Confederation of Indian Industry

CII VISION 2030

CLIMATE CHANGE AND SUSTAINABILITY

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EXECUTIVE SUMMARY

The CII Vision 2030 on Climate Change and Sustainability envisages that, by year 2030, India will achieve an industrial sector that is low carbon, circular, and collaborative, with a focus on balanced ecosystems. Low Carbon, Circularity, Collaborations and Balanced Ecosystems form the four pillars of this Vision.

This vision document lays out the aspirations for 2025 and 2030 under these four pillars, each marked with pathways, intervention areas and enablers. The pathways are overall guiding frameworks, while the intervention areas talk about specific aspects that will require action from industry. The document also offers enablers for each of these intervention areas – policy/regulatory actions required, technology inputs, finance, and industry awareness, to drive them to the desired outcomes.

The 'Low Carbon' pillar lays emphasis on the de-carbonization journey of Indian industry, primarily through the transition to Renewable Energy (RE), adoption of green technologies, and the development of carbon markets. Unfortunately, despite price optimisation and aggressive augmentation of RE capacity, industry has not been able to fully leverage the benefits of these measures, largely because the distribution mechanisms are very complex. A smooth transition will require collective advocacy for reforms. Green hydrogen is increasingly gaining momentum, riding on policy focus. The commercial viability of carbon capture, utilization and storage, though, remains a topic of debate for industry, particularly for the 'hard-to-abate' sectors. We also need to proactively approach the institutionalization of a carbon market in the context of international business, especially after the COP26 Glasgow agreement.

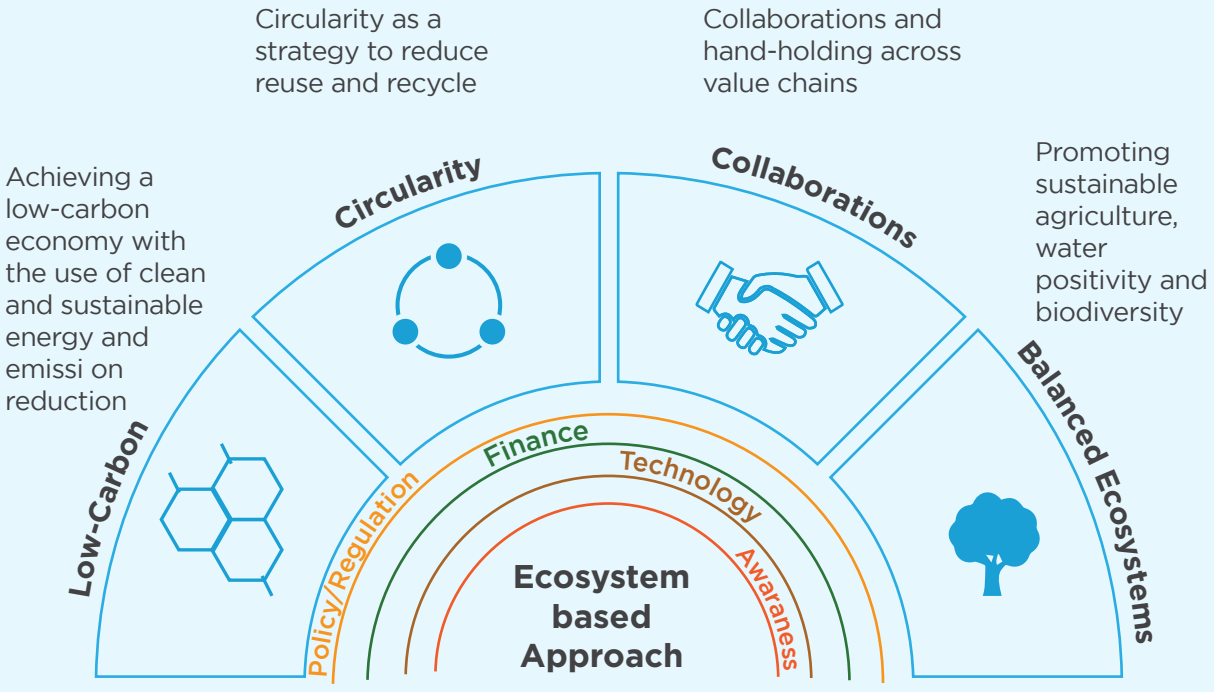

Figure 1: CII Vision 2030

The second pillar of ‘Circularity’ looks at altering business models from a ‘produce and sell’ mindset to a more conscious ‘reuse and recycle’ approach. Under the CII Vision 2030, circularity embraces both a renewed business model as well as technology aspects. Achieving circularity through new business models will require us to fundamentally change the way we produce and distribute our goods and services, and, alongside, influence our customers to generate demand for these new sustainable goods and services. This will only be possible through the adoption of technologies that can provide us insights on how our customers use the goods and services we produce, how they dispose of them, and how well we can bring these back into our systems and processes. In India, where a significant proportion of waste management lies with the informal sector, the pursuit of a truly circular economy will also depend on how well we collaborate with local informal players, and empower them to be more effective and efficient.

The third pillar, ‘Collaborations’, is about sharing common but differentiated responsibilities for all our efforts – towards de-carbonization, circularity, or creating balanced ecosystems. A ‘just transition’ that works for everyone in the economic value chain will require collaborations to share the burden of upfront costs that may not be economically viable for one player in isolation. We, as industry, will also need to work with the government to create the right signals and incentives to enable us to remain competitive in global markets. Technology and finance, the key drivers of sustainable action, will also require collaborations so that the pioneering actions trickle down to the last industrial units in the value chains.

Last but not least, the fourth pillar, ‘Balanced Ecosystems’, is about the protection and conservation of our natural ecosystems. We see addressing water scarcity as the major challenge of the decade. It is also critical to promote sustainable agriculture as a source of livelihood for people, and of raw material for industry, while conserving biodiversity as a support system for all life forms and ecological balance. We must make concerted efforts in this direction, collectively mobilizing resources, to halt further losses immediately, and restore and protect the natural ecosystems around us.

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INTRODUCTION

India's industrial growth is running in tandem with a dynamic period in India's energy development. Despite the setback (GDP contraction of 23.9%) due to the COVID-19 pandemic, global multilaterals such as the World Bank and the Asian Development Bank, and rating agencies such as Fitch and S&P, have projected India's growth to be between 8.3-10% in financial year 2022.[1] A key driver of the Indian economy is the growing industrial sector, which contributed 23.2% of GDP in 2020. This, combined with the services sector (49.2%), adds up to 72.4% of GDP.[2]

Rising incomes and rapidly-improving standards of living have made India one of the largest energy consumers in the world. Energy use has doubled since 2000, with 80% of the demand still being met by coal, oil, and solid biomass.[3] Industry in India is a large consumer of energy: the estimated consumption of raw coal by industry has swelled from 587.81 million tonnes in 2009-10 to 968.25 million tonnes in 2018-19 with a CAGR of 5.12%.[4] The use of natural gas as a fuel in industry increased about tenfold between 2010 and 2020; with a 50% overall spurt in energy use during the same period. It was also reported (as of 2020) that nearly 60% of India's natural gas-based power generation capacity was facing extreme financial pressure, and operating at very low levels, due to the lack of affordable gas.[5]

As per the India Energy Outlook 2021[6] of the International Energy Agency (IEA), India is the third largest global emitter of CO_2. CO_2 contributed to more than 78% of India's total GHG emissions in 2016, and the energy sector accounted for more than 92% of all CO2 emissions from the country, demonstrating the dominance of coal.

On a per capita basis, however, India's energy use and emissions are less than half the world average. Similarly low are other key parameters such as vehicle ownership, steel, and cement output. While India needs to maintain a steady economic growth trajectory, decoupling economic growth and carbon emissions is crucial.[7] Hearteningly, the country has been making steady and commendable strides in this direction.

Apart from substantial progress on its Nationally Determined Contributions (NDCs) aligned with the Paris Agreement, India continues to make significant efforts to position itself as a leader in climate action. India leads and hosts two key international initiatives - the International Solar Alliance and the Coalition for Disaster Resilient Infrastructure. Along with Sweden, it also co-leads the Leadership Group for Industry Transition, to drive transformation in hard-to-decarbonize and energy-intensive sectors. In addition, India also announced a national net-zero target for 2070 at the COP26 in Glasgow,

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United Kingdom, with a slew of other pledges to expedite its climate mitigation and adaptation measures. These measures are in line with the country's ambitions of reducing the emissions intensity of its GDP.

