incurred financial losses worth ₹1,580 million. Physical risks such as inadequate infrastructure and increased water stress account for more than half of these commercial losses followed by reputational-cum-market like subpar access to water, sanitation and hygiene services, and regulatory risks, e.g.- failure to set mandatory water efficiency, conservation, and recycling standards. Corporations should thus strategically prioritise dealing with these risks to safeguard their financial bottom lines. For this, organisations have looked to secure alternate sources of water supply, adopt water efficiency and conservation practices as well as reuse and recycling of water.

A 2018 report from NITI Aayog⁹³ highlighted the fact that the country faced its worst water crisis that year. Rising water challenges have put strong regulatory pressure on businesses in India with significant operational risks. The private sector is a big contributor towards deepening water security issues but is also crucial in addressing it.

Given the current situation with water resources, it is perhaps unsurprising that many of the companies responding to CDP find themselves exposed to a plethora of physical and transition risks – that is, risks from regulatory or consumer reforms aimed at addressing the water crisis. These risks threaten their reputation and license to operate, their supply chains' security, financial stability, and their ability to grow. As per CDP's Global Water

Total financial loss by reporting companies as per risk type



Report, 2019⁹⁴ the combined business value at risk reported in 2019 topped out at US\$425 billion with about 40% of the risks anticipated to hit within the next 1-3 years. Whether it was the blockading of a Newmont Goldcorp mine in Mexico, or poor water quality threatening the production of Unilever's Hellmann's mayonnaise in the Mississippi River Basin, the impacts of the global water crisis are already being felt.

Water risks and risk assessment

As per the 2020 data, 71% of the responding companies consider current or future water-related regulations as a risk to business, followed by 57% companies that consider access to WASH⁹⁵ services for employees as very relevant and always included in their water-risk assessments. This shows that companies are vigilant about providing safe access to drinking water, sanitation arrangements and proper hygiene at workplace. The COVID-19 pandemic has highlighted the importance of WASH to human health and well-being. Safely managed WASH services, along with good hygiene practices, can help prevent infectious diseases that kill millions each year.⁹⁶ In addition, 50% companies reported that water used for their key commodities/raw materials is relevant enough to be considered for their risk-assessment. This was the most pertinent for chemical sector companies.

In 2020, companies that experienced detrimental water-related impacts have incurred financial losses worth **₹1,580 million.**

25 of the 28 Indian responding companies undertake water-related risk assessment.

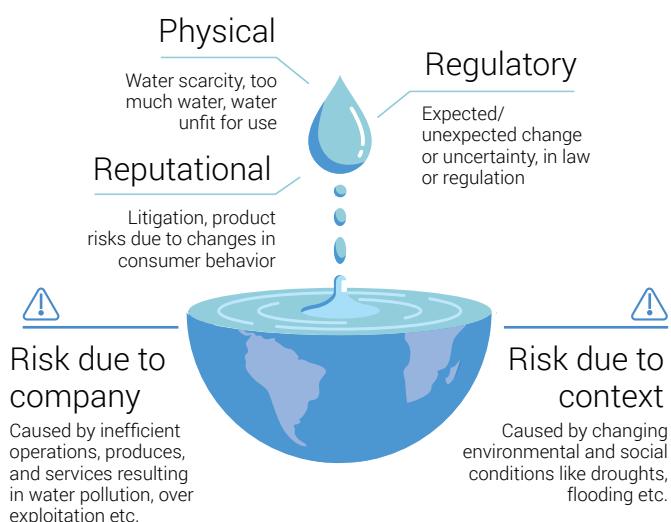
⁹² <https://globalriskinsights.com/2016/12/economic-cost-global-water-scarcity/>

⁹³ https://niti.gov.in/sites/default/files/2019-06/Final%20Report%20of%20the%20Research%20Study%20on%20the%20Composite%20Water%20Resources%20Management%20Index%20for%20Indian%20States%20conducted%20by%20Dalberg%20Global%20Development%20Advisors%20Pvt.%20Ltd_New%20Delhi.pdf

⁹⁴ https://6fefcb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/005/165/original/CDP_Global_Water_Report_2019.pdf?1591106445

⁹⁵ The term WASH refers to the provision of water, sanitation, and hygiene. Universal, affordable and sustainable access to WASH is a key public health issue within international development and is the focus of the first two targets of Sustainable Development Goal 6 (SDG 6)

⁹⁶ <https://www.worldbank.org/en/topic/water/brief/wash-water-sanitation-hygiene-and-covid-19>

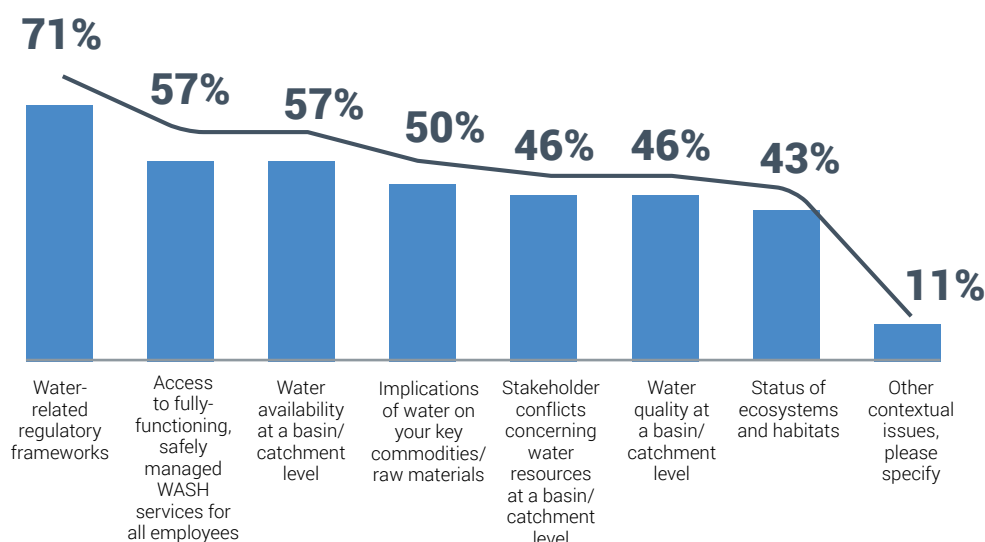


It is crucial to consider stakeholders in risk assessment procedures for a comprehensive understanding of water-related risks. Of the 25 companies that undertake water-related risk

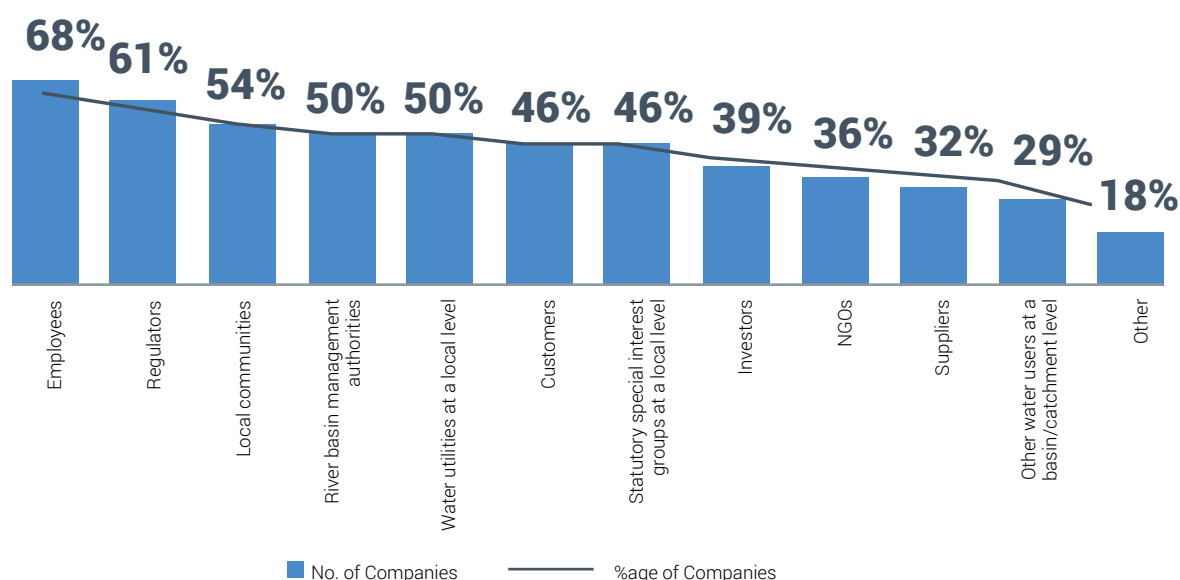
assessments, 68% always include employees in their internal assessment procedures by conducting training and awareness programs on water conservation initiatives, communicating water-related policies etc. This is followed by regulators and local communities, who are relevant in water-risk assessment procedures at 61% and 54% respectively for the responding companies. It is a positive sign that Indian companies are engaging with their employees and local communities and ensuring that the latter are not negatively impacted in terms of habitation, health, and water availability.

According to The World Economic Forum's Global Risk Report 2020⁹⁷, water crises are among the top five risks in terms of impact for the past ten consecutive years. Water-related risks are substantive in the risk assessment processes and identified as a threat to companies' bottom line, putting at risk a combined business value of US\$425 billion, according to CDP 2019 data.

