



TCFD

2023-24

Himadri Speciality Chemical Ltd



Task Force on Climate-related Financial Disclosures

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List of Abbreviations

BRSR	Business Responsibility and Sustainability Report
BU	Business Unit
CDP	Carbon Disclosure Project
CSR	Corporate Social Responsibilities
CSRD	Corporate Sustainability Reporting Directive
DE&I	Diversity, Equity and Inclusion
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortisation
GHG	Greenhouse Gases
GRI	Global Reporting Initiative
HSCL	Himadri Speciality Chemical Limited
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organisation for Standardisation
NAPCC	National Action Plan on Climate Change

NDC	Nationally Determined Contributions
NGFS	Network for Greening the Financial System
LIB	Lithium-ion Battery
LT-LEDS	Long-Term Low-Carbon Development Strategy
KPI	Key Performance Indicator
RCP	Representative Concentration Pathways
SBTi	Science Based Targets Initiative
SEBI	Securities and Exchange Board of India
TCFD	Task Force on Climate-Related Financial Disclosure
UNFCCC	United Nations Framework Convention on Climate Change
UNGC	United Nations Global Compact
SSP	Shared Socio-economic Pathways
ZLD	Zero Liquid Discharge

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About this Report

This report provides a comprehensive discussion of Himadri Speciality Chemical Limited's approach to climate change, which aligns seamlessly with our broader business strategy of "Together Towards Tomorrow." This report highlights our journey, showcasing our successes, learnings, and plans for future initiatives. By using scenario analysis, we have assessed the resilience of our business in the face of both a gradual and a more rapid transition to a 1.5°C world aligning with Paris Agreement.

It also provides insights into the climate-related performance of Himadri, derived from our materiality assessment exercise.

The climate-related financial disclosures in this report adhere to TCFD recommendations, summarizing our approach in the following areas:



Himadri is actively working on strategy disclosures (a) and (b) to improve the identification, impact assessment, and reporting of climate-related risks and opportunities. This work includes mapping these factors over the short, medium, and long term. The progress of this ongoing effort will be reflected in future TCFD reports.

Materiality matters

We engage with our stakeholders through various channels, as detailed in our Business Responsibility and Sustainability Report (BRSR) section of our Annual Reports and Sustainability Report. Their feedback helps us identify key issues / opportunities that impact both of us and our business. The ESG Committee at Board and other relevant governance bodies regularly review these insights, addressing both new and ongoing themes important to our stakeholders.

Our management team integrates stakeholder inputs with established frameworks such as GRI, TCFD, UNGC, SBTi Tools and relevant laws and regulations. This holistic approach guides us in determining the specific metrics and disclosures for measurement and public reporting in the TCFD Report.

Regarding materiality, our Sustainability Report FY 22-23 (Reporting tenure Financial Year 2022-23) defines it as the point at which ESG issues significantly affect our business operations, reputation and stakeholders, necessitating public reporting. We also consider Indian stock exchange listing requirements and disclosure standards. Our Sustainability Report for FY 22-23, also details our approach to engage with stakeholders and materiality identification procedure including materiality matrix. The Materiality matrix offers a detailed analysis of our sustainability strategy and performance, giving a comprehensive overview of our operations. This matrix highlights the critical aspects essential for managing our organisation and important to our stakeholders. Through careful evaluation, these concerns have been ranked on a scale from very high to moderate relevance, taking into account the perspectives of both internal and external stakeholders.¹

Furthermore, from our maiden materiality matrix of FY 22-23, we have revisited the material topics during the current reporting year and adopted Corporate Sustainability Reporting Directive's (CSRD) on double materiality assessment. It refers to the fact that companies reporting on sustainability must consider the relevance of a sustainability matter from two perspectives: On one hand, organisations have an impact on people and the environment (the inside-out view). On the other hand, sustainability-related developments and events create (new) risks and opportunities for organisations (the outside-in view). In a broader sense, the concept of double materiality ensures that sustainability reporting focuses on the topics that are most relevant for the organisation and its stakeholders. Material topics also underpin the (sustainable) strategy. A report and strategy based on material topics create more transparency, contribute to better decision-making and ensure that time and resources are focused on those topics that matter most to the organisation, its stakeholders and the society / planet at large.

Most of the topics are retained as material whereas two topics are introduced during the current reporting which are mentioned below:

Our management team integrates stakeholder inputs with established frameworks (GRI, TCFD, UNGC, SBTi Tools and relevant laws and regulations).