Globally, the threat of climate change looms large on the horizon – the Intergovernmental Panel on Climate Change (IPCC)'s Sixth Assessment Report has estimated dire consequences for the planet if appropriate actions are not taken immediately. The report estimates that the world will probably reach or exceed 1.5° C of warming compared to pre-industrial levels within just the next two decades. The World Economic Forum's Global Risks Report also consistently features climate change as one of the top global risks.

For industry this means that, on one hand, **physical risks** will gain prominence due to the increasing frequency of extreme weather events such as cyclones, floods and drought. These will not only impact physical assets and operations, but will also affect extended value chains for most businesses. On the other hand, **transition risks** will be triggered by the evolving policy and regulatory scenario, both domestic and international, including cross-border restrictions on products and services.

Along with climate risk and emissions-reduction considerations, there is now increasing focus on the impact businesses (can) have on the environment and communities. Various stakeholders – consumers, investors and regulators – are now demanding high standards of sustainability from businesses.

The United Nations has called for accelerating sustainable solutions to all the world's biggest challenges – ranging from poverty and gender to climate change, inequality, and closing the finance gap, in this **'Decade of Action'** 2021-2030.

Indian industry contributes significantly to the national economy, but not without a corresponding amount of pressure on the environment. In this decade of action, decoupling economic growth by businesses is an imperative to ensure business sustainability and safeguard business and society against risks from climate change and sustainability issues. This decade is set to prove that what is good for the planet is good for business.

To achieve this, a holistic framework which will drive the entire ecosystem through a collaborative approach towards set goals is the need of the hour. A clearly-defined VISION can drive the critical changes towards a sustainable future.

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60%

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2030
PURPOSE
OF THE
CII VISION 2030
FOR CLIMATE
CHANGE AND
SUSTAINABILITY

The CII Vision 2030 for Climate Change and Sustainability envisages the creation of an ecosystem to drive towards low carbon transition, and enable Indian industry to become a leader in climate action.

The purpose is to:

1. Create a blueprint for collaborative action across value chains and various sectors of industry and stakeholder groups including policy, regulation, finance and technology

2. Lay out challenges and the role of enablers such as government incentives, policies and regulations, as well as finance, technology and innovation

3. Provide sectoral guidance on the different responsibilities under the principle of 'common but differentiated responsibilities'

4. Set high-level goals with achievable outcomes for 2030 with interim goals for 2025

5. Mobilize collective advocacy for enabling policy

CII VISION 2030 AND PATHWAYS

To achieve by 2030 an industry that is low carbon, circular, and collaborative, with a focus on achieving balanced ecosystems.

The India Energy Outlook 2021 (International Energy Agency) estimates that India accounted for about 10% of world growth in industrial value-added (in PPP terms) in the last three decades. It predicts that India is set to become the world's third largest energy consumer by 2030, with primary energy consumption almost doubling to 1,123 million tonnes of oil equivalent (Mtoe) as the Gross Domestic Product (GDP) expands to USD 8.6 trillion by 2040.[8]

India's solid waste management also poses a serious concern for the environment. In 2016 (when the Municipal Solid Waste (M&H) Rules 2000 were revised to the Solid Waste Management Rules, 2016 after 16 years, and extended to urban and industrial areas), the Ministry of Environment, Forest and Climate Change estimated that 62 million tonnes of waste is generated annually in India. This number is expected to increase to 165 million tonnes in 2030![9]

As a home to four of the 34 biodiversity hotspots in the world, India also faces the challenge to preserve and conserve its natural ecosystem amidst the threat of climate change and environmental degradation. v Sustainable agriculture, in terms of food security, rural employment, and environmentally-sustainable technologies such as soil conservation, sustainable natural resource management and biodiversity protection, will be critical for ensuring sustainable industrial growth..

The coming decade calls for concentrated efforts towards building a climate-resilient future, aligning with the 'Decade of Action' for delivering the Global Goals of the United Nations. This can come only from collaborative action towards emissions reduction, water-use efficiency, climate-smart agriculture, and a shift from the 'take-make-waste' approach towards conscious preservation of natural ecosystems.

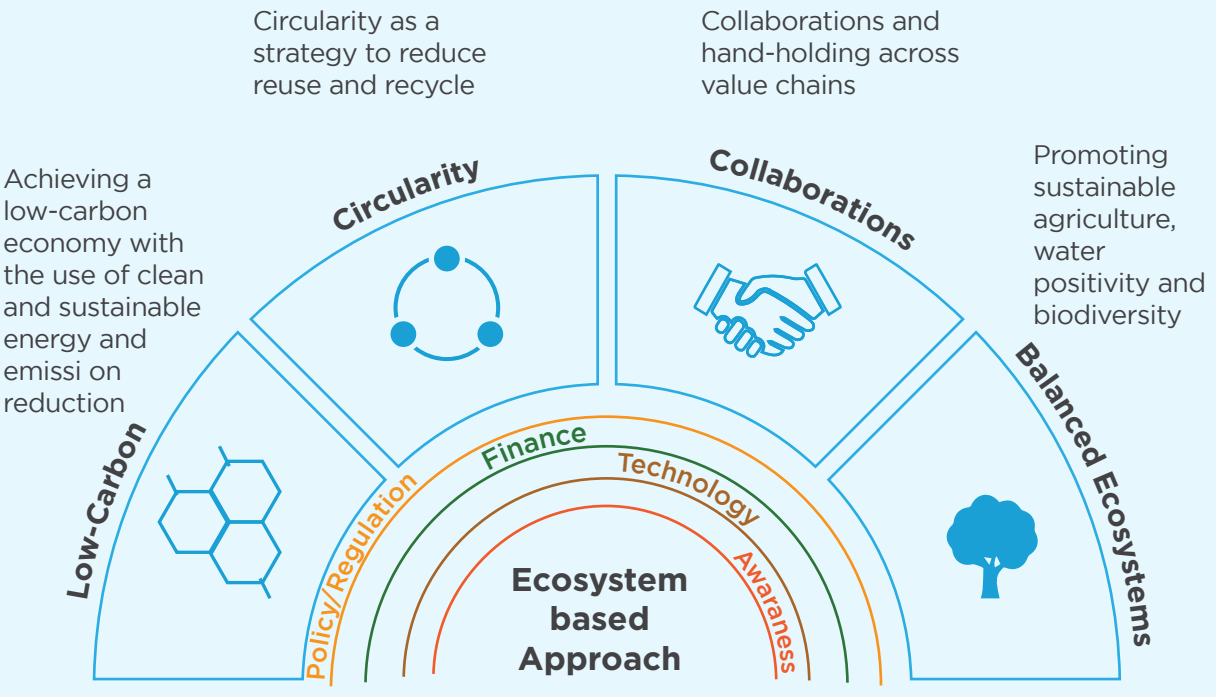


Figure 2: CII Vision 2030: Components and enablers

Drawing from the above, CII would support business members in driving collective action built on the four pillars to achieve the CII Vision 2030:

1. Low Carbon Economy

Transitioning to cleaner energy by augmenting the installed capacities of RE at the country level, developing market mechanisms for carbon trading, and harnessing new technologies for fuel cells, carbon capture and storage.

2. Circularity

Developing robust circular business models that utilize waste as an intermediary raw material, and thereby reduce industry's dependence on virgin raw material.

3. Collaborations

Creating collaborations across value chains and with stakeholders to ensure just transitions, develop markets and incentives for green products, and build consensus to collectively move towards sustainability.

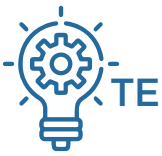
4. Balanced Ecosystems

Ensuring that industry comes together to share practices, take joint responsibility for water management, and support sustainable agriculture, particularly in eco-sensitive geographies.

These four pillars link strongly with the globally-desired Sustainable Development Goals (SDGs), and would also contribute directly to the overall objectives of the SDGs.