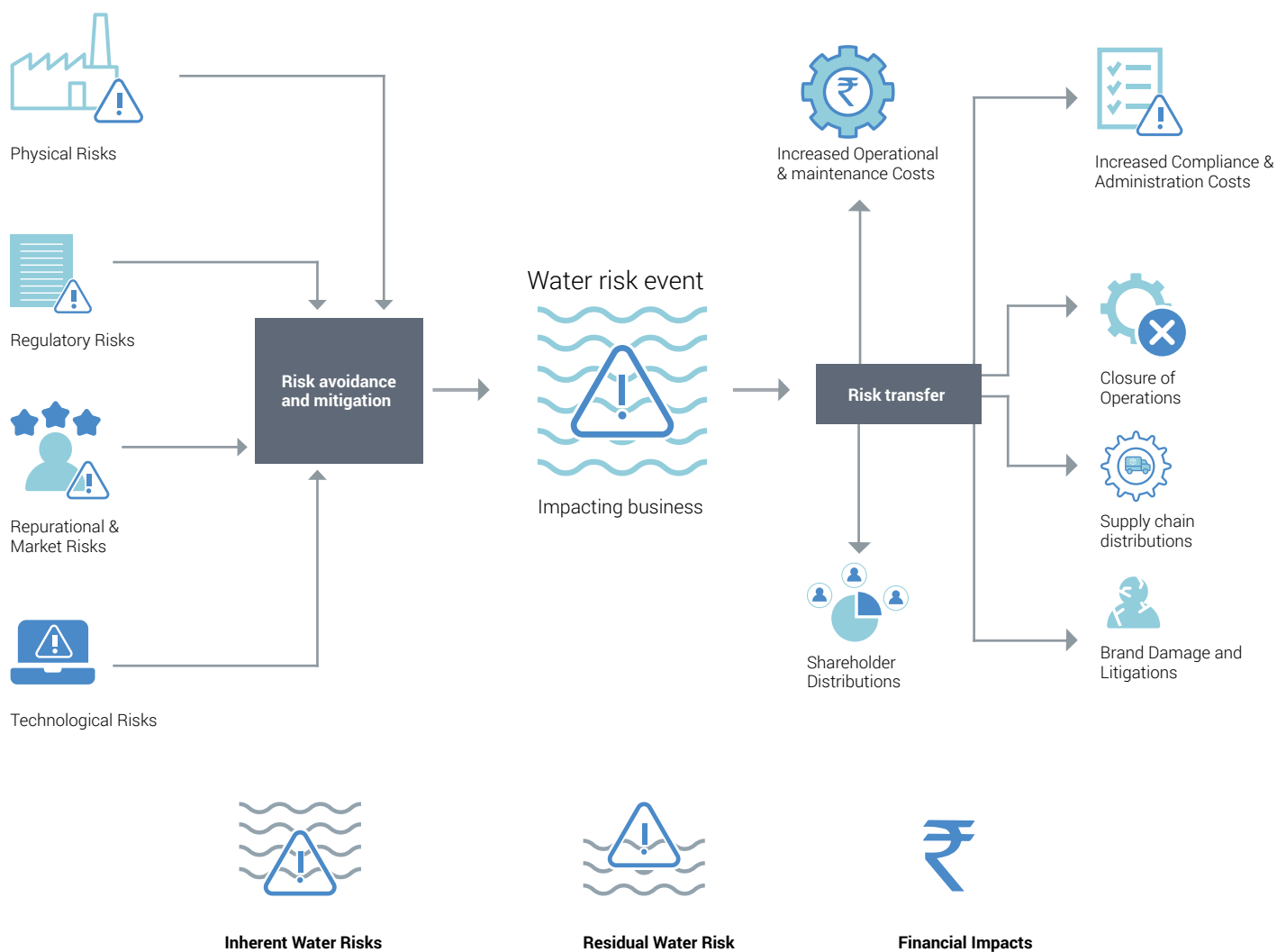
Relevancy of water-related risks



Relevancy of stakeholders in water-risk assessment



⁹⁷ <https://www.weforum.org/reports/the-global-risks-report-2020>



Physical Risks

All the figures reported are in million rupees.



143,721

Increased water stress



41,105

Increased water scarcity



17,604

Drought



820

Inadequate infrastructure



300

Ecosystem vulnerability



69

Severe weather events



63

Declining water quality



13

Flooding

Regulatory Risks

Higher water prices

233

Tighter regulatory standards

120

Technology Risks

Transition to water intensive, low carbon energy sources

3

CDP's data shows that physical risks seem to have the highest magnitude of impact on the Indian responding companies. Drought is seen to be the primary driver of potential substantive impact.

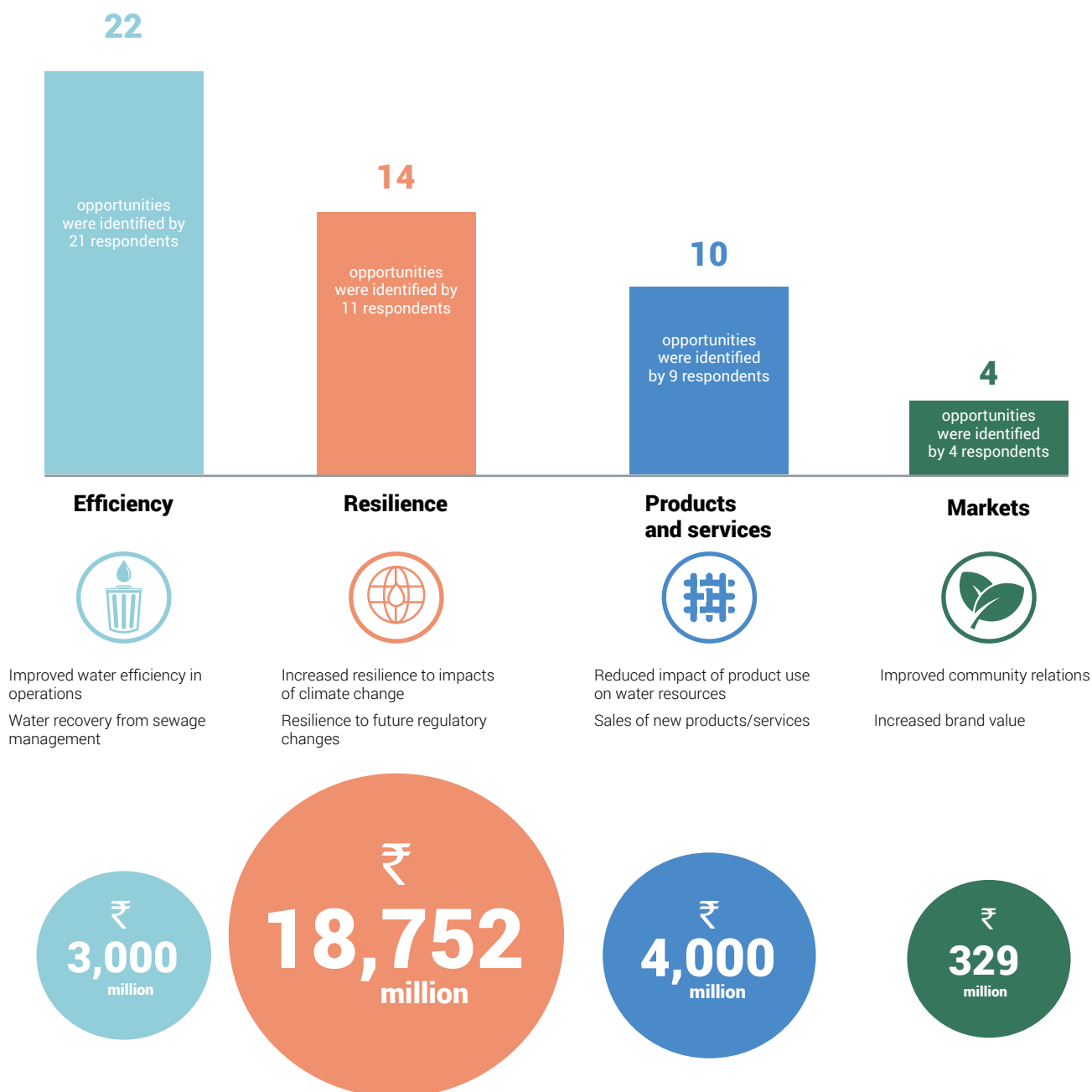
Where there is risk, there is opportunity

Where there's risk, there's reward. Industrial wastewater for example, is a vast, untapped resource. It is a potential source of heat, power, process water and high-value materials. And there has never been a better time for this transformation to take place – technologies are better, the regulatory climate is favourable, and the business case is clear. Meanwhile, the market demand for pollution-free products is growing. For companies to thrive, they will need to be aligned to changing consumer demands. If

they respond to these opportunities then market differentiation, resilience and profitability are on the table.

Globally corporate leaders have started realising the untapped potential of smart water technology and the market for smart water management is anticipated to grow from US\$8.46 billion in 2016 to US\$20.10 billion in 2021⁹⁸. Industrial wastewater has for a long time been reused for cooling towers, steel works, oil refineries, textile manufacturing and paper production. It was found that 15 of the 23 companies valued improved water efficiency in operations as their primary opportunity having a substantive financial or strategic impact on business.