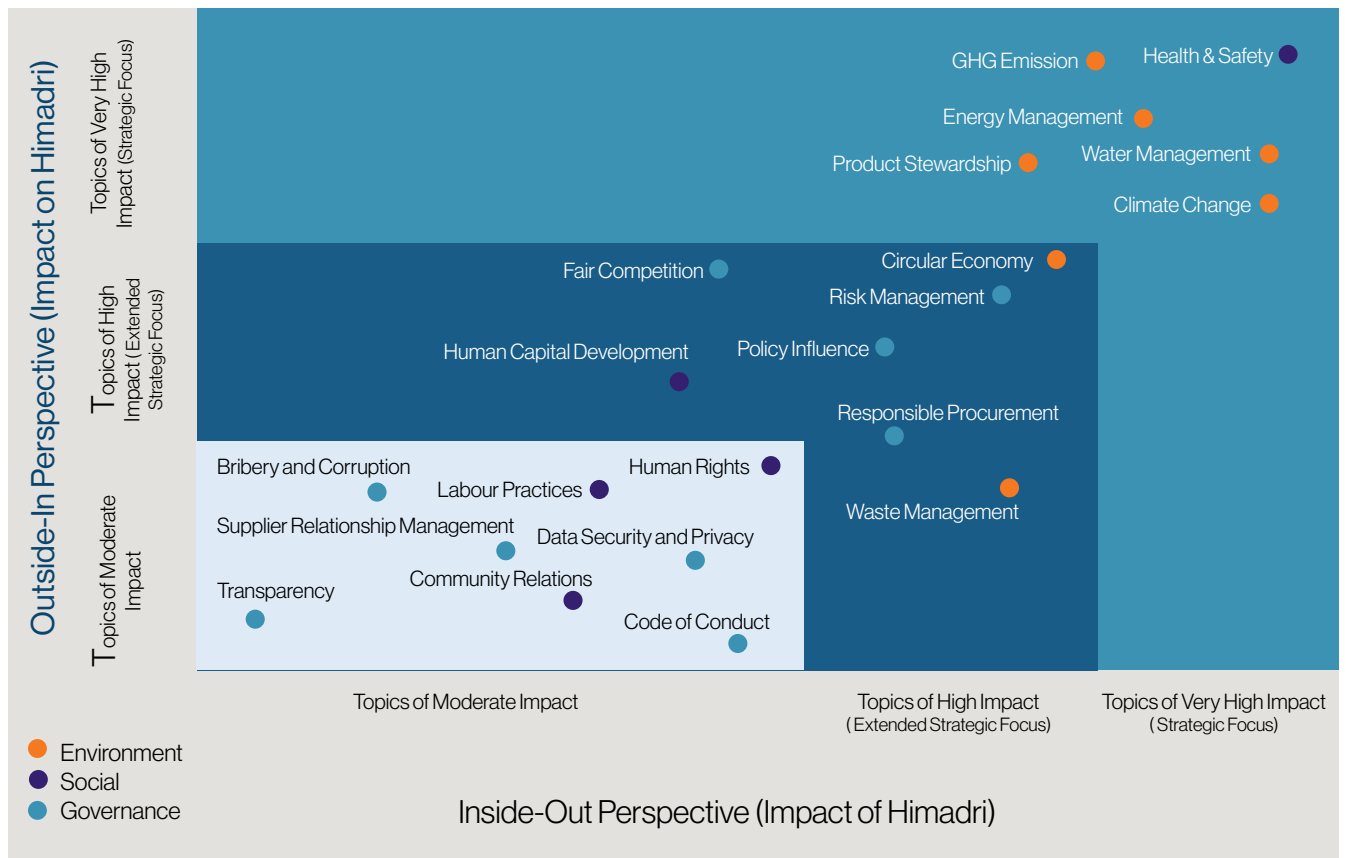


Figure 1: Double Materiality Assessment for Himadri

In keeping with evolving stakeholder priorities, Himadri is committed to an ongoing evaluation of its reporting approach. The impacts of the materiality topics are provided below:



Greenhouse gases emission

GHG emissions materiality could impact the environment, regulatory landscape, and operations. High emissions catalyse climate change with environmental and societal consequences. Regulatory bodies are imposing stricter controls and making compliance imperative. Investors and consumers prioritise sustainable processes and products; high emissions pose financial and brand risks. On the other hand, declining GHG emissions enhance operational, financial and resource efficiency. They help manage physical and transition risks, ensuring long-term resilience. Overall, addressing GHG emissions is essential for meeting stakeholder expectations, securing competitive advantage, and fostering sustainable growth.



Health and safety

Health and safety materiality impacts employee well-being, productivity, and organisational reputation. A safe workplace reduces the risk of accidents and injuries, and hence, operational disruption and financial losses. Besides, it enhances employee morale cum retention. Health and safety measures also mitigate potential risks, protecting the Company from liability and reinforcing a commitment to corporate social responsibility. Prioritizing health and safety maintains operational integrity, supporting sustainable growth and long-term success. Non-compliance could result in legal penalties and reputational damage. Stakeholders, including investors and customers, increasingly value robust health and safety practices as indicators of a responsible and sustainable business.



Energy management

Energy management helps reduce operational costs, energy consumption, waste and greenhouse gas emissions. Effective energy management enhances corporate reputation, attracting eco-conscious investors and customers. Besides, it enhances resilience against energy price volatility and supply disruptions, strengthening long-term sustainability and moderated environmental impact. It ensures resilience against energy price volatility and supply disruptions. Overall, energy management is key to long-term business sustainability, minimizing environmental impact, and supporting the transition to a low-carbon economy.



Product stewardship

Product stewardship ensures responsible product lifecycle management. This comprises products designed for durability, recyclability, and safe disposal, reducing waste and resource consumption. Effective product stewardship enhances brand reputation and compliance with meeting the growing demand for sustainable products. It fosters innovation in creating eco-friendly solutions, long-term business sustainability and environmental protection.



Water management

Water management has a direct impact on environmental sustainability and operational efficiency. It ensures responsible use, treatment and water recycling. Effective water management mitigates risks related to water scarcity and regulatory compliance, strengthening environmental stewardship.



Human rights

The materiality of human rights is fundamental to ethical business practices and corporate responsibility. Respect for human rights helps create a positive workplace, employee well-being and social justice. It helps mitigate risks related to legal compliance, reputational damage and operational disruptions. Commitment to human rights attracts socially conscious investors and customers, strengthening the corporate brand. Overall, upholding human rights is essential for sustainable, fair, and equitable business operations.



Labour practices

The materiality of labour practices fosters an equitable and productive workplace. Ethical labour practices ensure a compliance with laws and regulations, reducing legal risks and probable liabilities. They enhance employee satisfaction, retention, and productivity. Strong labour practices enhance a company's reputation, attracting talent and socially conscious investors while promoting long-term growth.



Climate change

The materiality of climate change has a profound impact on operations and sustainability. Climate change affects regulatory compliance, operational costs, and supply chain. Companies need to address climate risks to mitigate financial losses and avoid reputational damage. The proactive management of climate change is aligned with global sustainability goals that could unlock innovation and leadership opportunities leading to long-term stability and environmental stewardship.



Circular economy

The materiality of the circular economy lies in its potential to transform waste management, resource efficiency and sustainability. By focusing on recycling, reusing and waste reduction, a circular economy helps moderate costs and environmental impact. It drives innovation in product design and business models; it enhances resource security and enhances revenue streams, reputation and regulatory compliance.



Risk management

The materiality of risk management is essential to safeguard corporate assets, operations, and long-term viability. Effective risk management identifies, assesses and mitigates potential threats from financial uncertainties to operational disruptions. It ensures regulatory compliance, strengthens decision-making, and protects against unforeseen events. By proactively addressing risks, organisations can prevent losses, seize opportunities, and deepen stakeholder trust.



Waste management

Waste management is material due to its significant impact on environmental sustainability and regulatory compliance. Effective waste management minimises environmental pollution, reduces landfill use, and conserves resources through recycling and reuse. It helps companies address legal requirements, mitigate operational risks, and reduce disposal costs. Responsible waste management enhances corporate reputation and supports broader sustainability goals.



Human capital development

Human capital development is material as it influences productivity, innovation, and long-term success. Investing in employee skills and development drives efficiency, talent retention, and a positive culture. It supports growth through workforce skills, organisational resilience, competitive advantage, and strategic achievements.



Transparency

Transparency is material as it influences stakeholder trust and accountability. It ensures open communication regarding operations, performance, and governance. Transparency facilitates better decision-making and risk management through precise and accessible information, strengthening relationships with investors, customers and regulators.



Policy influence

Policy influence is material, shaping the regulatory and legislative environment in which a company operates. By engaging in policy discussions and advocating favorable regulation, companies can align public policies with objectives, mitigate regulatory risks, and enhance efficiency. Effective policy influence enables companies to contribute to broader social and environmental goals.



Code of Conduct

A code of conduct is material as it establishes the ethical standards and behavioural expectations of stakeholders. It promotes a positive work environment and governance practices. It fosters accountability and ethical behavior.



Responsible procurement

Responsible procurement is material because it ensures that sourcing practices align with ethical, environmental, and social standards. It reduces risks associated with unethical labour practices, environmental degradation, and supply chain disruptions. By prioritizing suppliers who adhere to sustainability and ethical standards, organisations enhance reputation, regulatory compliance and social cum environmental outcomes leading to long-term value creation.