The next section discusses the four pillars and their components in greater detail, including the short- and long-term aspirations (2025 and 2030 respectively) along their pathways. Intervention areas have been elaborated with enablers for the pathways. The enablers are referenced under four broad categories:

Policy and regulation support from the government



Technology in the form of R&D and innovation for efficiencies

Finance for supporting the transition to a low carbon economy

Industry-wide awareness of sustainability-related issues and challenges

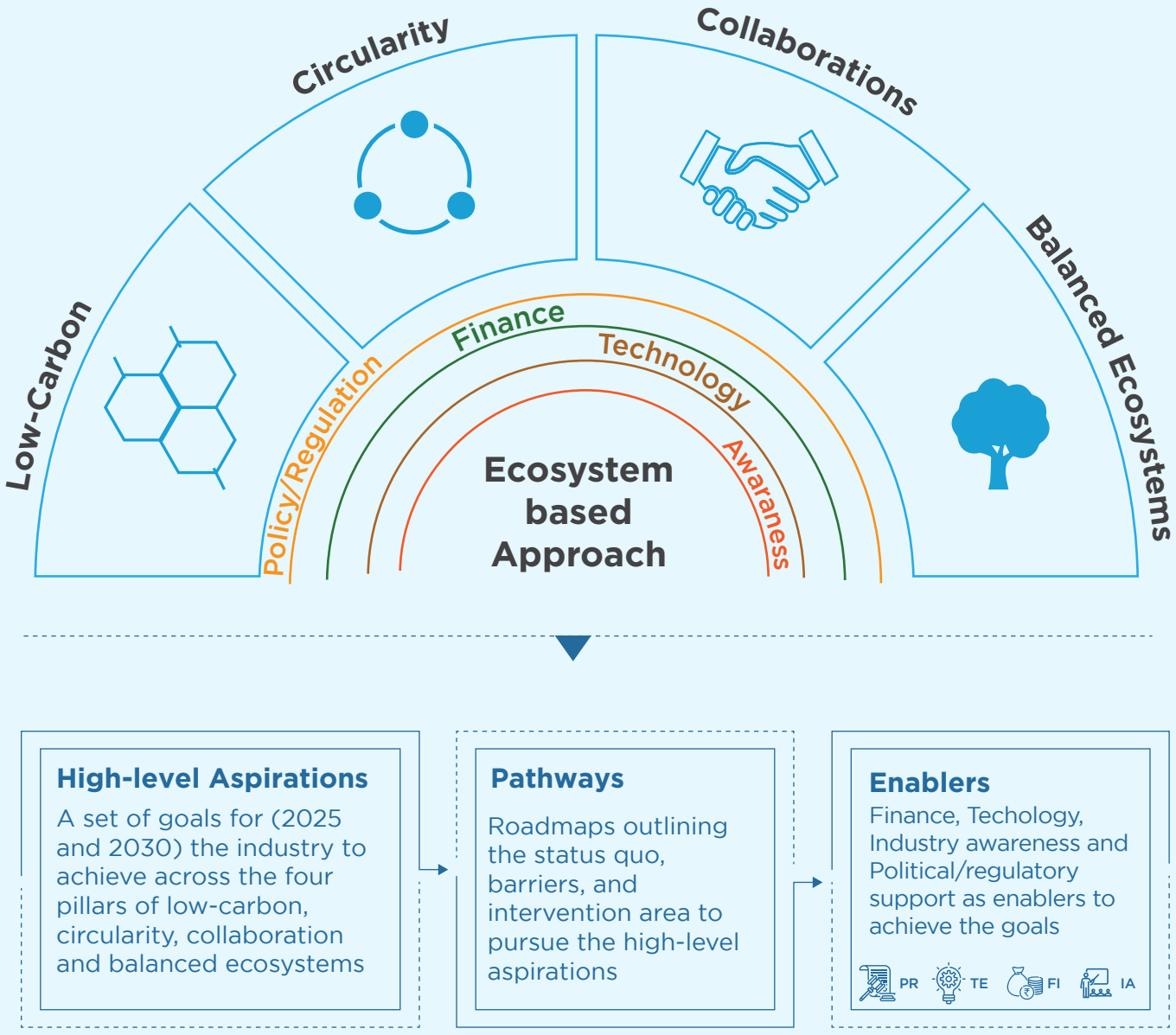


Figure 3: Process flow for the CII Vision 2030

3.1 Low Carbon Economy

As renewable energy becomes more available and viable, and with advances in climate technology, the CII Vision 2030 envisages industry, set on a mature decarbonization journey, supported by appropriate technology and an enabling policy environment.

The deepening climate emergency makes it evident that a rapid transition away from fossil fuels is the need of the hour. There is substantial scientific evidence that GHG emission from burning of fossil fuels such as coal, oil and gas is a major contributor to climate change. One of the prominent levers to move towards a low-carbon or carbon-neutral economy is therefore a transition towards renewables.

India has seen an exponential growth in its renewable energy (RE) sector in the past five years, backed by a highly-conducive policy environment, a steady influx of capital, falling prices and new technologies. In 2015, the government demonstrated a clear intention to transition to a lower-emission electricity system by declaring an ambitious target of 175 GW from renewables by 2022. Today, with an installed capacity of 151.39 GW (December 2021) , India is among the top-five clean energy producers globally, and is well on course to surpass its original target. In fact, it is now eyeing 500 GW from renewables by 2030 and a target of 50% non-fossil fuel energy by 2030!

CII will support industry to work on the following aspirations towards making India a low-carbon economy.

Table 1: Low Carbon: Aspirations, pathways, and intervention areas for Indian industry

2030 aspirations

- **Target 100% transition to renewable energy.**
- **Switch to alternate fuels such as Green Hydrogen.**

Interim Goals for 2025	Pathways	Intervention Areas	Enabler(s)
Develop company and unit-level roadmaps to electrify energy end-use wherever possible, in buildings, mobility, industry, and agriculture. Prepare roadmaps for technology adoption towards a transition to clean fuels for 'hard-to-abate' sectors.	Transition from fossil-based energy to RE	DISCOM reforms Improvement in the quality of RE	Policy/ regulation Technology
Invest in R&D for sequestration and low carbon technologies.	Advancements in green technology	Investment in R&D for CCUS and alternative fuels like Green Hydrogen	Finance Technology Policy/ regulation
Develop an internationally-compatible emissions trading mechanism for Indian industry	Establishment of a carbon market	Institutionalization of a national carbon market	Industry Awareness Policy/ regulation

3.1.1 Transition from fossil-based to Renewable Energy

Solar and wind technologies have significantly improved in competitiveness over the past decade. Earlier, only onshore wind could match the economic advantage of capacity addition in new fossil fuels. However, in recent times, Concentrated Solar Power (CSP), solar PV and offshore wind have also become techno-economically feasible. Between 2010-20, the cost of electricity from utility-scale solar PV fell by 85%, that of CSP by 68%, and onshore and offshore wind by 56% and 48% respectively.[11]

India's Energy Mix

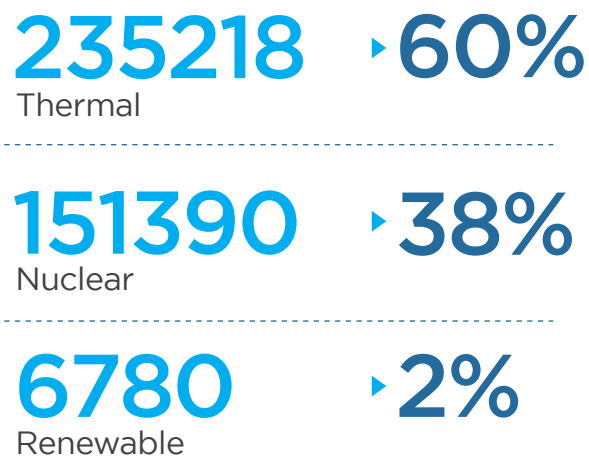


Figure 4: India's energy mix as on December 2021
Source: Central Electricity Authority (Unit: MW)

Given India's aggressive RE capacity augmentation, a gradual transition to RE is seemingly the simplest solution. However, barriers remain. While acknowledging government efforts, the private sector, looking to develop its own RE capacities, has cited concerns about grid integration and inconsistent policy approaches between the states and the Centre. Power distribution remains completely under government control and private sector suppliers of RE do not find the business commercially attractive. Lenders deem financing RE projects risky, due to precedents of contractual disputes arising from distributors not upholding the purchase agreements. Besides these issues, energy fluctuations from RE are a cause of concern for industry.