26 of the 28 responding companies (approx. 93%) identified water-related opportunities in their business



⁹⁸ <https://www.marketsandmarkets.com/Market-Reports/smart-water-management-market-1265.html>

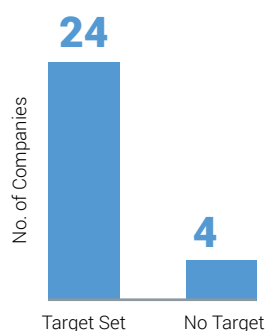
Businesses have identified transparency in water management issues as a fundamental activity and disclosure through CDP's annual water questionnaire produces a standard, comparable dataset. McGill University and Millani found that companies disclosed through CDP ranked 19 percentiles better than the average business in their ability to access capital⁹⁹. The research showed that a comprehensive voluntary disclosure produces a quality management team with enhanced awareness of threats and opportunities linked to climate and environmental change.

Targets and Goals¹⁰⁰

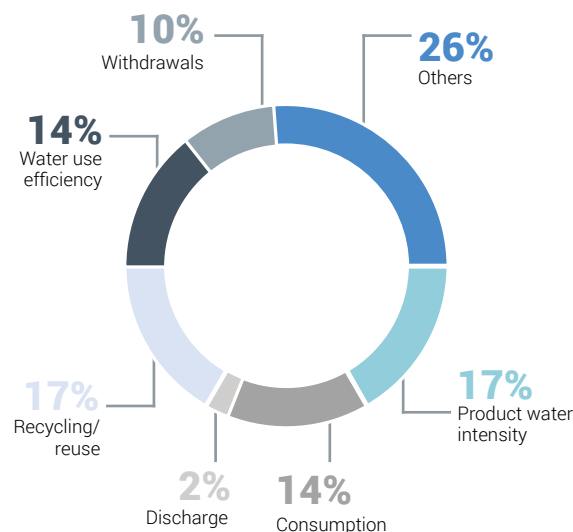
In response to declining water resources, many companies have started engaging in water stewardship and setting water targets aligned with SDG Goal 6 to ensure availability and sustainable management of water, sanitation, and hygiene facilities for all.¹⁰¹ Developing water-related targets helps companies make meaningful change from informed actions at the local level¹⁰². In 2020, four companies did not set water-related targets within their operations. Whereas 24 companies had water-related targets, 26% of them had set targets for product water intensity, 17% set recycling/reuse targets, and 14% focused on water use efficiency.

Companies can set goals and targets on a range of operational issues to drive performance and/or manage risks and opportunities. CDP's data shows that a majority had set targets at the company-wide level – 55% of responding companies reported setting water targets across the company. This was followed by 26% who set water targets at the business level and 19% at the site or facility level. While setting water goals, around 56% of companies monitored their goals at the company level, 24% at the site/facility level and the remaining at the basin, business, or country-level.

Water targets monitored at the corporate level



Categories of water targets monitored at the corporate level



A company has various drivers for setting goals and targets, and it tries to align these with increased stakeholder concerns and environmental legislation. Data shows that most organisations considered reducing environmental impact and risk mitigation as the primary motivation for monitoring water goals and targets. Organisations also considered brand value protection as one of the important factor while setting goals.

55% of companies set company-wide water targets.

56% of companies set company-wide water goals.

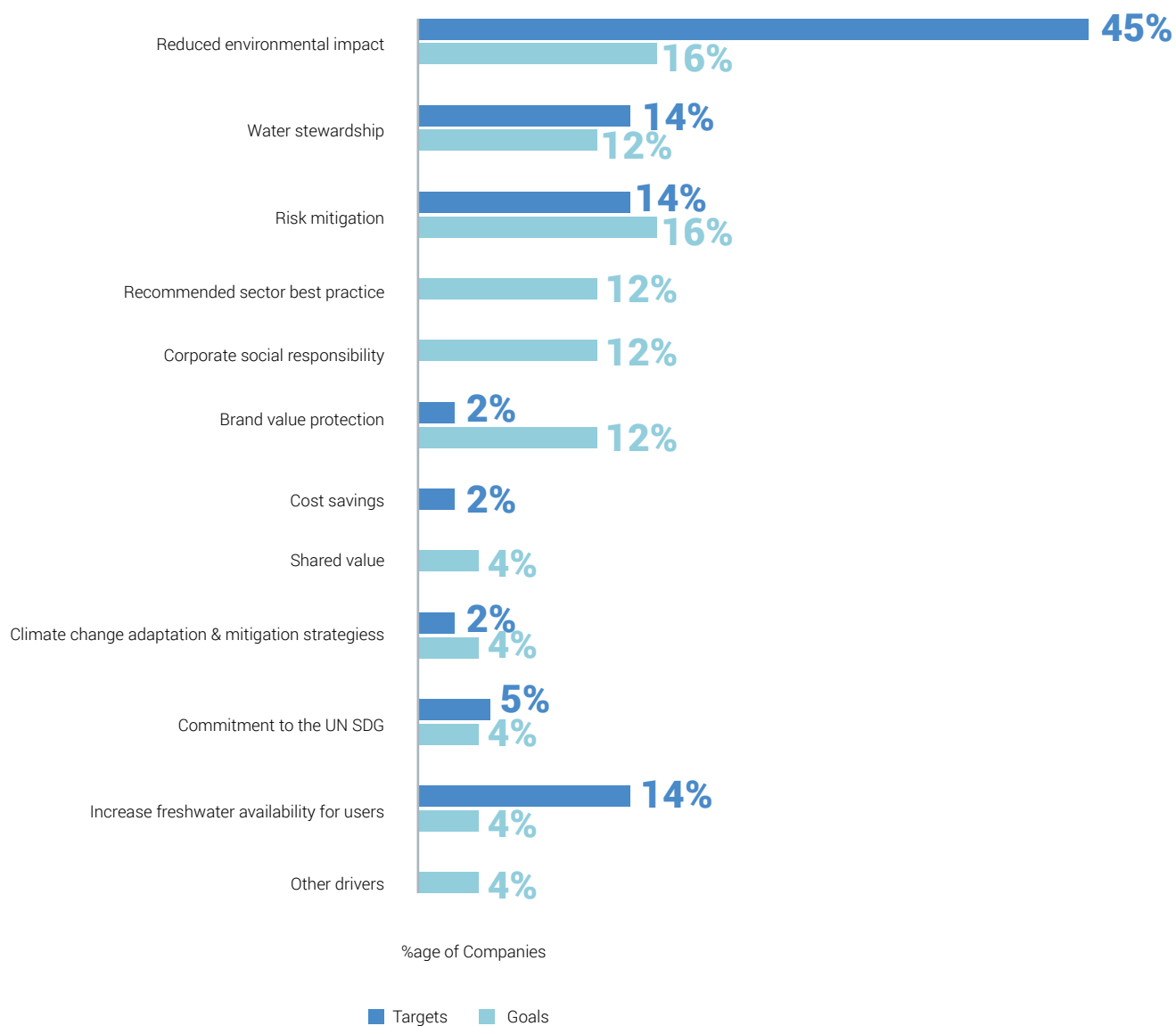
99 Craig, M., Coulombe, E., Nostrat, A. 2019. The Role of CDP Disclosure to Improve Access to Capital, Research Note: https://f01c8ee6-cac3-40ff-a0e4-8bfb54f2b88b.filesusr.com/ugd/66e92b_30b06fd11b9c43d88428f768676e9a8b.pdf

100 Targets – quantitative, Goals – qualitative

101 <https://unstats.un.org/sdgs/report/2020/goal-06/>

102 <https://ceowatermandate.org/site-targets-guide/>

Drivers behind setting water targets and goals at the corporate level



PROTECTING OUR FOREST WEALTH

Deforestation is fundamentally linked to climate change. According to the IPCC Special Report on Climate Change and Land (2019)¹⁰³, 11% of global GHG emissions are from deforestation, and from the conversion of natural ecosystems for human use.

In 2020, three Indian companies responded to CDP's forests questionnaire – one responded to the request for disclosure from investors while two responded to their customers. Globally, 687 companies responded to CDP's forests questionnaire, and 57% of them evaluated deforestation-related risks at US\$53.12 billion.

The world lost an estimated 10 million hectares of forest annually between 2015 and 2020¹⁰⁴. Protecting and restoring forests and other natural ecosystems could provide up to 30% of climate change mitigation action needed to limit global warming to below 2°C by 2030.¹⁰⁵

Global demand for agricultural commodities is the primary driver of deforestation and ecosystem conversion – timber is extracted unsustainably and land is cleared for agricultural production. This represents major risks to businesses as commodities associated with deforestation such as palm oil, soy, cattle and timber products are the building blocks of millions of products traded globally, and therefore, feature in the supply chains of numerous organisations.

The unsustainable production and supply of these commodities and activities not only poses a significant business risk but also has a severe negative impact on the environment, especially the climate crisis.

At an 8% annual growth rate, edible oil consumption in India is growing faster than the 3% growth rate in production. Imports and imports are rising to fill the gap. As a result, India still is the largest importer of edible oils, followed by China, European Union, and the United States. India's edible oil imports in MY 2020/21 are predicted to rise 6% to 15 MMT; of this, 8.5 MMT will be palm oil, 3.5 MMT soybean, 2.8 MMT sunflower seed oil and 0.2 MMT rapeseed (canola) oil.

-United States Department of Agriculture¹⁰⁶

We can't address climate change without protecting our forests.

They are vital carbon stores that help reduce global warming.