Supplier relationship management

Supplier relationship management is material because it ensures that suppliers address performance, quality, and compliance standards. Effective management strengthens collaboration, improves supply chain reliability and drives innovation. By fostering strong relationships, companies mitigate risks, enhance transparency, and achieve cost efficiency. It supports sustainability goals by aligning suppliers with ethical and environmental standards, contributing to business resilience and competitive advantage.



Community relations

Community relations are material because they foster trust and support between a company and local stakeholders. Positive community engagement can enhance corporate reputation, operational smoothness, and build a strong social license to operate. They address community concerns, support local development, and lead to mutually beneficial partnerships that strengthen long-term sustainability.



Data Security and privacy

Data security and privacy are material due to their impact on trust, regulatory compliance, and operational integrity. Effective data protection safeguards sensitive information from breaches, ensuring customer and stakeholder confidence. Compliance with data privacy laws avoids legal penalties and reputational damage. Robust data security protects financial integrity and workflows.



Bribery and corruption

Bribery and corruption are material because they undermine ethical standards, legal compliance, and corporate integrity. Addressing these issues helps maintain stakeholder trust, avoid legal penalties, and ensure fair practices. Effective anti-bribery measures protect corporate reputation and stability.



Fair competition

Fair competition is material because it ensures a level playing field, ethical business practices and consumer trust. It prevents monopolistic behaviors and unfair advantages, fostering innovation and market efficiency. Upholding fair competition helps maintain legal compliance, protects the Company's reputation, and supports long-term sustainability.

Coverage

The report encompasses our operations in India.

Our position on climate change

Himadri Speciality Chemical Limited (Himadri) recognises a growing need for accelerated decarbonisation. This includes efforts to enhance energy efficiency, and develop and implement low emissions and negative emissions technologies, enhancing resilience.

Our commitment extends to operating in a financially, environmentally, and socially responsible manner. Climate change affects these facets and poses risks to human well-being and development. Our actions to minimise environmental impact not only mitigates long-term risks but also helps us contribute to a just world.



Our climate commitment



Achieve net-zero carbon foot print by 2050; short-term target of 2030 and mid-term target of 2040



Reduce absolute Scope 1 and 2 emissions by 30% by 2030 from 2021 baseline



Reduce absolute Scope 3 emission contraction by 20% from 2023 baseline



Aim to spend ₹100 Cr over the next 10 years to accelerate transition to net-zero



Transitioning to renewable power from traditional fossil fuel-based thermal power wherever relevant



Accelerate the adoption of alternative and clean fuels and strive to diversify fuel consumption.



Ensure that value chain partners' emissions are accounted for



Work with long-term, Tier 1 suppliers to submit their GHG reduction strategies by 2025 and align with our commitments by 2026



Disclose our performance in alignment with TCFD requirements



Help communities adapt to climate change impacts through science-based social impact/CSR programmes

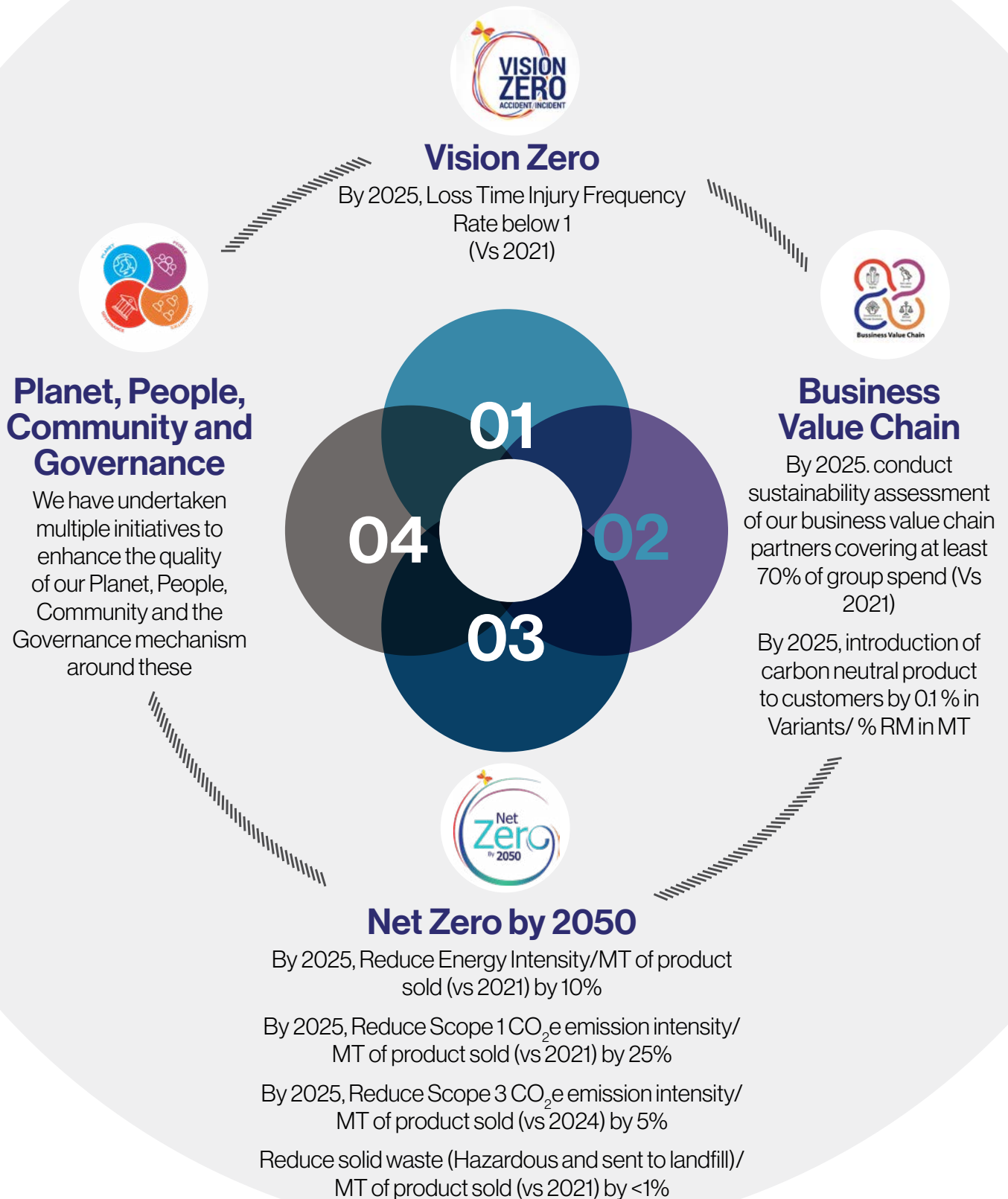


Figure 2: Himadri's Sustainability Ambition

From the desk of the **Chairman-Managing Director**



Anurag Choudhary
CMD & CEO

At Himadri Speciality Chemical, we believe that our corporate success is dependent on the well-being of our planet and society.

In view of this, we have invested in our business with efficient processes and responsible practices with the objective of creating a cleaner planet and justified society for all.