Expedited transition will require policy reforms, technological upgradation, and infrastructural improvement.

Intervention Area 1: DISCOM reforms

The state DISCOMS in India are financially distressed. The imposition of wheeling charges, traditional power purchase agreements and licensing systems make it difficult for them to pass the benefit of tariff reduction on to consumers.

The government has proposed several amendments over the years, such as reforming the licensing system, revamping the regulatory framework, and improving the financial health of power distribution companies. The tariff policy also requires significant amendments to ensure payment security for power suppliers, and to reduce losses and cross-subsidies.

Enablers

Collectively advocate for DISCOM reforms that target more efficient distribution of energy through appropriate pricing mechanisms in order to benefit from cheap RE, thereby facilitating faster transition.

PR

Energy players need to seek legal and policy support to ensure more favorable purchase agreements, which would further incentivize industry to move towards power generation and distribution as an additional source of income, in addition to self-sufficiency.

Intervention Area 2: Improving the quality of Renewable Energy and infrastructure

Apart from the distribution of solar energy, another issue of concern for industry is the quality of the electricity supplied, and lack of adequate infrastructure. Fluctuations in energy from solar and wind power make it less dependable than the 'more consistent' thermal energy.

Enablers

TE

RE companies must take the onus of investing in R&D towards technology improvements that encourage pairing solar with other generation technologies, and develop storage to offer 'round the clock' supply, as an immediate viable solution.

PR

Collectively advocate for policy and regulation to cushion the risks relating to delayed payments to power generators, enable smoother land acquisitions, and mitigate regulatory and contract uncertainties.

3.1.2 Advancements in Green Technologies

Two aspects are significant for advancements in green technology. First, the development and commercialization of clean energy technology such as green hydrogen, publicized to be a game changer in India's net zero aspirations. Second, the development and scaling of carbon capture, utilization and storage (CCUS) technologies, which are especially significant for 'hard-to-abate' sectors such as steel and cement.

Hydrogen is emerging as an important alternative form of green energy. The Prime Minister of India announced the country's Green Hydrogen Mission on August 15, 2021. With this, India plans to become a world leader in the commercial production of green hydrogen. The Mission envisages frameworks for indigenous manufacturing with R&D towards improving the efficiency of electrolyzers. A key aspect of the Mission is also to generate demand for green hydrogen through mandates in sectors that will be identified in the mission guidelines. Although electrolysis technology is well developed in India, there is an urgent need for technology development to store solar energy for the production of green hydrogen. Mixing green hydrogen with natural gas (discussed in more detail in the automobile sectoral roadmap) will cut CO_2 emissions and reduce India's dependency on fossil fuels.

Carbon Capture, Utilization and Storage (CCUS) has traditionally been seen as a commercially unviable alternative to reduce emissions. However, some CO_2 capture technologies are now commercially available. Costs, specifically in carbon capture, can vary greatly based on CO_2 source, ranging between USD 15-25/t CO_2 and USD 40-120/t CO_2 depending on the process.[13]

Intervention Area: Investment in R&D for CCUS and Alternative Fuels like Green Hydrogen

The International Energy Agency (IEA) argues that CCUS technologies are among the cheapest abatement options for industry. It suggests that it would be more cost-effective to retrofit CCUS to existing facilities than build new capacity with alternative technologies such as approaches based on electrolytic hydrogen.

The public sector in India has undertaken many pilot initiatives in CCUS and industry will be expected to follow suit, with the commercialization of these technologies. Among private sector players, the Indian cement sector has led by example, and it is time that complementarities are established in industry for R&D, with support from the government.

Enablers

TE

FI

Leaders in 'hard-to-abate' sectors such as steel and cement need to lead by example with investments in R&D to determine the most viable options for emissions reduction – whether by retrofitting CCUS to existing facilities or building new capacities for alternative fuels like green hydrogen. CII will also work with its members to develop low-cost mass storage of solar energy.

PR

Industry must collectively advocate for policy incentives that can help institutionalize increased R&D spending and participation in technology collaborations. Over the next decade, our focus needs to be on supporting the government in stimulating private investments, developing industrial areas with shared CCUS infrastructure, and boosting innovation.

3.1.3 Establishing a National Carbon Market

Carbon markets are considered an effective methodology to combat climate change by reducing greenhouse gases and investment in new technologies. The European Union's Emissions Trading Scheme is the world's first major carbon market, and currently the biggest. A major development in The Glasgow Climate Pact was the finalization of 'fundamental norms' intended to ensure that international carbon markets are real, additional, and verifiable in delivering further reductions in greenhouse gas emissions. This makes it an opportune time for India to institutionalize

an efficient carbon market at the national level, together with appropriate policies and regulations. The potential for a carbon market in the country stems from the fact that India is the world's third largest GHG emitter. While India has experience in trading emissions through schemes such as Perform, Achieve and Trade (PAT), the mechanism is not simple in application and use.

Intervention Area: Institutionalization of a National Carbon Market

A global carbon market is poised to re-emerge in a new avatar following the agreements in COP26. Complementarily, CII will play a crucial role in mobilising industry in the coming years to establish a national carbon market, facilitating an inter-sectoral symbiosis through its various sectoral councils, in addition to leveraging transactions in the global carbon marketplace. A clear, robust regulatory framework for carbon pricing will ease its adoption for Indian businesses. CII will also play an active role in generating public dialogue, deliberations and concurrence towards developing mechanisms to restore the income generated from carbon pricing to society. The potential way forward may be as follows.

Enablers

Different industry sectors need to come together at the discussion table for collaborative deliberations that will pave the way for developing goals and objectives to ensure the achievement of aligned objectives.

Together in consultation with various stakeholders, our priority needs to be to arrive at a framework that covers legal, operational and policy parameters such as issuing directives, enforcing penalties, governance and oversight, core implementation, technology management, standards, and accreditation, etc., supported by a well-designed market mechanism.

Ensure that awareness in industry and dialogue with the government works in tandem to drive the process of defining market principles such as accountability and transparency, administrative ease and cost effectiveness, local relevance, and international compatibility.

3.2 Circular Economy

The CII Vision 2030 envisages an industry that has formalized circularity in its value chains through the development of new business models, investment in innovation, and adoption of sustainable and circular-reprocessed products. This needs to be done by developing local capacity and infrastructure for the collection and processing of materials required to support local business models.

A circular economy offers an incredible opportunity to reduce cost and improve operational efficiency. A circular model involves sharing, leasing, reusing, repairing, refurbishing, and recycling existing goods or materials in the value chain, extending their life, and thereby reducing the need to create emission-intensive virgin materials. It can also mean replacing current materials and products with entirely new sustainable substitutes. This is in stark contrast to the linear economy where natural resources are turned into products which are ultimately destined to become waste because of the way they have been designed and manufactured.

The Government of India has been taking robust measures to promote a circular economy. The Scrappage Policy 2021 focusing on phasing-out polluting vehicles, for instance, is a substantial impetus in this regard, as it creates formal channels for metal recycling.

In addition, the Indian Government has also been actively formulating policies for better management of waste and circularity. It has notified various rules, such as the Plastic Waste Management Rules (2021), e-Waste Management Rules (2016), Construction and Demolition Waste Management Rules (2016), Non-Ferrous Metal Scrap Recycling Framework (2020), in this regard.

Industry's shift towards circularity depends on two key aspects:

1. **Reworking business models to adopt practices that promote circularity. This involves the development of data governance structures, quantifiable targets, frameworks for responsible sourcing, and inclusion of smaller, local players in the implementation of these models.**

2. **New investments and innovation to boost faster adoption of sustainable circular products across the value chain. This involves investment to generate awareness among producers as well as consumers, and investing in tracing technologies such as blockchain and IoT.**

Under the pillar of circularity, CII will work on the following aspirations to support industries in adopting a circular economy.