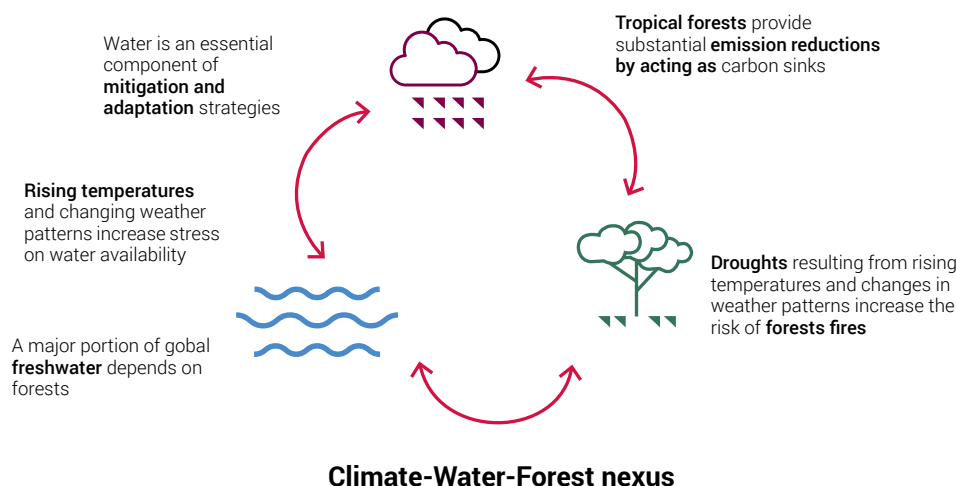
The mitigation potential of reduced deforestation is
1/3 of the global emissions

¹⁰³ <https://www.ipcc.ch/srccl/>

¹⁰⁴ The State of the World's Forests 2020: Forests, biodiversity and people

¹⁰⁵ <https://www.pnas.org/content/114/44/11645>

¹⁰⁶ https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Oilseeds%20and%20Products%20Annual_New%20Delhi_India_04-01-2020



Disclosure on deforestation management through CDP could be a significant opportunity for companies operating in India, one of the largest importers of palm oil in the world. This can help Indian companies tap into lucrative opportunities by scaling sustainable trends. CDP's forests questionnaire allows companies that produce, source, or use palm oil, soy, timber, cattle, cocoa, coffee and rubber to disclose. Moreover, new biodiversity-focused metals & mining and coal sector questionnaires were introduced in 2019.



'Palm oil consumption dropped by **40%** in 2020 in India due to COVID-19'

Palm oil is the most commonly used processed oil in industrial food production, with its production being responsible for 5% of global tropical deforestation¹⁰⁷. India's palm oil imports account for nearly 2/3rd of its total imports of edible oil. This demand was shaken in 2020 when the pandemic hit with a 40% fall in the consumption of palm oil during the lockdown¹⁰⁸. India's imports, which account for nearly 20% of the global trade in palm oil, will have a major effect on efforts to make its production and processing sustainable. The primary barrier for sustainable palm oil consumption in

India stems from it belonging to a more price-sensitive and volume driven market, making environmental impacts a low or non-existent priority in the minds of consumers.

Climate change can reduce palm oil production and with demand outstripping supply, prices could rise. The Roundtable on Sustainable Palm Oil (RSPO) has developed a set of environmental and social criteria which companies must comply with in order to produce Certified Sustainable Palm Oil (CSPO). When properly applied, these criteria can help in minimising the negative impacts of palm oil cultivation.



Soy cultivation is the second largest soft commodity driver of tropical deforestation after cattle products. Various aspects of soy production generate GHGs that contribute to climate change. India imports around 33 lakh tons of soybean oil¹⁰⁹. According to data from the US Department of Agriculture, India

is set to import 35 lakh metric ton of soybean oil in 2020/2021.¹¹⁰ In addition, India is also responsible for clearing huge spaces of forest land in Brazil that contributed to 23% of soybean imports to India in 2018¹¹¹. Soy is also used as fodder for livestock, and a growing local demand for poultry products will further affect India's position on deforestation. The country ranks amongst the top four producers of egg and chicken in the world and it is increasingly exporting to the Middle East and Europe¹¹².



Cocoa has been a notable agent of deforestation since the last century. The global production of cocoa has increased from 3.4 million to 4.5 million tonnes between 2000 and 2014 while the land use footprint of its plantations rose by 37% to 25.7 million acres¹¹³. About 90% of

cocoa is produced by 7 countries -- Ivory Coast, Ghana, Indonesia, Ecuador, Cameroon, Brazil and Nigeria. The dearth of incentives for improving the plantations combine with high investment costs to make cocoa a low yield crop, forcing farmers to resort to clearing untouched forest lands in order to meet the growing demand, and

¹⁰⁷ Deforestation & Palm Oil

¹⁰⁸ As world's largest importer of palm oil, India has a duty to push for ethical production practices

¹⁰⁹ <https://seaofindia.com/interim-data-on-import-of-edible-oils-march-2020-down-by-32-percent-nov19-to-mar20-down-by-10-percent/>

¹¹⁰ https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Oilseeds%20and%20Products%20Annual_New%20Delhi_India_04-01-2020

¹¹¹ <https://resourcetrade.earth/?year=2018&exporter=76&importer=699&category=87&units=value>

¹¹² <https://www.rvo.nl/sites/default/files/2017/05/poultry-sector-in-india-2017.pdf>

¹¹³ <https://resourcetrade.earth/publications/cocoa-trade-climate-change-and-deforestation>

for cutting down production costs¹¹⁴. In Southern India, Cocoa is mainly grown as an intercrop in conjunction with coconut, areca nut oil and rubber plantations. India's consumption in 2015-16 was 30,000 tonnes of which 57% was imported while the domestic production rose at an annual rate of 3.7% in the same period¹¹⁵. Failure to protect forests in the event of a sharp cocoa price increase will lead to unsustainable levels of deforestation¹¹⁶.



The US\$10 billion **coffee** industry too leaves a gargantuan ecological footprint. It is estimated that every cup of coffee consumed results in the loss of one square inch of forest cover¹¹⁷. Each year around 250,000 acres of land is cleared for coffee which is unsustainable. The Kodagu district

in the Western Ghats of India is a major biodiversity hotspot which produces about one-third of the country's coffee. This region has more than 270 tree species which are all under significant ecological stress due to the coffee farms that threaten land use and land cover, while potentially leading to the felling of about 21,000 trees¹¹⁸.



An estimated 8-10% of global production of low-cost **timber** products comes from illegal logging in forests. To meet the burgeoning demand of timber produce, about 2.5 million acres of land is converted to fast-

wood forests (timber plantations) across the world annually and this hampers the ecosystem services that nature provides us¹¹⁹. With the World Bank forecasting that the global market for wood is set to quadruple by 2050¹²⁰, reducing timber's environmental footprint is vital for the industry's success. In India, there is no provision of a central data pool that maintains records of production and consumption of timber. There is a need to address this inconsistency in reporting and data collection by forging a comprehensive strategic policy and providing institutional support¹²¹. This would ensure effective collaboration among all stakeholders that would result not only in the production of quality forest products, but also a sustainable timber sector.



Beef production remains by far the largest driver of deforestation in the world's tropical forests, as forest land cleared for cattle is more than twice the combined area required for producing soy, palm oil, and wooden products. The problem of cattle ranching

is particularly profound in the Amazon region, the largest forest reserve in the world, leading to 80% of present deforestation rates¹²². Clearing land for grazing causes irreversible habitat loss, soil degradation, and conflict between humans and wild animals. India imports 15% and 12% of bovine leather from Turkey and Brazil respectively which poses a great threat to the forest areas of these countries¹²³. It also jeopardises the earnings of the Indian companies manufacturing such products for its European consumers who have a high degree of sensitivity and awareness around deforestation¹²⁴. In a larger context, the impact of cattle stretches far beyond the realm of forests and is one of the key reasons for rising global emissions and climate change. There are more than 1.5 billion cows on Earth with each of them capable of expelling 1.7 times more GHG emissions than cars in the form of methane burps, a gas several times more potent than CO₂ in terms of trapping heat. It is therefore not surprising that cattle accounts for a colossal 18% in atmospheric carbon emissions¹²⁵. To put this in perspective, this surpasses emissions of the third largest CO₂ emitter, India, which accounts for a 7% share in worldwide emissions¹²⁶.



Another commodity whose production has significant impact on the environment is **rubber**. Environmentalists have warned for years that the rapid expansion of rubber plantations would come at the expense of natural forests. Rubber has

not been subjected to extensive publicity in a way that palm oil, soy, and paper have been over the years, given their impact on the environment—publicity that has led to adoption of robust sustainability criteria for these commodities. India's natural rubber plantation spans across an area of 1.83 million acres as of 2012, with the raw material being used as an input for making 35,000 finished products of industrial importance¹²⁷. Currently, the impact assessment of large-scale rubber plantations on the environment is non-existent in the country, a worrying sign considering India's position as the 4th largest consumer in the world¹²⁸.