Himadri is uniquely positioned to deepen sustainable and environment-friendly practices in its position as one of the biggest manufacturers of speciality chemicals essential for a green economy.

We believe that we are attractively placed to support the production and supply of efficient renewable energy storage solutions, electric vehicles, and other future-ready projects.

This diverse speciality chemicals portfolio provides us with a significant advantage in creating a sustainable future.

Our Company's strategic advantage positions us as a responsible partner in the world's efforts to address climate change and achieve sustainability goals. In the face of a rising demand of essential specialty chemicals, our diverse portfolio is attractively placed for ongoing success. By leveraging these chemicals effectively, we expect to continue playing a responsible role in driving the global shift towards sustainability, innovation and economic growth.

We acknowledge the importance of aligning our operations with sustainability principles, particularly in the area of responsible use and manufacture of chemicals. As industry leaders, we are committed to leverage our position to foster positive change and contribute to global efforts aimed at achieving a net-zero future. We are determined to play a crucial role in shaping a sustainable, carbon-neutral economy by collaborating with stakeholders and embracing cutting-edge technologies.

Our transition commitment to a net-zero future extends beyond the rhetoric; it is ingrained in our DNA. We rely on our senior leadership and dedicated workforce to deepen our foundation, set ambitious goals and expedite our transition to net-zero emissions by 2050.

Himadri is embarking on a related investment of ₹100 Cr over the decade apart from commitments related to new business announcements, underscoring a commitment to sustainable practices and moderated carbon footprint.

To accelerate transition towards a net-zero carbon economy, Himadri is aligned with India's Long-Term Low-Carbon Development Strategy (LT-LEDS) around a unique product and service proposition. We are endorsing Mission LiFE mandated by Government of India, introducing programs targeting sustainable lifestyles. We welcome Government of India's initiative to further Li-ion battery manufacturing detailed in current year's Union Budget.

As we advance renewable energy storage solutions, collaboration between governments, businesses, communities, and individuals is becoming essential. By aligning efforts, sharing knowledge, and leveraging resources, we expect to accelerate the transition to a net-zero economy.

We are also dedicated to helping customers minimise their carbon footprint. Our commitment to innovation and sustainability is reflected in our products, such as specialty carbon black and coal tar pitch. We are excited about the progress made in pilot projects related to new energy materials, an innovative offering that underscores our continuous effort to provide sustainable solutions to our clients, reducing product carbon footprints.

With the launch of our inaugural TCFD report, we emphasise our climate commitment and climate management strategy. Over the past year, we sustained our climate performance and identified improvement areas. We seek to harness collective knowledge, expertise, and resources to drive meaningful changes.

We recognise that there is much to be done and remain dedicated to continuous improvement.

Anurag Choudhary
CMD & CEO

Our Company's strategic advantage positions us as a responsible partner in the world's efforts to address climate change and achieve sustainability goals.

Perspective of the Chief Sustainability Officer

I am excited to share Himadri's journey of value creation in this inaugural Climate Change Report, aligning with the Taskforce on Climate-related Financial Disclosures (TCFD) recommendations.

In the last year, we made significant strides and achieved milestones. Our commitment is to emerge as a net zero carbon company by 2050. We are keen to transparently communicate our roadmap to stakeholders.

This report details our approach to achieve de-carbonisation targets in the short, medium, and long-term. By sharing our plans, we seek to promote a spirit of collaboration and engagement, ensuring that all relevant agencies are informed and involved in our sustainable journey.

The Board and management are dedicated to spearhead the organisation in tackling climate change challenge. This includes their understanding of the changes needed to transition towards a decarbonised economy and their active involvement in driving improvements. Our pilot production of new energy materials showcases our commitment to manufacturing solutions that can facilitate the energy transition.

In the pursuit of less carbon-intensive energy consumption, we transformed waste gas produced while carbon black manufacturing process into power generation. We enhanced the use of low sulphur speciality oils in place of heavy oils, which moderated greenhouse gas emissions.

We achieved 24.2% reduction in GHG intensity and 12.29% reduction in energy

intensity through innovative process control and engineering.

At Himadri, we recognise the significance of water and an emerging water stress. To address this challenge, we undertook initiatives to achieve water positivity. We reduced our overall water consumption in the past year. We are embracing the principles of a circular economy, with nearly 98% of our waste being effectively recycled in FY 23-24.

We offer support to communities around our manufacturing operations to help them counter the effects of climate change. Our Corporate Social Responsibility programs comprise climate adaptation strategies crucial for the welfare of communities across our business unit locations.

Himadri is dedicated to managing climate risks and seizing opportunities by embracing the latest advancements in climate science and comprehensive scenario analyses.

Our progress report will document our 2050 net-zero emissions journey with detailed initiatives.

I look forward to your feedback and suggestions on how we can accelerate this transition.

Avijit Sasmal
Chief Sustainability Officer

The Board and management are dedicated to spearhead the organisation in tackling climate change. This includes their understanding of the changes needed to transition towards a decarbonised economy and their active involvement in driving improvements



Himadri Speciality Chemical Limited at a glance

Overview

Himadri Speciality Chemical Limited produces speciality chemicals crucial to modern life, addressing domestic and international demand for intermediates for several industry segments.