Table 2: Circularity: Aspirations, pathways, and intervention areas for Indian industry

2030 aspirations

- **Integrate circularity and next-life use into all aspects of business strategy.**
- **Close the loop on recollection and reprocessing.**

Interim Goals for 2025	Pathways	Intervention Areas	Enabler(s)
Develop new business models to extend product life cycle	Development and adoption of new business models	Leveraging the informal sector's local networks Demand generation for circular products Supply chain localization and capacity-building	Industry awareness Policy/regulation Technology
Invest in R&D for sequestration and low carbon technologies.	Advancements in green technology	Exploration of new technologies towards circularity	Policy/regulation Finance

3.2.1 Development and adoption of new business models

The approach to circularity in production or manufacturing emphasizes three crucial aspects: First, the share of previously-used material that goes into manufacturing the final product. An important aspect here is the degree to which these previously-used materials are designed to be reutilized, keeping quality considerations in mind. Second, the frequency at which a product changes hands during its functional lifespan; and third, the product's value over time, and whether there are any physical changes or lack of social demand over time.

Understanding these aspects helps in designing an appropriate business model to align with the circular economy, and address the gaps to switch over from a linear model. Circular business models may focus on one or more of the following:

1 Recovery and recycling

Recover useful resources/energy from disposed products or by-products.

2 Product life extension

Extend the working lifecycle of products and components by repairing, upgrading, and reselling them.

3 Sharing platform

Increase the utilization rate of products by enabling shared use/access/ ownership.

4 Product as a service

Offer product access and retain ownership to internalize the benefits of circular resource productivity.

Management of solid waste is a critical aspect of circularity. Waste that cannot be recycled or reused can be appropriately used to generate energy (this is explored in detail in sectoral roadmaps).

A move towards circularity requires the reassessment of business models and working in clusters to localize supply chains. It requires adopting the concepts of circularity like the 5Rs (Refuse, Reduce, Reuse, Recycle, Repair) in business strategy. The figure below illustrates the shift from linear to circular.

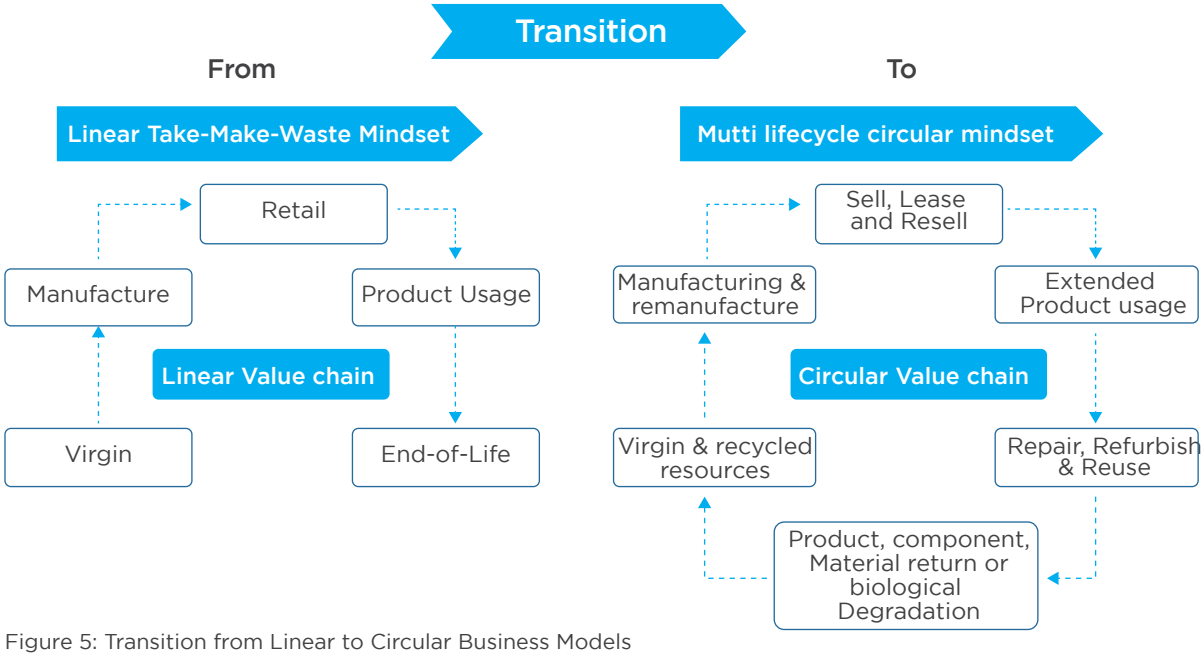


Figure 5: Transition from Linear to Circular Business Models
Adapted from Accelerating India's Circular Economy Shift (FICCI, 2018)

Intervention Area 1: Leveraging the informal sector's local networks

Currently, waste management in India is largely managed by the informal sector where child labour is common. While this sector may lack resources and technological know-how, it has been a long-time practitioner of recycling and repurposing. As of 2019 estimates, about 660,787.85 tonnes of plastic waste is produced in India annually, of which around 60% is reportedly recycled. The informal sector plays a key role in the collection, disposal and recycling of this waste. A shift from a linear to circular business model will need to leverage the pre-established local networks of the informal sector.

Enablers

PR

Push for policy reforms that incentivize the informal sector to formalize, and ensure compliances with ethical labour practices

TE

Develop platforms to log the collection and disposal of waste by individual actors, thus enabling IoT-based technology apps to play a role in city-level solid waste management.

Intervention Area 2: Demand generation for circular products

Even the best efforts in altering business models may not yield the desired results if demand generation is not emphasized. Since the concept of circularity is based on the tenets of reuse and product-life extension, there is always the threat of a dip in social demand. This would have to be tackled through various measures.

Enablers

PR

Work with government policy and regulations to motivate behaviour change through incentives and retributions for circular and non-circular products respectively

FI

CII will support industry to channelize finance into marketing campaigns to promote products and services that are made with circular processes as 'planet-friendly, conscious and sustainable choices.'

CII will ensure industrial collaborations to conduct large scale awareness drives between industry sectors as well as between industry and the government, encouraging citizens to demand repurposed goods.

Invest in technologies that can be used to create products and services designed, based on behavioural science, to encourage extended life, reuse and recycle by the end-user.

Intervention Area 3: Supply chain localization and capacity-building

Corporates often source raw material from far-off regions because the required intermediaries are not available locally. The shocks to global supply chains caused by the COVID-19 pandemic have reinforced the need to develop local presence and shrink supply chains geographically. A key benefit of such localized supply chains is having local partners that can be trusted and tapped into to drive innovation and explore new opportunities to exploit data and analytics.

Enablers

Make collaborative efforts in partnership with local government for technology application to foster Management Information Systems (MIS) that can track output and waste generation from companies and ancillaries in specific geographies.

Explore the deployment of technology to innovate in supply chains using ground-level data analytics.

Conduct capacity-building for local partners on circularity to identify local avenues for extending product life cycles and introduce innovative models for distribution, use, reuse and sharing of products.

3.2.2 Adoption of new technologies

Achieving a circular economy requires a paradigm shift in the way the economy functions. It will redefine design, production, and consumption patterns down to the smallest units in the economy. Technology will play a significant role in developing innovative ways to reach the last mile of the value chains.

The promise of technology today best manifests in Industry 4.0. The Fourth Industrial Revolution or Industry 4.0 is a concept based on interconnectivity and smart automation through technologies such as Internet of Things (IoT), machine learning, and artificial intelligence (AI).

Automation and interconnectivity can expedite circular business models for recycling waste and delivering new products, significantly reducing resource consumption, and optimising natural resources. Circular business models can conversely be used to recycle electronic scrap, with the proposed integration of web technologies, reverse logistics and Additive Manufacturing (AM) as a technological platform to support the model. These applications have several environmental, socio-technical, and economic implications for society.

Intervention Area: Exploration of new technologies towards circularity

Technology will be instrumental in lowering the costs of processes and systems essential to the circular economy model, such as recycling. Industry 4.0 can boost the circular business model by developing collection and processing techniques for urban waste using AI and machine learning.

In tandem with looking at clean energy technologies, industry will need to work on technologies that improve the exchange of information, pushing processes and services towards circularity. Technology applications will also have a role in influencing and empowering consumers – a key step in ensuring a well-functioning circular economy.

Enablers

PR

Collectively advocate for policies that encourage the development of common infrastructure for digital connectivity. This includes high-speed internet infrastructure and cybersecurity.

PR

While technology would facilitate data sharing, businesses will still need to be incentivized to share their data. Work for policy and regulation in this direction.