114 <https://resourcetrade.earth/publications/cocoa-trade-climate-change-and-deforestation#:~:text=As%20cocoa%20tends%20to%20be,forest%20loss%20over%20this%20time.>

115 <https://economictimes.indiatimes.com/industry/cons-products/food/although-indias-consumption-of-chocolate-is-steadily-growing-but-we-still-depend-on-imports-for->

116 <https://nationalzoo.si.edu/scbi/migratorybirds/research/cacao/ruf.cfm>

117 <https://ohiostate.pressbooks.pub/sciencebites/chapter/a-bitter-brew-coffee-production-deforestation-soil-erosion-and-water-contamination/#:~:text=For%20every%20cup%20of%20coffee,inch%20of%20rainforest%20was%20destroyed.&text=Chemical%20buildup%20in%20soils%20and,soil%20eroding%2C%20and%20land%20degradation.>

118 <https://webcache.googleusercontent.com/search?q=cache:YhaeYHVPWasJ:https://www.mdpi.com/1999-4907/11/4/480/pdf+&cd=6&hl=en&ct=clnk&gl=in>

119 <https://resourcetrade.earth/?year=2018&exporter=76&importer=699&category=87&units=value>

120 <http://documents1.worldbank.org/curated/en/240231467291388831/pdf/106467-REVISED-v1-PUBLIC.pdf>

121 <https://onlinelibrary.wiley.com/doi/full/10.1111/1477-8947.12094>

122 <https://globalforestatlas.yale.edu/amazon/land-use/cattle-ranching>

123 <https://resourcetrade.earth/?year=2018&importer=699&category=779&units=value>

124 <https://resourcetrade.earth/?year=2018&importer=699&category=779&units=value>

125 <http://large.stanford.edu/courses/2018/ph240/halper1/#:~:text=Every%20half%20hour%2C%20a%20cow,more%20potent%20than%20carbon%20dioxide.&text=There%20is%20rampant%20deforestation%2C%20especially,to%20make%20room%20for%20cattle.>

126 <https://www.investopedia.com/articles/investing/092915/5-countries-produce-most-carbon-dioxide-co2.asp>

127 <http://www.cwejournal.org/vol9no3/do-extensive-rubber-plantation-influences-local-environment-a-case-study-from-tripura-northeast-india/>

128 https://www.ibef.org/download/Rubber_Plastics_220708.pdf



Fossil-fuel and mineral mining accounts for 7% of global deforestation. Moreover, it not only presents a threat to forest cover and resource extraction, but also leads to long-term impacts such as soil and water pollution, infrastructure development, and

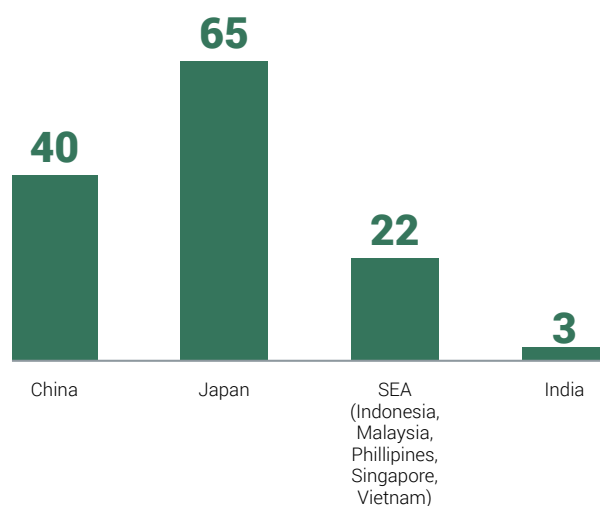
increased anthropogenic activity¹²⁹. While the effects of large-scale mining are easier to quantify as they are well regulated and undertake environmental impact assessments, it is the scope and impact of artisanal and small-scale mining (ASM) that goes under the radar due to lack of data and a high degree of informality in the sector. In India, this problem warrants special attention since over 12 million people are engaged in the ASM business, with women and girls from backward communities and those living below the poverty line being its primary employees¹³⁰. A landscape-level approach is critical not only to identify and monitor the environmental and social impacts of individual mining projects, but also to consider its interactions with other land uses as well, given the crucial role forests play in balancing the ecosystem¹³¹. India's investor requested company, Hindustan Zinc Ltd., was the first to disclose this year under the mining sector.

Hindustan Zinc: Pioneering forest and biodiversity conservation in the mining sector.

Hindustan Zinc Limited is the first investor-requested company in India to respond to CDP's Forests questionnaire. It demonstrated that a dedicated Biodiversity Policy and Management Standard is its compass in reducing flora and fauna disruption and in minimising or compensating its impact of operation through project scoping, site closure and beyond.

Companies in India currently lag behind their regional peers in terms of disclosure on deforestation management with only 3 companies disclosing on this topic in 2020.

Total no. of companies disclosing through CDP's Forests questionnaire in 2020 by HQ country/region



¹²⁹ <https://globalforestatlas.yale.edu/land-use/mining-extraction>

¹³⁰ <https://www.pactworld.org/state%20of%20asm>

¹³¹ https://www.researchgate.net/publication/38084575_Landscape_approach_for_quantifying_land_use_land_cover_change_1972-2006_and_habitat_diversity_in_a_mining_area_in_Central_India_Bokaro_Jharkhand

CITIES, STATES AND REGIONS

16

Indian cities and

2

Indian states
disclosed to CDP

Cities

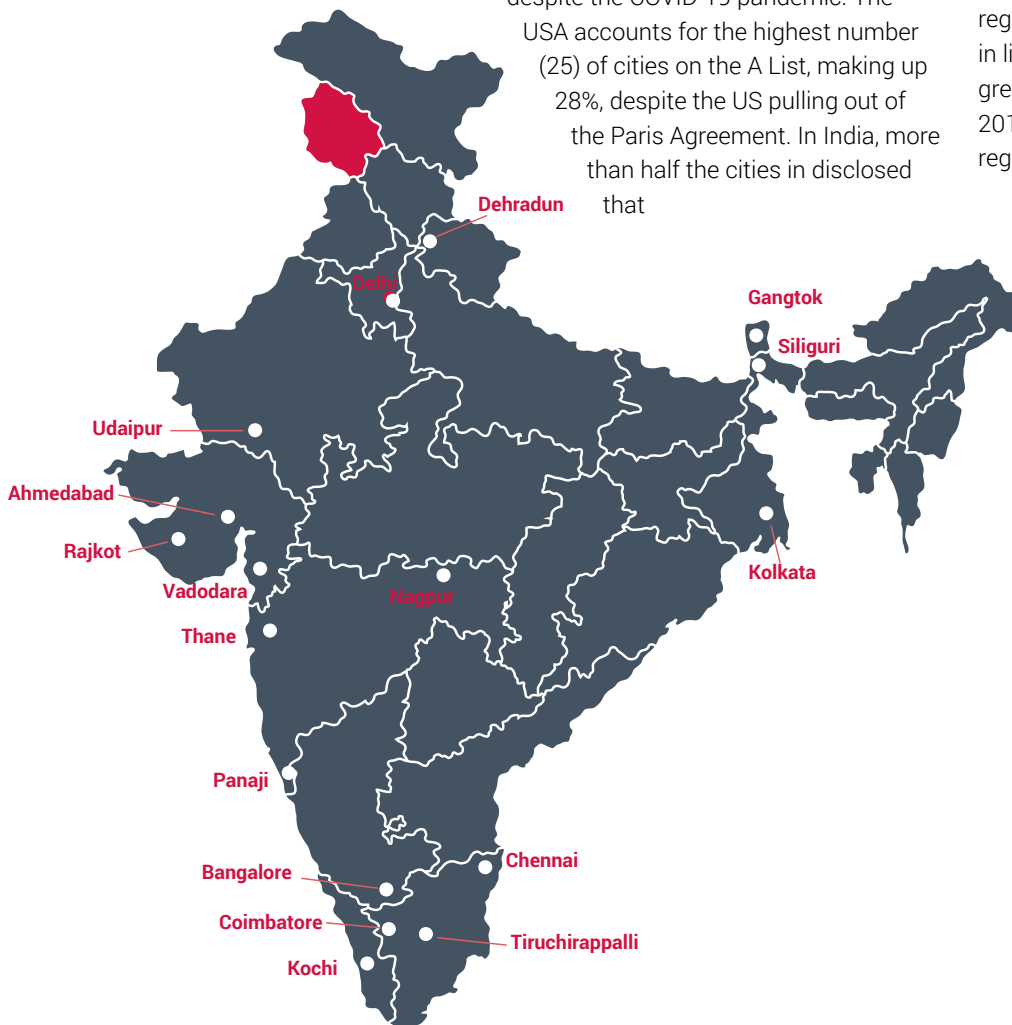
In 2020, over 800 cities disclosed their environmental information through CDP, including 16 Indian cities. The number of cities in India disclosing through the CDP-ICLEI Unified Reporting System increased from 13 in 2019 to 17. This was largely due to cities' ongoing commitments to climate leadership initiatives, such as the C40 Cities Climate Leadership Group (C40), the Global Covenant of Mayors for Climate and Energy (GCoM) and our partnership with ICLEI, whose South Asia Regional Office also acts as the GCoM South Asia Helpdesk.

they either have sustainability targets incorporated into the master planning of the city or it is in progress, while only 43% of the cities have a published plan that addresses climate change adaptation. Approximately half of the disclosing Indian cities have identified opportunities as a result of addressing climate change, and one-third of them have a GHG emission reduction target which is a strong indication towards a low carbon development pathway.