Domestic presence

7

Our best in class manufacturing facilities

3,397.19

₹ in Cr
Domestic revenue

81.18%

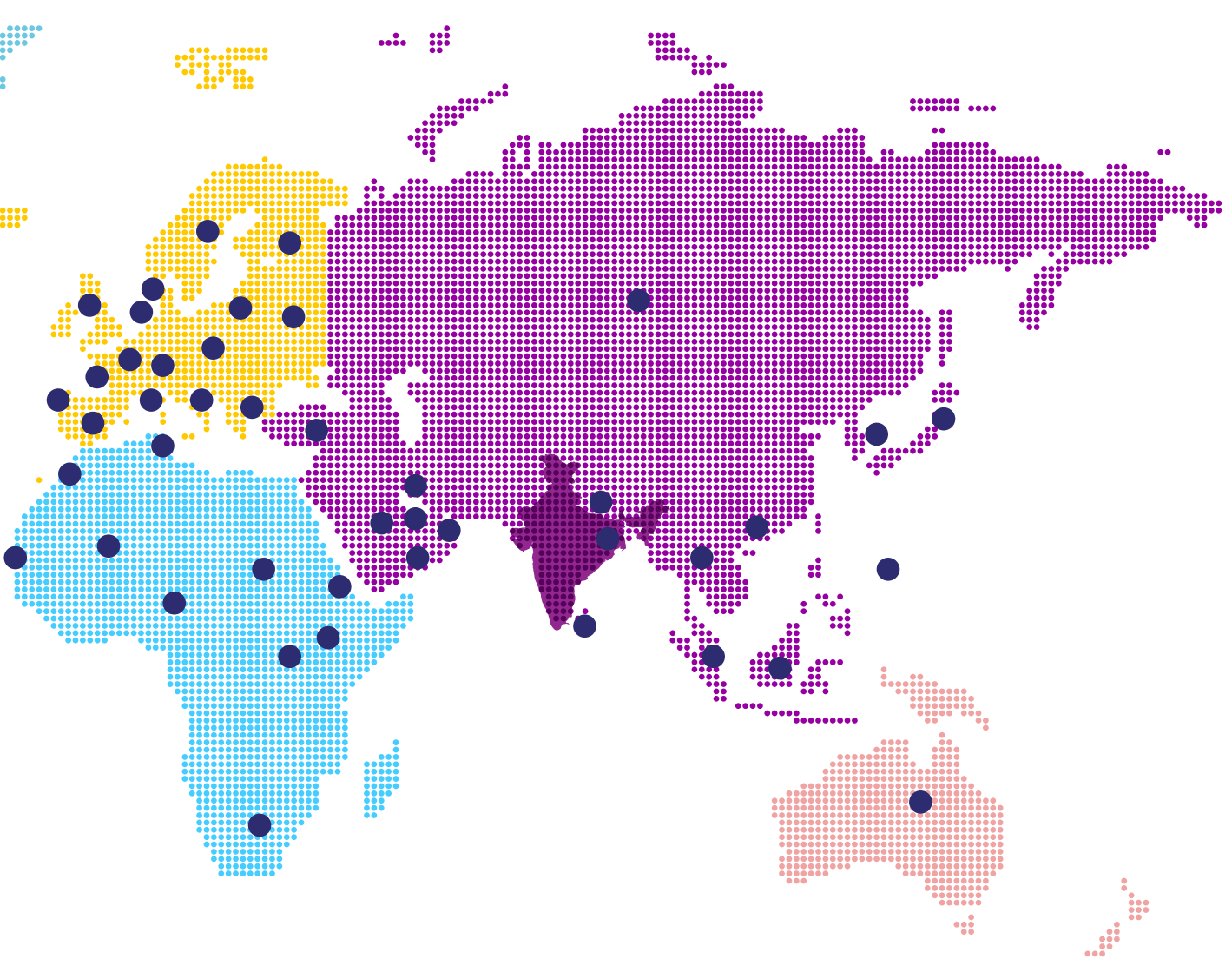
Share of domestic sales in revenue



Expanding our presence far and wide

- Algeria
- Australia
- Austria
- Bahrain
- Bangladesh
- Belarus
- Belgium
- Brazil
- Canada
- Chile
- Colombia
- Czech Republic
- Djibouti
- Ecuador
- Egypt
- Ethiopia
- Finland
- France
- Germany
- Greece
- Guatemala
- Indonesia
- Italy
- Japan
- Malaysia
- Mexico
- Morocco
- Nepal
- Netherlands
- Nigeria
- Oman
- Peru
- Philippines
- Poland
- Portugal
- Qatar
- Russia
- Saudi Arabia
- Senegal
- Slovenia
- South Africa
- South Korea
- Spain
- Sri Lanka
- Sweden
- Thailand
- Tunisia
- Turkey
- UAE
- Uganda
- UK
- USA
- Venezuela
- Vietnam

Figure 3: Himadri's Global Presence.



Global presence

54

Countries present

787.41

₹ in Cr
Export revenue

18.82%

Share of exports in total revenue

Figure 3: Himadri's Global Presence.

Products range

At Himadri, we serve a diverse customer base. Our innovative product portfolio is a testament to our research and development, and domain knowledge. We deliver top-tier value-added specialty chemicals that match and exceed customer expectations.

At Himadri, we uphold the highest standards of quality, consistency and precision from product development to manufacturing. Our quality assurance team is engaged in meticulous documentation and data management, translating

into credible partnerships and peer recognition. This team undergoes periodic training while products undergo audits at our state-of-the-art, NABL-accredited research lab.

Our commitment to innovation drives the development

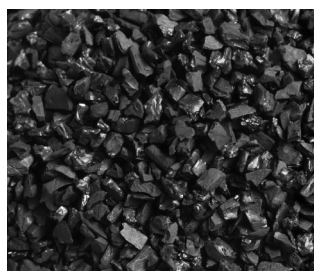
of cutting-edge products, processes, and technologies. Our global team of dedicated scientists and engineers empowers us to deliver forward-thinking solutions. Our research and development is directed to positioning the Company at

the forefront of technological advancements. By harnessing an international network of knowledge professionals, we foster collaborations, ensuring our solutions are not only innovative but also relevant, practical and effective.



New Energy Materials

- First Indian producer and pioneer of anode material required for lithium-ion battery
- High capacity, superior rate and long cycle life
- Enhanced anode offerings for the cell manufacturing process with silicon graphite and hybrid graphite anodes
- Next-generation LFP cathode materials to cater to the national and global demand for lithium-ion battery
- Established in-house production of precursor meso coke for anode material, ensuring quality control



Carbon Black

- Custom-made carbon black solutions tailored for specific applications
- Carbon black production with the lowest impurities in carcass and tread black is made possible by our backward integration into the cleanest feedstock
- A proven track record in quality and delivery



Speciality Carbon Black

- High-performance, customised products
- Used in various industries such as plastics, fibres, coatings, inks, paints, wires and cables
- Premium-grade solutions, high-quality products and reliable delivery



SNF (Sulphonated Naphthalene Formaldehyde)

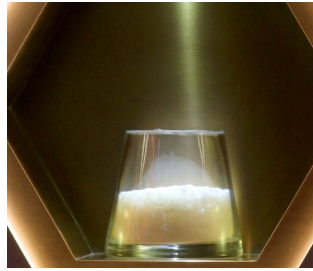
- Dominant player of SNF in India
- Products serve the concrete, agro, rubber and gypsum board industries
- Superior quality and continuous supply are backed by in-house raw material resources

Figure 4: Himadri's Products Range



Coal Tar Pitch

- Largest Indian manufacturer in the industry with over 60% market share
- Used as a binder in aluminium anode and graphite electrode manufacturing
- Custom-made grades and contemporary manufacturing facilities



Naphthalene Derivatives

- Consistent high-quality products
- Reliable and steady supply through in-house raw material resources
- Largest Indian player in Refined Naphthalene



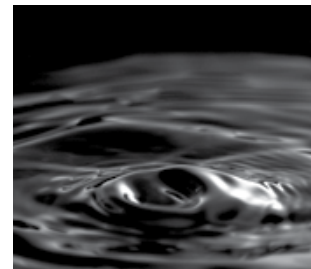
Corrosion Protection

- Anti-corrosion products developed using high-quality, high-temperature carbonised coal tar
- Optimal resistance to both acid and alkali attacks
- Can withstand adverse climatic conditions and provide long-lasting protection against severe salinity in seawater



PCE (Polycarboxylate Ether)

- Leading PCE manufacturing facility
- The range includes customised products of varying grades to suit specific needs



Speciality Oils

- Environment-friendly, low sulphur content and customised products
- Continuous distillation method is backed by superior technology and quality control



Precursor Meso Coke

- In-house pitch coke product for anode materials
- High quality coke to ensure efficient performance
- Quality control from coal tar to meso coke production



Anode Materials

- Synthetic Graphite Anode: Capacity and Efficiency Increase
- Natural Graphite Anode
- Hybrid Graphite Anode consisting of Synthetic and Natural Graphite: To imbibe the characteristics of both Synthetic and Natural Graphite to provide a unique Anode solution to the Cell Manufacturers.