FI

Pool in finance for investments in pilot technologies and R&D to expedite the application of technology towards a circular economy.

3.3 Collaborations

The CII Vision 2030 for Collaborations envisages a grounded recognition of interconnections among sectors and issues – be it emissions, sustainable jobs, product competitiveness, regulations, or the market for green products. The Vision foresees formalizing advocacy groups to expedite the transition to a clean and green economy. These collaborations will ensure smart shifts to systems that maximize outcomes for all without creating unintentional consequences.

The importance of collaboration for sustainable and climate-resilient development cannot be over-emphasized. As companies face increasing expectations to take responsibility for their social, environmental, and economic impacts, there is growing realization that one company, or even one sector in isolation, cannot rally the consolidated impact desired for the entire ecosystem. There would be externalities either upstream or downstream in their value chain, or due to the systemic nature of inter-relationships between cause and effect. It is therefore imperative for industry to work with external stakeholders and find ways to address challenges. Business leaders now recognize the importance of not just connections but deep collaboration with others to drive progress on common objectives.

Under the pillar of collaborations, CII will work on the following aspirations to support companies in building partnerships and enabling common but differentiated responsibilities.

Table 3: Collaborations: Aspirations, pathways, and intervention areas for Indian industry

2030 aspirations

- **Build partnerships and collaborations across the value chain to reduce energy demand and create a market for green products**

Interim Goals for 2025	Pathways	Intervention Areas	Enabler(s)
Create roadmaps of common but differentiated responsibilities	Industrial collaborations	Coalitions of allied sectors Integrating value chains and MSMEs	Industry awareness
Mobilize coalitions with policy-makers and other stakeholders to develop comprehensive strategies across the value chain Nodal government body at the Centre to oversee low-carbon transition of the economy	Collaborations for policy and regulation	Advocacy for favourable policies and regulations	Industry awareness Policy/ regulation
Integrate global best practices and technologies in industrial processes and supply chains Encourage public-private partnerships for new technologies	Collaborations for technology and finance	Technology transfer and mobilization of finance	Industry awareness Finance Technology

3.3.1 Industrial Collaborations

The principle of 'common but differentiated responsibility' applies as much to industry as to nations of the world. There are two crucial aspects to this principle. On one hand is the common responsibility of all industry to reduce emissions and protect the environment. On the other is the need to take account of differing circumstances, particularly in relation to each sector's environmental footprint, and its ability to prevent, reduce and mitigate the problem. There are already-identified 'hard-to- abate' industry categories such as cement and steel, where reducing emissions would be more challenging. It is thus important that the entire value chain agrees on principles that would guide industry as a whole to reach an overall low-carbon economy.

According to a McKinsey report, a typical consumer company's supply chain creates far greater social and environmental costs than its own operations, accounting for more than 80% of greenhouse-gas emissions and more than 90% of the impact on air, land, water, biodiversity, and geological resources.

With the guiding principle being 'common but differentiated responsibilities,' industry collaborations would be enabled in a two-pronged approach:

Intervention Area 1: Integrating value chains and MSMEs

In the transition towards a net zero economy for Indian industry, CII's objective will be to work with ancillaries and MSMEs in their journey towards achieving net zero.

Involvement in the value chains of stakeholders who would be directly and indirectly affected in the course of the transition is an important step in implementing a net zero journey that is accepted and supported by all the relevant parties. Special care must be taken to ensure a level playing field for the MSME sector, which is already hampered by high resource constraints and low-capacity levels.

Enablers

IA

Engage in social dialogue and stakeholder engagement, especially with smaller informal units, to create support infrastructure with social protection and investments, to equip them to work and thrive in a zero-carbon future.

TE

Invest in the application of technologies like IoT to create a shared platform for efficient processes and products.

IA

Larger enterprises need to take the lead role in encouraging sustainability among their suppliers by offering competitive prices for products made with more efficient processes, encouraging competition among suppliers through a ranking system with incentives for better performers, conducting technology transfer workshops, training and capacity-building for workers employed in these MSMES, et al.

Intervention Area 2: Building coalitions of allied sectors

The transition to net zero and de-carbonization cannot happen in isolation. It requires coalitions of allied sectors to come together and encourage markets for green products and processes. If one sector bears the upfront cost of going green, reducing profit margins, and more costly offerings than their conventional competitors in the market, the sector it supplies to must agree to the principles that make green offerings as competitive as their cheaper counterparts.

Enablers

IA

Businesses in allied sectors should come together to form coalitions with mutual agreements to promote greener processes and products. Sectors like steel and cement, for instance, can form a coalition with real estate – the largest consumer of these commodities, to ensure that green practices and products are rewarded. Such signaling from dominant players in the market will also push competitors to adopt more sustainable practices.

3.3.2 Collaborations for policy and regulation

The principle guiding collaborations for supporting the transition to a clean and green environment pivot around balancing voluntary action by industry towards sustainability and a vibrant policy environment. This would ensure that regulation, which is often seen as a compliance burden, takes the form of an enabler through regular and effective dialogue between industry, policy-makers, and regulators. Appropriate incentives with checks and balances to reward industry's adoption of greener practices – especially in instances where there is a substantial price to be paid – will provide a major boost to industry's efforts.

Intervention Area: Collective advocacy for favourable policies and regulations

Policies and regulations have the power to provide the right signals and impose checks and balances to ensure a timely and just transition to a low carbon economy, remaining cognizant of the inequalities in the value chains. As businesses start taking voluntary action towards sustainability, collaboration would be required from various segments of industry for collective advocacy towards favourable policies and regulations.

The government is undertaking several schemes and policies with effective regulation. However, industry faces a compliance burden because of the fragmented approach from various line ministries. Some proposals for more effective dialogue to create an enablers policy and regulatory environment are presented below:

Enablers

IA

Industry-wide advocacy campaigns for the creation of a nodal central agency to oversee the transition of industry, hear grievances, and expedite action across line ministries. Current efforts are fragmented among different ministries and departments, such as those in charge of Power, Environment, Forests and Climate Change, New and Renewable Energy, among others.

PR

Work in close coordination with relevant ministries to develop policies, incentives and codes that not only promote green products and processes but also ensure sustainable growth for all. In this process, various CII councils and committees and collaboration between allied sector committees need to be leveraged to maximum potential.

3.3.3 Collaborations for technology and finance

Though the tech revolution and start-up ecosystem is thriving in India, technology application at scale is yet to take off in the country. Technology such as AI (Artificial Intelligence) and IoT (Internet of Things) has a significant role to play in automation and monitoring that can lead to a more efficient use of energy and better understanding of emerging climate patterns to build a more resilient future. Technology applications can also offer economies of scale to make adoption of sustainable measures more cost-effective for companies.

There have recently been fragmented instances of Indian companies embracing clean-air tech innovations. However, there is a pressing need for India to significantly accelerate and strengthen climate technology innovation, to deliver technologies optimally on a larger and more widespread scale. This would require seamless support from the developed world for the fulfilment of appropriate technology and its transfer

to the developing world.
Green or climate finance – financing projects towards transition – remains in a nascent stage in India. As per Reserve Bank of India (RBI) statistics, instruments such as green bonds constituted merely about 0.7% of all the bonds issued in the Indian financial market in the financial year 2019-20. Given the large size of the domestic market, and the much smaller penetration of green instruments, vast opportunities remain to be tapped. CII will support industry to collaborate and advocate for policy action to establish an enabling framework that promotes a green finance ecosystem in the country by fostering awareness through coordinated efforts.

Intervention Area: Technology transfer and mobilization of finance

The international community continues to work together for the establishment of green financial institutions – investment banks, funds and other entities that look solely at advancing green initiatives. In India, though, despite the RBI's inclusion of the small RE sector under its Priority Sector Lending (PSL) scheme in 2015, directed and concessional lending for low-carbon energy or green technology adoption has not seen much progress. The RBI Bulletin (January 2021) pegged the bank credit outstanding to non-conventional energy at 7.9% of power sector credit.

While technology has always been deployed by industry to develop new products and services, its role in addressing societal problems such as air pollution and water pollution is still nascent. This means that there is currently little or no 'natural' market for most environmental technologies.