States and Regions

In 2020, the Union Territories of **Delhi** and **Jammu & Kashmir**, along with over 120 states and regions from across the world disclosed their environmental impacts through CDP. Globally, 90% of states and regions reporting a 2030 target have one in line with the IPCC's goal to reduce global greenhouse gas emissions by 40-50% from 2010 levels by 2030 and 55% of states and regions with a 2030 emissions reduction target are showing greater ambition than their national counterparts.

88 global cities reached CDP's A list, which include Bristol (UK), Miami (USA), Cape Town (South Africa), Buenos Aires (Argentina), and Auckland (New Zealand), despite the COVID-19 pandemic. The USA accounts for the highest number (25) of cities on the A List, making up 28%, despite the US pulling out of the Paris Agreement. In India, more than half the cities in disclosed that



India Snapshot

ANNEXURES

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

Sector	Company Name	2020 permission Status	Final score 2020	Scope 1	Scope 2	Scope 3	Number of categories reported in Scope 3
Bars, hotels & restaurants	Indian Hotels Co. Ltd.	public	C	50,610	239,568	23,824	3
Biotech & pharma	Biocon	public	C	41,948	133,110	Not Provided	
	Dr. Reddy's Laboratories	public	B	247,317	154,836	1,272,548	8
	ZCL Chemicals	public	D-	Not Provided	Not Provided	Not Provided	
Cement & concrete	ACC	public	B	16966585	643870	648068	3
	Ambuja Cements	public	B	14523738	551219	1973622	7
	Dalmia Bharat Ltd	public	B	11280051	537968	1320736.048	9
	JK Cement	non public	D	Private	Private	Private	Private
	JSW Cement Limited	public	B-	1398609	647870	572488	4
	Shree Cement	non public	C	Private	Private	Private	Private
	Ultratech Cement	public	B	47954830	1327185	5376354	4
Chemicals	Aarav Frances & Flavors Private Limited	public	Not Scored				
	GHCL LIMITED	public	D	1094705.36	4967.07	Not Provided	
	Godrej Industries	public	B	32311	44361	6735.893	3
	Gujarat Fluorochemicals	non public	C	Private	Private	Private	Private
	Jubilant Life Sciences Ltd	non public	C	Private	Private	Private	Private
	Kansai Nerolac Paints Limited	non public	Not Scored	Private	Private	Private	Private
	Tata Chemicals	public	B	4449880.61	45059.56	121623.95	5
	UPL Limited	non public	Private	Private	Private	Private	Private
	Godrej Consumer Products Limited	public	A-	33980	30848	26433	2

Note: Due to increase in sample size more samples were considered for this report. These samples include companies from the BSE Top 200 list, CDP's Fixed Income sample, FAIRR sample, Emerging markets sample, Environmental sample and Continuity climate change sample.

For further details visit https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/comfy/cms/files/files/000/003/423/original/CDP_Climate_Change_Sample_Investor_Request_2020.pdf

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

Sector	Company Name	2020 permission Status	Final score 2020	Scope 1	Scope 2	Scope 3	Number of categories reported in Scope 3
Energy utility networks	Adani Transmission Ltd	public	D	3187007.6	21155	93796.37	3
	GAIL	public	C	4925087	387358	1071	1
Financial services	Axis Bank	public	B	6250	168043	44147.12	3
	HDFC Bank Ltd	public	B	7649.19	390176	16424.53	3
	Indusind Bank	public	A	8831.6	62785.67	12779.12	3
	Kotak Mahindra Bank	public	C	90.78	69780	4290.177	3
	L&T Finance Holdings Limited	non public	Private	Private	Private	Private	Private
	State Bank of India	public	B-	390	1066386	257902	5
	YES BANK Limited	public	A-	3445.15	30993.69	48596.25	3
Agricultural commodities	Tata Consumer Products Ltd	public	A-	11731	34238	3348672.939	10
	Marico	public	A-	1380	12140	499568	9
Intermodal transport & logistics	Adani Ports & Special Economic Zone	public	B-	95905.791	176946.845	202567.171	3
IT & software development	HCL Technologies	non public	Private	Private	Private	Private	Private
	Infosys Limited	public	A-	15344	124063	371602	6
	Larsen & Toubro Infotech Ltd	public	B	394.85	25218.74	19080.34	2
	Mindtree Ltd	non public	A-	Private	Private	Private	Private
	Tata Consultancy Services	public	A-	26714	811815	702615	7
	Tech Mahindra	public	A	1803.807	105736.586	39285.212	5
	Wipro	public	A-	13366	124564	421527	7
Land & property ownership & development	Godrej Properties Limited	public	Not Scored	4,400	2,429	422	
	Mahindra Lifespace Developers Limited	public	B	397	2,675	589,525	8
Light manufacturing	APOLLO TYRES LTD	public	Not Scored	24207	60717	Not Provided	
	JK Tyres & Industries	public	C	158568	88424	Not Provided	

Sector	Company Name	2020 permission Status	Final score 2020	Scope 1	Scope 2	Scope 3	Number of categories reported in Scope 3
Media, telecommunications & data center services	Bharti Airtel	non public	D	Private	Private	Private	Private
	Reliance Jio Infocomm Limited	public	B	105018	1826762	2431950.34	3
	Tata Communications	public	A-	6376	108482	6938	3
Metal smelting, refining & forming	Hindustan Zinc	public	A	4480887	253756	4182181	10
	Vedanta Ltd	public	B-	57482869	1864711	Not Provided	
	JSW Steel Ltd.	public	A-	40045307	476901	4168823	8
	Tata Steel	public	A-	60116322	5687999	14970000	12
Metallic mineral mining	NMDC	public	D	29004	63671	1957	1
Oil & gas processing	Bharat Petroleum Corporation	public	B	5023580	366230	729820	2
	Indian Oil Corporation	public	D	18690000	54700	Not Provided	
Renewable power generation	Adani Green Energy	public	D	841	13313	1174	1
	Azure Power	public	Private	323	2767		
Specialized professional services	Mahindra & Mahindra Financial Services	public	B	3370	18847	22922	3
	Piramal Enterprises	public	C	44305.68	86928.44	Not Provided	
	Vakrangee Softwares Ltd.	public	B	20533.55	354.09	Not Provided	
Textiles & fabric goods	ARVIND Ltd	public	B-	351456.1	238894	Not Provided	
Thermal power generation	Adani Power Ltd	public	D	58970705	14607	6910800	1
	JSW Energy	public	B	17200521	36117	6115.1	2
	NTPC Ltd	public	D	252495018	15845	978052	3
	Tata Power Co	public	C	34952981	22051	1226	1
Tobacco	ITC Limited	public	B-	1241718	230192	206064	5
Transportation equipment	Hero Motocorp Ltd	non public	D	Private	Private	Private	Private
	Mahindra & Mahindra	public	A	40654	414552	58425531	11
	Tata Motors	public	A-	60533	266200	3140861	8

Appendix II: List of companies invited to respond to CDP

Climate Change – Investor requested companies¹³²

CDP Activity Group	Company name	Response Status	CDP Activity Group	Company name	Response Status
Air transport	InterGlobe Aviation Ltd	Not submitted	Chemicals	Asian Paints	Not submitted
	Jet Airways (India) Ltd.	Not submitted		Berger Paints India Ltd	Not submitted
Apparel design	Page Industries Ltd	Not submitted		Castrol India	Not submitted
Bars, hotels & restaurants	Indian Hotels Co. Ltd.	Submitted		Colgate Palmolive India	See Another
	Jubilant Foodworks Ltd	Not submitted		Coromandel International	Not submitted
Biotech & pharma	Abbott India Ltd	See Another		Dabur India	Not submitted
	Ajanta Pharma Ltd.	Not submitted		Emami Ltd.	Not submitted
	Alkem Laboratories Ltd	Not submitted		Godrej Consumer Products Limited	Submitted
	Aurobindo Pharma	Not submitted		Godrej Industries	Submitted
	Biocon	Submitted		GRAPHITE INDIA LTD	Not submitted
	Cadila Healthcare	Not submitted		HEG LTD	Not submitted
	Cipla	Not submitted		Jubilant Life Sciences Ltd	Submitted
	Divi's Laboratories	Not submitted		Kansai Nerolac Paints Limited	Submitted
	Dr. Reddy's Laboratories	Submitted		PI Industries Ltd	Not submitted
	Glenmark Pharmaceuticals	Not submitted		Pidilite Industries Ltd	Not submitted
	Lupin	Not submitted		Procter & Gamble Hygiene & Health Care Ltd	See Another
	Natco Pharma Ltd	Not submitted		SRF Ltd.	Not submitted
	Pfizer Ltd	See Another		Supreme Industries Ltd	Not submitted
	Sun Pharma Advanced Research Company Ltd	Not submitted		Tata Chemicals	Submitted
	Sun Pharmaceutical Industries	Not submitted		UPL Limited	Submitted
	Torrent Pharmaceuticals	Not submitted	Coal mining	Adani Enterprises	Not submitted
Cement & concrete	ACC	Submitted		Coal India	Not submitted
	Ambuja Cements	Submitted		Gujarat Mineral Devp. Corpn.	Not submitted
	Dalmia Bharat Ltd	Submitted	Commercial & consumer services	Quess Corp Ltd	Not submitted
	India Cements	Not submitted	Construction	Bharti Infratel Limited	Not submitted
	JK Cement Ltd	Submitted		GVK Power & Infrastructure	Not submitted
	Orient Cement Limited	Not submitted		Honeywell Automation India Ltd	See Another
	Shree Cement	Submitted		Larsen & Toubro	Not submitted
	The Ramco Cements Ltd	Not submitted		Voltas	Not submitted
	Ultratech Cement	Submitted			

¹³² These include companies from the BSE Top 200 list, CDP's Fixed Income sample, FAIRR sample, Emerging markets sample, Environmental sample and Continuity climate change sample. For further details visit https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/comfy/cms/files/files/000/003/423/original/CDP_Climate_Change_Sample_Investor_Request_2020.pdf

'See Another' -The response is covered by another CDP reporting company, usually the parent company.