Silicon-based Anode Materials

- To store ~9x more lithium ions than graphite enabling higher cell energy density and faster charging. To develop practical (and cost effective) high performance silicon graphite-carbon composite anode materials.

Figure 4: Himadri's Products Range



Quarter 1 FY 23-24

- Completed materiality assessment and defined sustainability priorities and targets for Himadri.
- R&D initiatives undertaken in areas of anode. Silicon-based anode materials, cathode materials and graphene
- Acquired 12.79% stake in Australia's Sicona Battery Tech to explore innovative technologies for the production of high-quality silicon-based anode materials



Quarter 2 FY 23-24

- Development and introduction of 7 Speciality
- Black Series with more than 55 grades - ONYX, JETEX, ELECTRA, KLAREX, COLORX, BARONX and VIRTEX
- Quarterly PAT crossed ₹100 Cr



Quarter 3 FY 23-24

- Joint acquisition of Birla Tyres Ltd for a total acquisition cost of ₹306 Cr, with Himadri as Strategic Partner and Dalmia Bharat Refractories Limited (DBRL) as Resolution Applicant.
- Awarded the EcoVadis Silver medal, which ranks us among the top 23% of the highest-rated companies in the world; among 1,00,000+ rated companies.
- Announced a capex of ₹1,125 Cr for building the first commercial plant of 40,000 MTPA of LFP Cathode Active Material with a phased outlay of ₹4,800 Cr across the next 5-6 years.



Quarter 4 FY 23-24

- Joined the United Nations Global Compact (UNGC) as a direct signatory.
- Capex commitment for expansion of new speciality carbon black line of 70,000 MTPA with an investment of ₹220 Cr.
- Acquired 40% stake in Invati Creations for a consideration of ₹45 Cr to engineer high-quality LiB materials for efficient energy storage with higher energy density and longer battery life.
- Record sales volume of 1,40,317 MT.

Figure 5: Quick Recap of FY 23-24

Governance



Our ESG governance structure responds to global changes, drives business expansion, and addresses social challenges. This framework supports the achievement of our short-term and mid-term plans as well as our long-term vision.

Key features of this structure comprise capable and experienced committee members who provide oversight and guidance, coupled with the prompt implementation of management decisions.

The Board of Directors oversees ESG matters, including associated risks and opportunities, while the CMD-CEO and other teams are responsible for execution.

At the Board level, climate change is recognised as a key governance issue addressed in strategy discussions, business performance evaluations, investment decisions, and assessments of scenario triggers and indicators. Our Board members contribute to a range of expertise, encompassing finance, governance, resources and public policy, ensuring a comprehensive approach to integrating sustainability considerations into our decision-making processes.

This extensive experience enables them to evaluate the potential impacts of climate change on Himadri and its operational capabilities, grasp the evolving nature of the climate change debate, and understand national and international policy responses as they develop. The Board possesses the requisite skills and collective knowledge to guide the optimal allocation of financial capital, prioritizing long-term stakeholder value creation. It acknowledges the importance of meeting stakeholder expectations, particularly those related to environmental concerns. The Board showcases a comprehension of systemic risks and potential impacts on Himadri's assets. To ensure informed decision-making, the Board implements measures to integrate climate change science and expert advice.

At Himadri, we believe that enterprises possess the potential to create significant societal benefits alongside economic value. This belief is rooted in our history and guides our commitment to business sustainability. We inspire every employee to the highest standards of responsibility and transparency.

In our pursuit of progress, we embrace Environmental, Social, and Governance (ESG) stewardship. We are dedicated to integrating these ideals into our endeavours. This ESG commitment is not just a goal but a fundamental part of our strategy to ensure sustainable growth and positive impact.

Our ESG dedication is reflected in our efforts to reduce environmental footprint, promote social well-being, and uphold the highest governance standards. We seek to minimise our environment impact through innovative practices and technologies. We support communities and foster a diverse and inclusive workplace, where every individual is valued and respected. Our governance framework ensures transparency, accountability and ethical conduct.

We embrace ESG to build a world that is harmonious, just, and sustainable for all. By embedding it into our strategy, we aim to create long-term stakeholder value.

The ESG Committee at the Board assumes the responsibility of supervising all sustainability matters.