Enablers

Many businesses within Indian industry are multinational corporations. These companies can leverage their foreign counterparts to become pioneers of technology transfer, bringing sustainable practices and advanced technologies to India.

Form sector-level collaborations with industry bodies in other countries for effective transfer of knowledge.

Work together to create incubators and accelerators that not only look at tech development but also explore mechanisms to market these technologies and make them cost-effective for deployment across geographies

PR

Push for integration of climate finance for priority sector lending to build adaptation measures against climate change. Joint coordination by SEBI, RBI and the Department of Science and Technology (DST) and the Ministry of New and Renewable Energy (MNRE), for example, would promote the integration of finance and technology perspectives in climate adaptation.

IA FI

Come together as industry to work with the government to encourage public-private partnerships for new technologies that require high R&D investments and a long gestation period. Establish partnerships with institutions such as the Council of Scientific and Industrial Research (CSIR) and public sector undertakings to facilitate cost efficient technology development and large-scale production of alternative fuels and CCUS.

3.4 Balanced Ecosystems

Water, agriculture, and biodiversity are the key components and the fundamental blocks of a balanced ecosystem envisaged under the CII Vision 2030. Private sector engagement has been recognised as crucial for conservation. Actions must be prioritised in order to achieve the 2030 Vision.

A balanced ecosystem consists of flora and fauna in their natural habitats with co-dependence on each other and their surroundings. These ecosystems are as important to businesses as they are to the planet. The interconnectedness of various components such as biodiversity, water and agriculture ensures an adequate supply of raw material to the industry. It is becoming increasingly imperative for businesses to take stock of natural ecosystems, particularly in the areas that they operate in. Apart from clear economic gains through the judicious use of scarce resources like water, and plugging gaps in agriculture supply chains, biodiversity conservation efforts such as afforestation can be significant measures for climate change mitigation.

In India, each of the three components under the pillar of Balanced Ecosystems – water, agriculture and biodiversity, comes with its own set of challenges. Water demand in India is estimated to grow to almost 1.5 trillion m3 by 2030. Most of India's river basins face severe deficit by 2030, unless concerted action is taken. The World Bank estimates that industrial water use is currently about 13% of the total freshwater withdrawal in the country. It is further estimated that the water demand for industrial uses and energy production will grow at a rate of 4.2% per year to reach 228 billion cu m by 2025.

India has had a National Mission for Sustainable Agriculture (NMSA) since 2014-15. While the programme adequately covers agroforestry, rain-fed areas, water and soil health management, climate impacts, and adaptation, the primary challenge is fund allocation. With just 0.8% of the budget of the Ministry of Agriculture and Farmers Welfare allocated towards NMSA, India's policy focus in agriculture remains heavily skewed towards green revolution-led farming.

In terms of biodiversity, according to the International Union for Conservation of Nature (IUCN), India is home to 7-8% of all recorded species in the world, including over 45,000 species of plants and 91,000 species of animals. Four of the 34 globally-identified biodiversity hotspots fall in India. The Centre for Science and Environment's report 'State of India's Environment in Figures 2021,' states that over 90% of the area under these four biodiversity hotspots in India has been lost. Deteriorating air quality is also a growing concern for Indian cities, especially in northern India.

Concerted industry efforts have the potential to create impact at scale, develop water-positive systems, and promote sustainable agriculture and habitats.

Under the pillar of Balanced Ecosystems, CII will work on the following aspirations to support industry in adopting nature-based solutions, water and biodiversity conservation, as well as promoting sustainable agriculture practices.

Table 4: Balanced Ecosystems: Aspirations, pathways, and intervention areas for Indian industry

2030 aspirations

- Clean up, restore, and monitor water-related ecosystems.
- Promote water- smart agriculture solutions to support production in the context of increasing water scarcity.
- Restore and conserve biodiversity ecosystems.

Interim Goals for 2025	Pathways	Intervention Areas	Enabler(s)
Integrate existing disclosure frameworks on water and set scientific targets for corporate water stewardship. Enhance awareness and innovation of water-efficient products and processes.	Becoming water positive	Water conservation and harvesting Zero Liquid Discharge (ZLD) Source Vulnerability Assessment (SVA)	Industry awareness Technology
Support regenerative agricultural practices and carbon sink restoration.	Supporting sustainable agriculture	Capacity-building to strengthen farmer resilience to climate change Artificially intelligent agriculture practices	Technology Finance Industry awareness
Halt further loss of biodiversity	Conserving biodiversity	Integration of biodiversity in corporate governance Offsetting as a mitigation strategy	Industry awareness Policy/regulation

In terms of biodiversity, according to the International Union for Conservation of Nature (IUCN), India is home to 7-8% of all recorded species in the world, including over 45,000 species of plants and 91,000 species of animals.

3.4.1 Becoming water-positive

With growing focus world-wide on sustainable development and judicious resource consumption, water management has evolved as a major challenge in global sustainability initiatives. This is particularly significant for India with water scarcity projections towards the end of the decade. Indian industry is cognizant of the country's water stress, and water conservation features as a core component of sustainability initiatives by Indian businesses, with approaches ranging from on-premises rainwater harvesting to restoring local water bodies. Businesses are also taking up community initiatives such as the construction of wells/check-dams, and promoting low water-intensive crop farming and drip irrigation implementation around the geographies in which they operate.

Intervention Area 1: Water conservation and harvesting within premises

The main barriers to water conservation and harvesting for industry come from a lack of targets, and internal capability to conduct natural capital valuation. Many industry efforts are also seen as offsetting rather than reducing water demand. Funding and requirement of multiple delivery partners causes further governance issues. However, strong governance, target-setting, measurement and disclosures can improve water handling. This can be further enabled by technology and industry awareness, as well as policy and regulation.

Enablers

TE

Adopt technologies that facilitate assessment of the potential as well as optimization of water consumption, groundwater recharge, recycling and reuse, and rainwater harvesting.

IA

Conduct industry-wide awareness on water metering, monitoring, and disclosure mechanisms to further boost water harvesting.

IA

PR

Disclosure-focused regulation and policy guidance will emphasize the need for standardization of water-related disclosures. Collaboratively develop guidance at the sectoral level and identify relevant and critical stakeholders both within the organization as well as across the value chain of the reporting organization.

Intervention Area 2: Zero liquid discharge

Given the environmental degradation resulting from excessive extraction, industry interventions to recycle and reuse wastewater within the system and reduce the withdrawal of freshwater are the need of the hour. Prioritising on this, Sewage Treatment Plants (STP), Effluent Treatment Plants (ETP), and Zero Liquid Discharge (ZLD) systems can be implemented for effective re-utilisation of wastewater by Industry.

ZLD, in particular, can be implemented by manufacturing industries as a systems approach. By removing all liquid waste from a system, ZLD focuses on reducing wastewater, increasing reuse of water, and reducing dependencies on local water sources. ZLD systems employ advanced wastewater/desalination treatment technologies to purify and recycle virtually all the wastewater produced.

In India, however, coverage of ZLD is not uniformly implemented across the states. A standardized approach is needed for water-intensive sectors, which are likely candidates for source point polluters. Government and civil society have been undertaking active efforts to restore water bodies like lakes and rivers around urban settlements; these initiatives are also actively supported by businesses. Interventions like ZLD and treatment of wastewater will help curb the pollution of these restored resources.

Enablers

PR

Work together with regulators to ensure uniform stricter rules on discharge. Imposing charges on effluent disposal and increased environmental awareness can drive industry to go for Zero Liquid Discharge (ZLD).

PR

With collective advocacy, ensure that regulation creates a level-playing field with regard to uniform compliance across the various states in India, without giving undue advantage to specific sectors.

IA

CII, with its members, will work towards building common infrastructure, including effluent treatment plants and sewage treatment, in key industrial areas.

Intervention Area 3: Source vulnerability assessment

Source vulnerability assessment based on current water supply, growth projections, available internal and external water sources, and related activities can provide a pathway for sustaining existing water sources and provision for desired quality and quantity in the long run.

Enablers

IA

Orchestrate an industry-wide movement to create water management plans involving Source Vulnerability Assessment (SVA) that identifies and quantifies risk comprising physical, environmental, social, political, economic and regulatory aspects, as also consumer perception of water positivity.