CDP Activity Group	Company name	Response Status
Convenience retail	Avenue Supermarts Ltd	Not submitted
Discretionary retail	Aditya Birla Fashion and Retail Ltd	Not submitted
	Future Retail Ltd	Not submitted
Electrical & electronic equipment	Amara Raja Batteries Ltd	Not submitted
	Bharat Electronics	Not submitted
	Crompton Greaves Consumer Electricals Ltd	Not submitted
	Exide Industries	Not submitted
	Havells India	Not submitted
	Motherson Sumi Systems	Not submitted
	Whirlpool of India Ltd	See Another
Energy utility networks	Adani Gas Ltd	Not submitted
	Adani Transmission Ltd	Submitted
	CESC Ltd	Not submitted
	GAIL	Submitted
	Indraprastha Gas Ltd	Not submitted
	Power Grid Corpn. of India	Not submitted
	Reliance Infrastructure	Not submitted
Financial services	Torrent Power	Not submitted
	AU Small Finance Bank Ltd	Not submitted
	Axis Bank	Submitted
	Bajaj Finance Limited	Not submitted
	Bajaj Finserv	Not submitted
	Bajaj Holdings & Invst. (BHIL)	Not submitted
	Bandhan Bank	Not submitted
	Bank of Baroda	Not submitted
	Bank of India	Not submitted
	Canara Bank	Not submitted
	Cholamandalam Investment and Finance Co Ltd.	Not submitted
	Cholamandalam Investment and Finance Company Ltd	Not submitted
	City Union Bank Ltd.	Not submitted
	Edelweiss Financial Services Ltd	Not submitted
	Federal Bank	Not submitted
	General Insurance Corporation of India	Not submitted

CDP Activity Group	Company name	Response Status
Financial services	Gruh Finance Ltd	Not submitted
	HDFC Asset Management	Not submitted
	HDFC Bank Ltd	Submitted
	HDFC Life Insurance Company Ltd	Not submitted
	Housing Development Finance Corporation	Not submitted
	ICICI Bank Limited	Not submitted
	ICICI Lombard General Insurance Company Ltd	Not submitted
	ICICI Prudential Life Insurance Company Ltd	Not submitted
	IDBI Bank Ltd	Not submitted
	IDFC First Bank Ltd	Not submitted
	Indiabulls Housing Finance Ltd	Not submitted
	Indiabulls Ventures Ltd	Not submitted
	Indian Bank	Not submitted
	Indusind Bank	Submitted
	Kotak Mahindra Bank	Submitted
	L&T Finance Holdings Limited	Submitted
	LIC Housing Finance	Not submitted
	Max Financial Services	Not submitted
	Motilal Oswal Financial Services Ltd	Not submitted
	Muthoot Finance Limited	Not submitted
	PNB Housing Finance Ltd	Not submitted
	Power Finance Corporation	Not submitted
	Punjab National Bank	Not submitted
	RBL Bank Ltd	Not submitted
	REC Ltd	Not submitted
	Reliance Nippon Life Asset Management Ltd	Not submitted
	SBI Life Insurance Company Ltd	Not submitted
	Shriram Transport Finance Co.	Not submitted
	State Bank of India	Submitted
	Union Bank of India	Not submitted
	YES BANK Limited	Submitted

CDP Activity Group	Company name	Response Status
Food & beverage processing	Britannia Industries	Not submitted
	Marico	Submitted
	Tata Consumer Products	Submitted
	United Breweries	Not submitted
	United Spirits	Not submitted
	Varun Beverages Ltd	Not submitted
	Venky's India Ltd	Not submitted
Health care provision	Apollo Hospitals Enterprises	Not submitted
Industrial support services	GMR Infrastructure Limited	Not submitted
Intermodal transport & logistics	Adani Ports & Special Economic Zone	Submitted
	Container Corporation of India	Not submitted
IT & software development	HCL Technologies	Submitted
	Infosys Limited	Submitted
	Larsen & Toubro Infotech Ltd	Submitted
	Mindtree Ltd	Submitted
	Mphasis	Not submitted
	Oracle Financial Services	See Another
	Tata Consultancy Services	Submitted
	Tech Mahindra	Submitted
	Wipro	Submitted
	WNS Holdings ADR	Not submitted
Land & property ownership & development	DLF	Not submitted
	Godrej Properties Limited	Submitted
	Housing Development & Infrastructure	Not submitted
	Oberoi Realty	Not submitted
Leisure & home manufacturing	Rajesh Exports Ltd	Not submitted
	Titan Company Limited	Not submitted
Light manufacturing	3M India Ltd	Not submitted
	APOLLO TYRES LTD	Submitted
	Balkrishna Industries Ltd	Not submitted
	Ceat Ltd	Not submitted
	MRF LTD	Not submitted

CDP Activity Group	Company name	Response Status
Media, telecommunications & data center services	Bharti Airtel	Submitted
	Reliance Communications	Not submitted
	Sun TV Network	Not submitted
	Tata Communications	Submitted
	Vodafone Idea Ltd	Not submitted
	Zee Entertainment Enterprises	Not submitted
	AIA Engineering Ltd.	Not submitted
	Bosch Ltd	See Another
	Endurance Technologies Ltd	Not submitted
	Gillette India	Not submitted
	Bharat Forge Ltd.	Not submitted
Metal products manufacturing	Essar Steel Limited	Not submitted
	Hindalco Industries	Not submitted
	Hindustan Zinc	Submitted
	Jindal Stainless Ltd	Not submitted
	Jindal Steel & Power	Not submitted
	JSW Steel Ltd.	Submitted
	Steel Authority of India	Not submitted
	Tata Metaliks Ltd	Not submitted
	Tata Steel	Submitted
	Vedanta Ltd	Submitted
Metal smelting, refining & forming	National Aluminium Co.	Not submitted
	NMDC	Submitted
Metallic mineral mining	Oil India Ltd.	Not submitted
	Petronet LNG	Not submitted
Oil & gas extraction & production	Bharat Petroleum Corporation	Submitted
	Hindustan Petroleum Corporation	Not submitted
Oil & gas processing	Indian Oil Corporation	Submitted
	Mangalore Refinery and Petrochemicals	Not submitted
	Nayara Energy Limited	Not submitted
	Oil & Natural Gas Corporation	Not submitted
	Reliance Industries	Not submitted
	Gujarat State Petronet	Not submitted
	Astral Poly Technik Ltd	Not submitted
Oil & gas storage & transportation	Bharat Heavy Electricals	Not submitted
Other materials	Cummins India	See Another

CDP Activity Group	Company name	Response Status
Renewable power generation	Adani Green Energy	Submitted
	Azure Power	Submitted
	National Hydroelectric Power Corporation Ltd (NHPC)	Not submitted
	ReNew Power Private Limited	Not submitted
	SJVN Ltd	Not submitted
Specialized professional services	L&T Technology Services Ltd	Not submitted
	Mahindra & Mahindra Financial Services	Submitted
	NBCC Ltd	Not submitted
	Piramal Enterprises	Submitted
	Vakrangee Softwares Ltd.	Submitted
Textiles & fabric goods	ARVIND Ltd	Submitted
	Birla Cellulose/Grasim Industries	Not submitted
	Chennai Petroleum Corporation	Not submitted
Thermal power generation	Adani Power Ltd	Submitted
	Aditya Birla Capital	Not submitted
	JSW Energy	Submitted
	KSK Energy Ventures Limited	Not submitted
	NLC India Ltd	Not submitted
	NTPC Ltd	Submitted
	Reliance Power	Not submitted
	Tata Power Co	Submitted
Tobacco	ITC Limited	Submitted
Transportation equipment	Ashok Leyland	Not submitted
	Bajaj Auto	Not submitted
	Eicher Motors Ltd	Not submitted
	Hero Motocorp Ltd	Submitted
	Mahindra & Mahindra	Submitted
	Maruti Suzuki India	Not submitted
	Tata Motors	Submitted
	TVS Motor Company Ltd	Not submitted
Web & marketing services	Info Edge (India) Ltd.	Not submitted
Wood & paper materials	Century Textiles & Industries	Not submitted

Climate Change – Self Selected companies

CDP Activity Group	Company name	Response Status
Chemicals	AARAV FRANCES & FLAVORS PRIVATE LIMITED	Submitted
	GHCL LIMITED	Submitted
	Gujarat Fluorochemicals	Submitted
Light manufacturing	JK Tyres & Industries	Submitted
Cement & concrete	JSW Cement Limited	Submitted
Land & property ownership & development	Mahindra Lifespace Developers Limited	Submitted
Media, telecommunications & data center services	Reliance Jio Infocomm Limited	Submitted
Biotech & pharma	ZCL Chemicals	Submitted