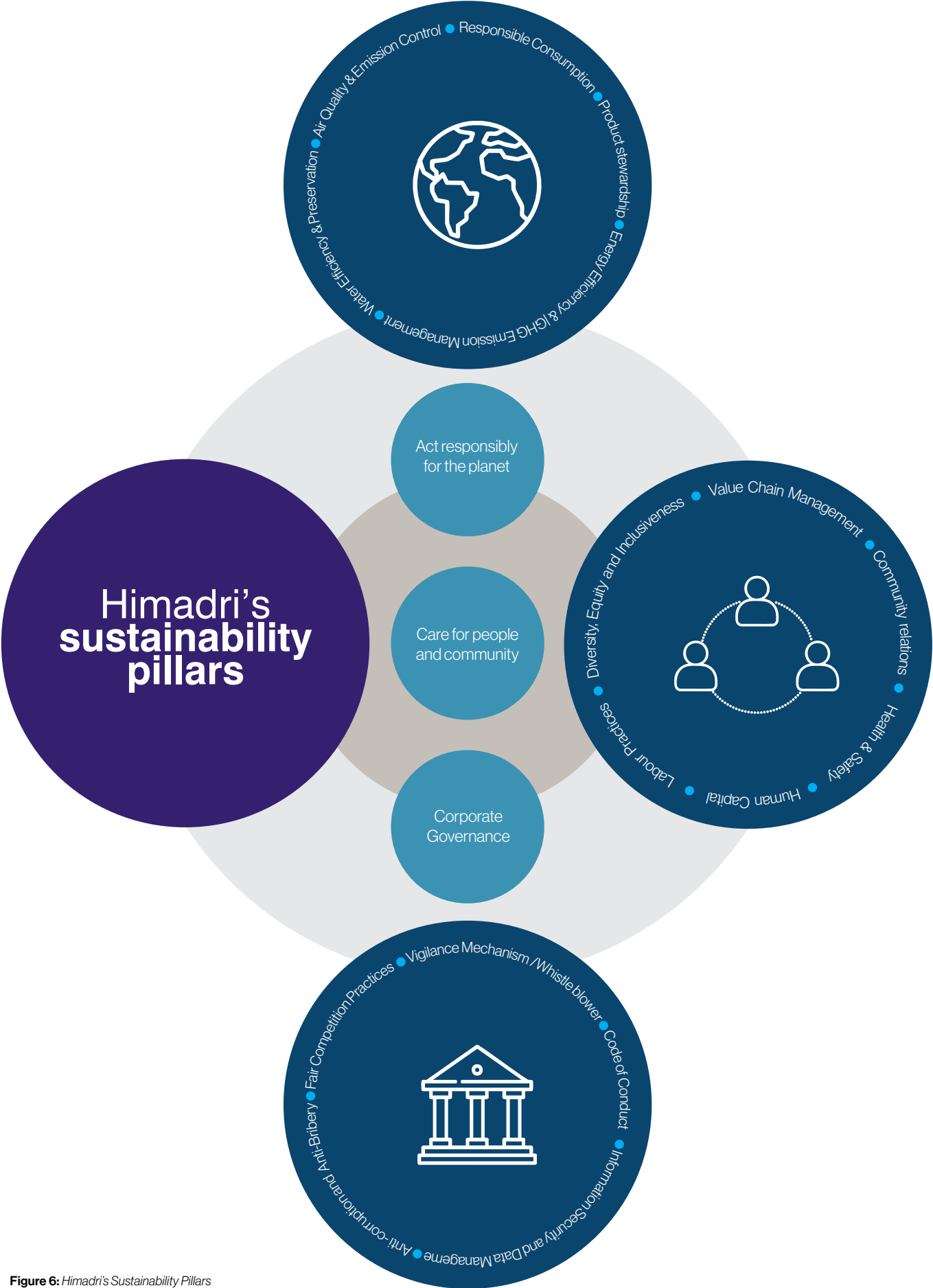


Figure 6: Himadri's Sustainability Pillars

Overseeing by the ESG Committee at Board



The ESG Committee at Board ensures that it possesses the necessary knowledge, experience, and competence to oversee Environmental-Social-Governance issues. The Committee comprises the Chairman-Managing Director and Chief Executive Officer coupled with Directors. This provides balanced expertise, enabling them to manage the Company from multiple perspectives. Recognizing that ESG warrants specialised knowledge, the Board seeks perspectives from Directors and other committee members adept in ESG issues.

During the last reporting year, ESG-related Key Performance Indicators (KPIs) were discussed by the Compensation Advisory Committee for Directors and Executive Officers; thereafter, they were approved by the Board of Directors. A long-term incentive compensation, comprising 30–50% of the base salary for each position, was weighted 40% based on ESG activity indicators. This ensured that the promotion of the

ESG-driven management was evaluated using external indicators, internal goals, and relevant factors.

Some key activities of the committee are provided below:

- Provides strategic guidance on climate-related matters, develops climate-related policies and management systems and reports to the full Board
- Advises the Board on changes in regulatory requirements related to climate, and sustainability topics in India and other geographies
- Provides oversight on the efficacy of short-medium-long-term targets from climate and other ESG topics
- Reviews and recommends improvements to established governance structures regarding carbon footprint management
- Reviews progress on the Company's net-zero and other ESG goals; suggests changes and improvements where required
- Ensures the effective implementation of governance, advocacy and public relation mechanisms and practices related to ESG and Climate Change
- Outlines initiatives required to institutionalise a sustainability and climate change culture through the involvement of employees at all levels
- Reviews information presented in ESG disclosures

At Himadri, the CMD cum CEO is responsible for overseeing a deepening of the sustainability culture and governance, covering people, culture, climate change risks and opportunities.

Sustainability governance

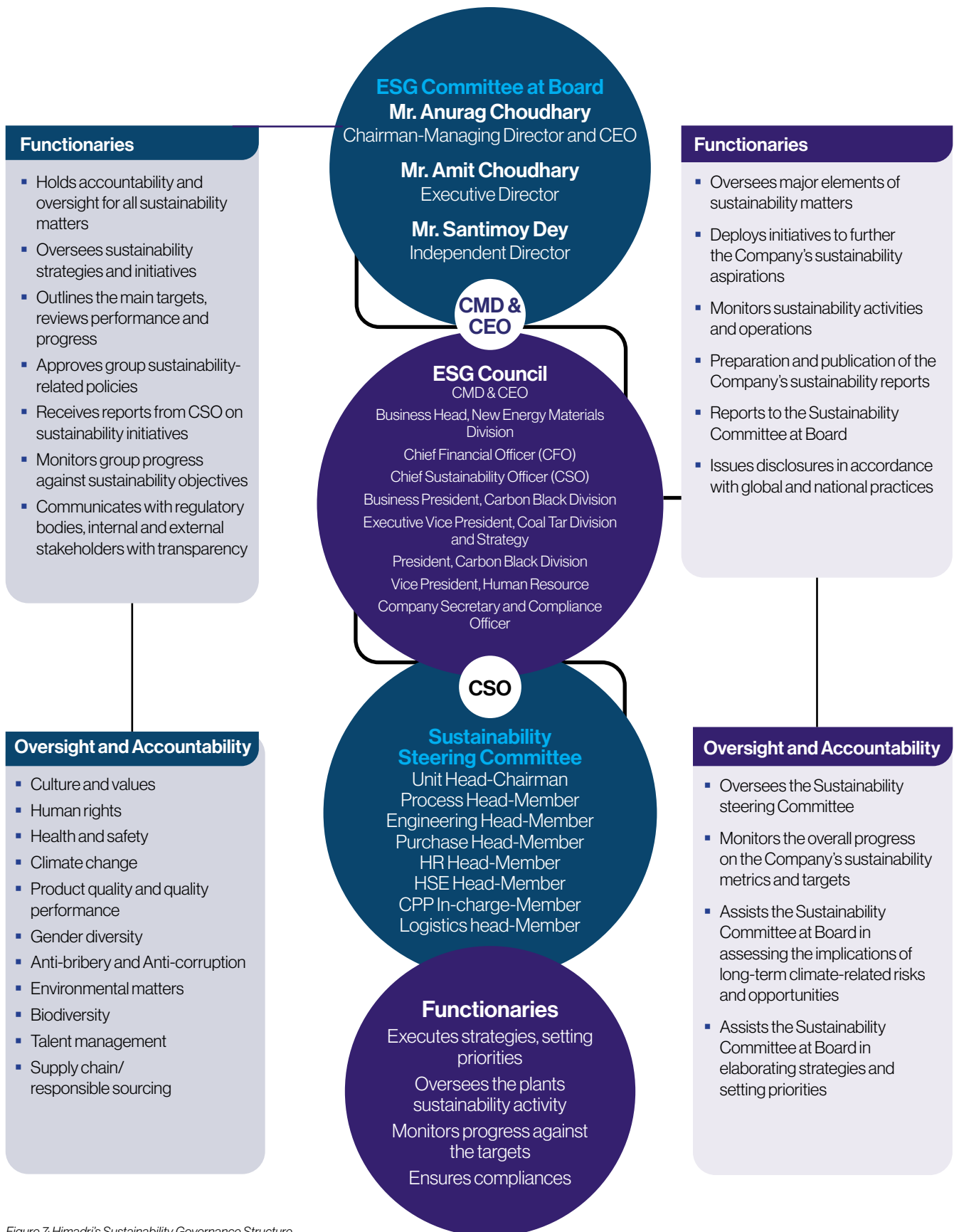
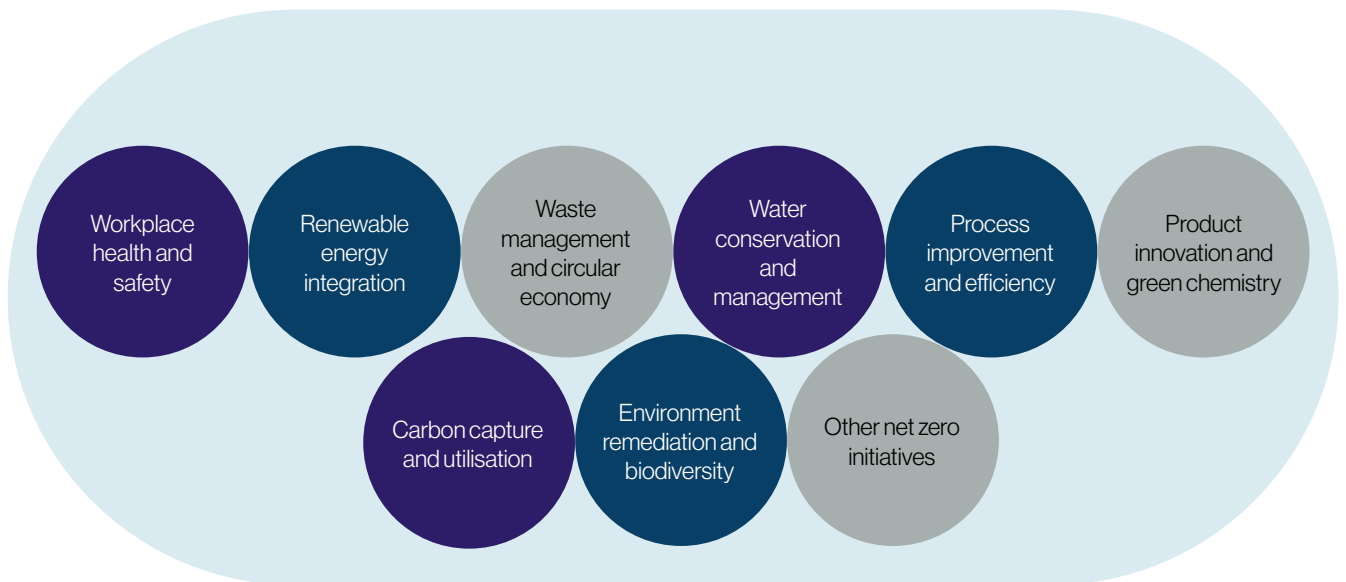