3.4.2 Supporting Sustainable Agriculture

Sustainable agriculture is crucial for industrial sustainability. Agro-businesses form the link between agriculture and industry. Such businesses also provide the opportunity to move from the traditional policy focus of green revolution-led farming to approach sustainable agriculture more holistically – as a source of jobs in rural areas as well as an important component of global supply chains.

Agriculture in India is beset with inequalities. While industry is equipped to channelize resources with innovations in technology and finance, agriculture in rural areas largely remains stripped of resources and know-how. Industry can help by entering and investing at different levels in the supply-chain, thus linking production eco-regions with consumers in promising domestic and global markets.

Industries also bring a different paradigm into the food system – fragmenting in production environments and re-consolidating in marketing environments in the post-harvest and processing phases. Industry can offer financial resources and share global best practices that can help reduce emissions and water usage during the crop cycle. Industry can play a significant role in making agriculture sustainable through strong public-private partnerships in agricultural research and development, as well as by fostering technology collaborations.

Intervention Area 1: Strengthening farmer resilience to climate change through capacity-building

Amidst alarming climate change impacts across the globe and their impact on agriculture, any transition towards more ecologically sustainable agri-food systems calls for a strong collaboration with farmers. This includes knowledge transfer of climate change aspects and their impact on farming, and capacity-building for strengthening farmer resilience to climate change.

Enablers

IA

Lead local and community-level initiatives to promote climate smart agriculture (micro irrigation, mulching and agro-forestry) through knowledge transfer and capacity-building for farmers.

PR

Provide guidance to the government on policy measures to boost the adoption of RE in the agri-sector, such as incentives and subsidies on solar-powered pumps, which can help reduce energy consumption.

Intervention Area 2: Artificially intelligent agriculture practices

NITI Aayog, the planning think-tank of India, sees the integration of AI and data-driven solutions for farming as the future of Indian agriculture, and has done extensive work in this space. The next green revolution is expected to hinge on the technological framework.

Enablers

TE

FI

Macro-scale crop planning, traceability, hyper-local weather forecasting, precautionary pest prevention and supply optimization are some technologies that are feasible and already in use. Proactively set up dialogue with planning entities, adopt and incubate agro-start-up technologies and volunteer to fund pilot programs.

3.4.3 Conserving Biodiversity

The third and a prime component of the balanced ecosystem is biodiversity. India's biodiversity is valuable because it provides various goods and services necessary for human survival, and directly provides livelihoods to, and improves the socio-economic conditions of, millions of people. It is important to identify biodiversity and ecosystem services risks and opportunities for businesses, to ensure that economic growth is achieved sustainably and not at the cost of environmental degradation. Globally, the Post-2020 Biodiversity Framework which is taking shape will be a stepping stone towards the 2050 Vision of 'Living in harmony with nature.'

There is good scope for integrating policies and tools that can incorporate biodiversity conservation into business strategy. One such tool, the Mitigation Hierarchy, sees prevention or avoidance as the best form of mitigation, providing a way to minimize impacts, conduct restoration efforts and queue up offsets.

Two intervention areas discussed here can pave the way for biodiversity conservation in Indian businesses.

Intervention Area 1: Integration of biodiversity in corporate governance

Businesses need to acknowledge the value of undertaking biodiversity conservation. They need to develop action plans to mainstream biodiversity conservation into their activities by adopting appropriate policy, management and reporting measures. By doing this, companies can play a key role in biodiversity conservation. Biodiversity, like circularity, must be ingrained in a business' DNA as a strategy.

Enablers

Businesses need to move towards integrating biodiversity within their environmental management systems. At the same time, companies need to start publishing specific information about how biodiversity risks are relevant to their business and how these are being managed.

Work on industry-wide biodiversity initiatives to identify and mitigate long-term risks; in particular, assessing and reporting exposure to protected areas including IUCN categories I-IV (IUCN 1994).

Extractive industries to undertake risk and opportunity assessments of their projects, to determine the pathway of least impact of their processes, and the likelihood/certainty of impact.

Intervention Area 2: Offsetting as a mitigation strategy

Biodiversity offsets are conservation activities intended to compensate for the residual, unavoidable harm to biodiversity caused by economic development projects. The basic idea of biodiversity offsets is to extend the traditional mitigation hierarchy of avoid, reduce, rescue, and repair to achieve no net loss, or even better, a net positive impact on biodiversity. Such offsets can be done voluntarily by companies.

Enablers

Work towards an inter-sector arrangement to develop biodiversity offsets as a commercial business, focusing on situations where there is significant unmet demand for offsets.

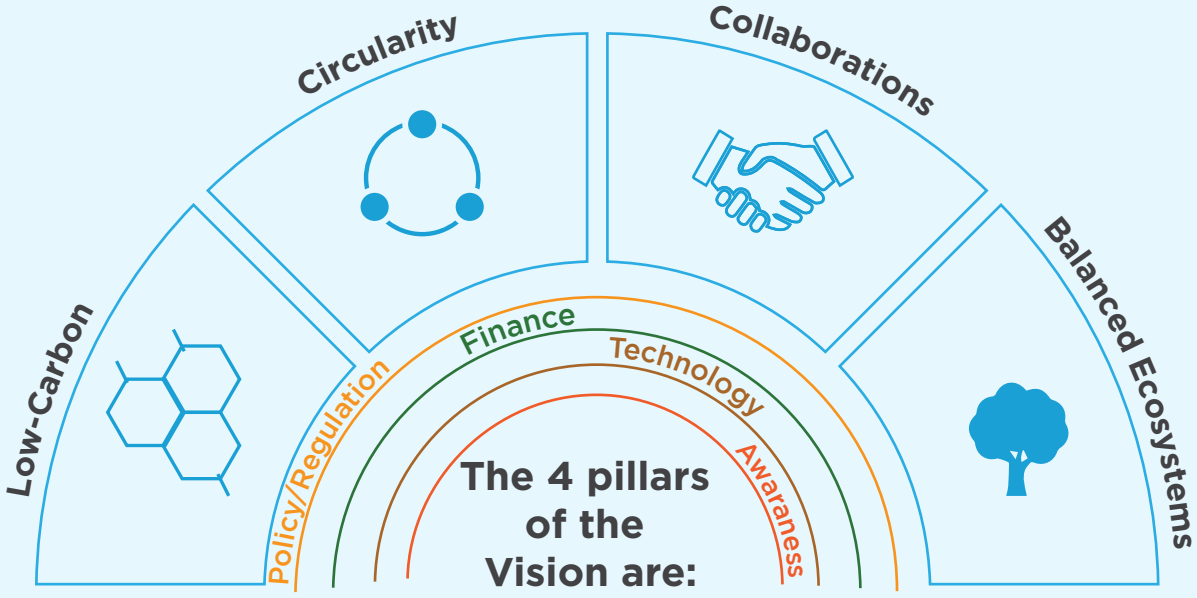
Carry out large scale afforestation programmes. In this domain, wood-based sectors can take the lead in converting large wastelands into forest areas in close coordination with government and policy.

PR

Collectively advocate to develop incentives/reward mechanisms for restoring biodiversity. A mechanism can be worked out to recognize and include these efforts in the country's progress on its NDCs.

ACHIEVING THE VISION

The CII Vision 2030 makes an urgent case for industry action through a guiding framework of aspirations, pathways to achieve these aspirations, intervention areas under these pathways, and enablers that will facilitate action under the intervention areas.



The four pillars are not mutually exclusive; rather they are expected to work together to drive industry towards acknowledging common but differentiated responsibilities, understanding mutual complementarities, and identifying the levers of action, to accelerate a sustainable and low carbon transition.

The CII Vision 2030 provides the foundation for the formulation of a sectoral roadmap for the industry. The roadmap will help realize the Vision by setting and prioritizing specific goals with time-bound targets for different industry sectors. As a next step, CII, in consultation and in partnership with all stakeholders, especially the private sector, ministries and government agencies, will initiate and encourage broad stakeholder engagement to ensure wide understanding of, and commitment to, the Vision. The sectoral roadmap will provide a 2030 framework for co-ordinated strategies among different industry sectors on climate change and sustainability.

Achieving the Vision is a national responsibility, where all sectors have an important role to play. It will succeed with the creation of a business ecosystem which thrives on leveraging actions around sustainability and climate change, rather than considering it a challenge.

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