Water Security – Investor requested companies¹³³

CDP Activity Group	Name	Response Status
Bars, hotels & restaurants	Indian Hotels Co. Ltd.	Submitted
Biotech & pharma	Ajanta Pharma Ltd.	Not submitted
	Alkem Laboratories Ltd	Not submitted
	Aurobindo Pharma	Not submitted
	Biocon	Not submitted
	Cadila Healthcare	Not submitted
	Cipla	Not submitted
	Divi's Laboratories	Not submitted
	Dr. Reddy's Laboratories	Submitted
	Glenmark Pharmaceuticals	Not submitted
	Lupin	Not submitted
	Natco Pharma Ltd	Not submitted
	Sun Pharmaceutical Industries	Not submitted
	Torrent Pharmaceuticals	Not submitted
	ZCL Chemicals	Submitted
Cement & concrete	ACC	Not submitted
	Ambuja Cements	Submitted
	Dalmia Bharat Ltd	Not submitted
	Shree Cement	Not submitted
	The Ramco Cements Ltd	Not submitted
	Ultratech Cement	Submitted
Chemicals	Asian Paints	Not submitted
	Berger Paints India Ltd	Not submitted
	Castrol India	Not submitted
	Coromandel International	Not submitted
	Dabur India	Submitted
	Emami Ltd.	Not submitted
	Godrej Consumer Products Limited	Submitted
	Godrej Industries	Submitted
	Jubilant Life Sciences Ltd	Submitted
	Kansai Nerolac Paints Limited	Submitted
	Pidilite Industries Ltd	Not submitted
	Procter & Gamble Hygiene & Health Care Ltd	Not submitted
	SRF Ltd.	Not submitted
	Supreme Industries Ltd	Not submitted
	Tata Chemicals	Submitted

¹³³ These include companies from the Water Global sample and Continuity water security sample. For further details visit https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcd1d.ssl.cf3.rackcdn.com/comfy/cms/files/files/000/003/422/original/CDP_Water_Security_Sample_Investor_Request_2020.pdf

CDP Activity Group	Name	Response Status
	UPL Limited	Submitted
	VVF Ltd	Not submitted
Coal mining	Adani Enterprises	Not submitted
	Coal India	Not submitted
Construction	Larsen & Toubro	Not submitted
Discretionary retail	Aditya Birla Fashion and Retail Ltd	Not submitted
Electrical & electronic equipment	Amara Raja Batteries Ltd	Not submitted
	Exide Industries	Not submitted
	Havells India	Not submitted
Energy utility networks	GAIL	Not submitted
	Power Grid Corpn. of India	Not submitted
Food & beverage processing	Marico	Submitted
	Tata Consumer Products Ltd	Submitted
IT & software development	Tech Mahindra	Submitted
Light manufacturing	APOLLO TYRES LTD	Not submitted
	JK Tyres & Industries	Submitted
	MRF LTD	Not submitted
Media, telecommunications & data center services	Tata Communications	Not submitted
Metal smelting, refining & forming	Bharat Forge Ltd.	Not submitted
	Hindalco Industries	Not submitted
	Hindustan Zinc	Submitted
	Jindal Steel & Power	Not submitted
	JSW Steel Ltd.	Not submitted
	Tata Steel	Submitted
Metallic mineral mining	National Aluminium Co.	Not submitted
	NMDC	Not submitted
Oil & gas extraction & production	Oil India Ltd.	Not submitted
	Petronet LNG	Not submitted
Oil & gas processing	Bharat Petroleum Corporation	Not submitted
	Hindustan Petroleum Corporation	Not submitted
	Indian Oil Corporation	Not submitted
	Oil & Natural Gas Corporation	Not submitted
	Reliance Industries	Not submitted
	Gujarat State Petronet	Not submitted
Specialized professional services	Piramal Enterprises	Submitted
Textiles & fabric goods	ARVIND Ltd	Submitted
	Birla Cellulose/Grasim Industries	Not submitted
Thermal power generation	Adani Power Ltd	Submitted
	JSW Energy	Not submitted
	NTPC Ltd	Submitted
	Tata Power Co	Submitted
Tobacco	ITC Limited	Submitted
Transportation equipment	Ashok Leyland	Not submitted
	Bajaj Auto	Not submitted
	Hero Motocorp Ltd	Not submitted
	Mahindra & Mahindra	Submitted
	Maruti Suzuki India	Not submitted
	Tata Motors	Not submitted

Water Security – Self Selected companies

CDP Activity Group	Name	Response Status
Chemicals	AARAV FRANCES & FLAVORS PRIVATE LIMITED	Submitted
Transportation services	Adani Ports & Special Economic Zones	Submitted
Other materials	Piramal Glass	Submitted

Appendix III - Indian Companies Committed to Action

Science-based Target initiative (SBTi)

Approved 1.5°C

Mahindra Heavy Engines Ltd*	Mahindra EPC Irrigation Limited*	White House*
Dr. Reddy's Laboratories Ltd	Swaraj Engines Limited*	Gromax Agri Equipment Limited*
Mahindra Accelo*	Mahindra Holidays and Resorts India Limited*	Mahindra Lifespaces Developers Limited
Mahindra Lifespaces Developers Limited	Mahindra World City (Jaipur) Ltd*	Mahindra World City Developers Ltd*
Polygenta Technologies Limited*		

Approved well-below 2°C

Tata Chemicals Limited	Mahindra & Mahindra Limited	Wipro
Mahindra First Choice Services Ltd.*	Mahindra Electric Mobility Ltd*	

Approved 2°C

Hindustan Zinc Limited	Mahindra Sanyo Special Steel	Shree Cement Ltd.
Tech Mahindra		

SBTi Committed

Infosys Limited	UPL Limited	JSW Energy Limited
Godrej Agrovet Limited*	Godrej Consumer Products Limited	Godrej Industries
Godrej Properties Limited	Godrej & Boyce Mfg. Co. Ltd*	Ultratech Cement Limited
Vakrangee Limited	ACC Limited	Adani Ports and Special Economic Zone Limited
SCM Garments PVT Limited*	Nahar Industrial Enterprises Limited*	Ambuja Cement Ltd
Adani Green Energy Ltd	Reliance Jio Infocomm Limited	Bharti Airtel Limited
Gujarat Fluorochemicals Ltd. (GFL)	Dalmia Bharat Limited	HCL Technologies
Havells India Limited*	Mahindra Susten*	Eastman Exports Global Clothing Pvt Ltd*
JK Tyre & Industries Ltd	Marico Limited	Tata Global Beverages Ltd.
EPC Industries Limited*	Mahindra & Mahindra Financial Services Limited	YES Bank

*SBTi companies not in CDP Sample

RE100

Dalmia Bharat Ltd	Infosys Ltd	Mahindra Holidays & Resorts India Ltd#
Tata Motors Ltd		

#RE100 companies not in CDP Sample

Internal Carbon Pricing (ICP)

Pricing carbon in 2020

ACC	Ambuja Cements	Dalmia Bharat Ltd
Dr. Reddy's Laboratories	Godrej Consumer Products	Godrej Industries
Gujarat Fluorochemicals	Hero Motocorp Ltd	Hindustan Zinc

Infosys Limited	JSW Cement Limited	JSW Steel Ltd.
Mahindra & Mahindra	Mindtree Ltd	Shree Cement
Tata Chemicals	Tata Consultancy Services	Tata Consumer Products
Tata Motors	Tata Steel	Tech Mahindra
Ultratech Cement	Wipro	

Planning to price in the next two years

Adani Ports & Special Economic Zone	ARVIND Ltd	GAIL
GHCL LIMITED	Indian Hotels Co. Ltd.	JK Tyres & Industries
JSW Energy	Jubilant Life Sciences Ltd.	Larsen & Toubro Infotech Ltd
Mahindra & Mahindra Financial Services	Mahindra Lifespace Developers Limited	Marico
NTPC Ltd	Piramal Enterprises	Reliance Jio Infocomm Limited
Tata Communications	Tata Power Co	UPL Limited
Vakrangee Softwares Ltd.	Vedanta Ltd.	YES BANK Limited

About CDP

CDP is a not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts by running a global environmental disclosure system. Each year CDP supports thousands of companies, cities, states and regions to measure and manage their risks and opportunities on climate change, water security and deforestation. We do so at the request of their investors, purchasers and city stakeholders.

Over the last two decades we have created a system that has resulted in unparalleled engagement on environmental issues worldwide. In 2020, Over 9,600 companies reported through CDP on climate change, water security and forests, and, over 800 cities and more than 120 states and regions disclosed their environmental impacts through CDP.

CDP India

CDP began working in India in 2008 and was formally registered in 2012, working on disclosure and driving climate action. It serves as a source of knowledge for hundreds of Indian corporations, from those that are just beginning on the road to corporate environmental disclosure, through to those looking to improve sustainability and make commitments to reduce environmental impact.

It is the only NGO to be named in India's INDC submission to the UNFCCC owing to its corporate environmental data repository and tracking of emissions and mitigation data from the Indian Industry. CDP India also actively participated in Government of India's Ministry of Environment, Forests & Climate Change (MoEFCC) work on future carbon market mechanisms. In addition to our work on disclosure, CDP India is actively engaged in other initiatives including Internal Carbon Pricing (ICP), Science-based targets (SBT) and RE100.

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