Figure 7: Himadri's Sustainability Governance Structure

Board resolutions/discussions during FY 23-24

<p>Appointed a CSO to drive ESG standards contextual to the business.</p> <p>Undertook a deep dive relating to climate change and corresponding strategies, including climate change</p>	<p>scenarios; deliberations included the relative attractiveness of green products.</p> <p>Conducted discussions on a range of climate-related topics including the role of industry</p>	<p>associations in climate change advocacy, stakeholder attitudes related to climate change, direction and momentum of expectations as well as government views on climate change issues.</p>	<p>Approved new net-zero roadmap by the Board aligning Science-Based Targets (SBTs).</p>
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Progressive investment plan of 100 Cr in Next 10 years in the Speciality chemical segment. The broad topics of capex investment are as below:



Realigned the strategy to invest in other business segments (new energy product manufacturing integrated with the recycling facility for ₹4,800 Cr, tyre business for ₹400 Cr and circular economy business vertical for ₹500 Cr)

<p>Created an ESG council consisting of group level functional and business unit heads</p> <p>Formed and structured a Sustainability Steering Committee at the business units; suitable engagement of sustainability task forces to drive initiatives</p> <p>Addressed investors' ESG concerns.</p> <p>Adopted management systems aligning global standards (ISO and SA8000) vis-à-vis sustainability coverage, monitoring and reporting.</p> <p>Strengthened the sustainability objective; reviewed Group policies, standards, guidelines, and action plans, related to the</p>	<p>sustainable development of the Company's projects and operations (social, economic, and environmental responsibilities).</p> <p>Deployed an internal carbon pricing system to drive the Company towards a low carbon model.</p> <p>Assessed ESG performance targets; reported to stakeholders on their appropriateness, time horizon, and ambition, while assessing progress</p> <p>Integrated sustainability in performance evaluation for all organisation layers (manager, unit heads, supervisors etc.).</p>	<p>Delegated and monitored the preparation of SEBI-mandated Business Responsibility and Sustainability Report (BRSR).</p> <p>Mandated transparent disclosures, including (but not limited to) the Annual Report, Sustainability Report, Taskforce for Climate-related Financial Disclosure (TCFD) and Carbon Disclosure Project (CDP)</p> <p>Deployed third party assurance to ensure transparency and efficacy of key sustainability parameters.</p> <p>Ensured stakeholder empowerment to deepen the sustainability culture with continual sustainability performance improvement.</p>
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Management of ESG-related risks and opportunities: ESG Council

ESG-related risk management is controlled by the ESG Council, a relevant committee under the purview of the ESG Committee at Board. This monitors the materiality of risks and manages key risks. The ESG Council deliberates the direction of ESG activities and reports the status of these activities to the ESG Committee at the Board level. The ESG Council offers insights that guide ESG efforts. The Council meets monthly to ensure the implementation of the ESG Strategy and related actions.

The priority issues comprise de-carbonisation, waste management, human rights, DE&I, and a circular economy.

Some ESG Council activities comprise the following:

- Implementation and progress of sustainability KPIs
- Design and deployment of initiatives to further the Company's sustainability
- Monitor sustainability KPIs and design continual improvement roadmap
- Prepare and publish sustainability disclosures in accordance with global and national requirements
- Meet monthly and report progress to the ESG Committee at Board

The ESG Council is chaired by the Chief Sustainability Officer; members consist of senior leaderships. When required, the ESG Council seeks external perspectives from subject matter experts. As the highest leader of ESG Council, the CSO is responsible for:

- Chairing the ESG Council and overseeing routine reporting to ESG Committee at Board
- Overseeing the Sustainability Steering Committee
- Monitoring the progress of the Company's sustainability metrics and targets
- Assisting the ESG Committee at Board in assessing the implications of short-mid-long-term climate-related risks and opportunities
- Assisting the ESG Committee at Board in elaborating sustainability strategies and setting priorities

Overall management of ESG activities: Sustainability Steering Committee

Himadri formed a business division-wise Sustainability Steering Committee, responsible for executing sustainability initiatives. The ESG initiatives are addressed by a ESG Steering Committee, the highest authority at the unit level. This team collaborates with Himadri's functional teams, external partners, and industry stakeholders to develop a sustainability roadmap. The team, under the leadership of the Chief Sustainability Officer, provides information and monitors sustainability KPIs. The ESG Steering Committee ensures a timely execution of priorities.

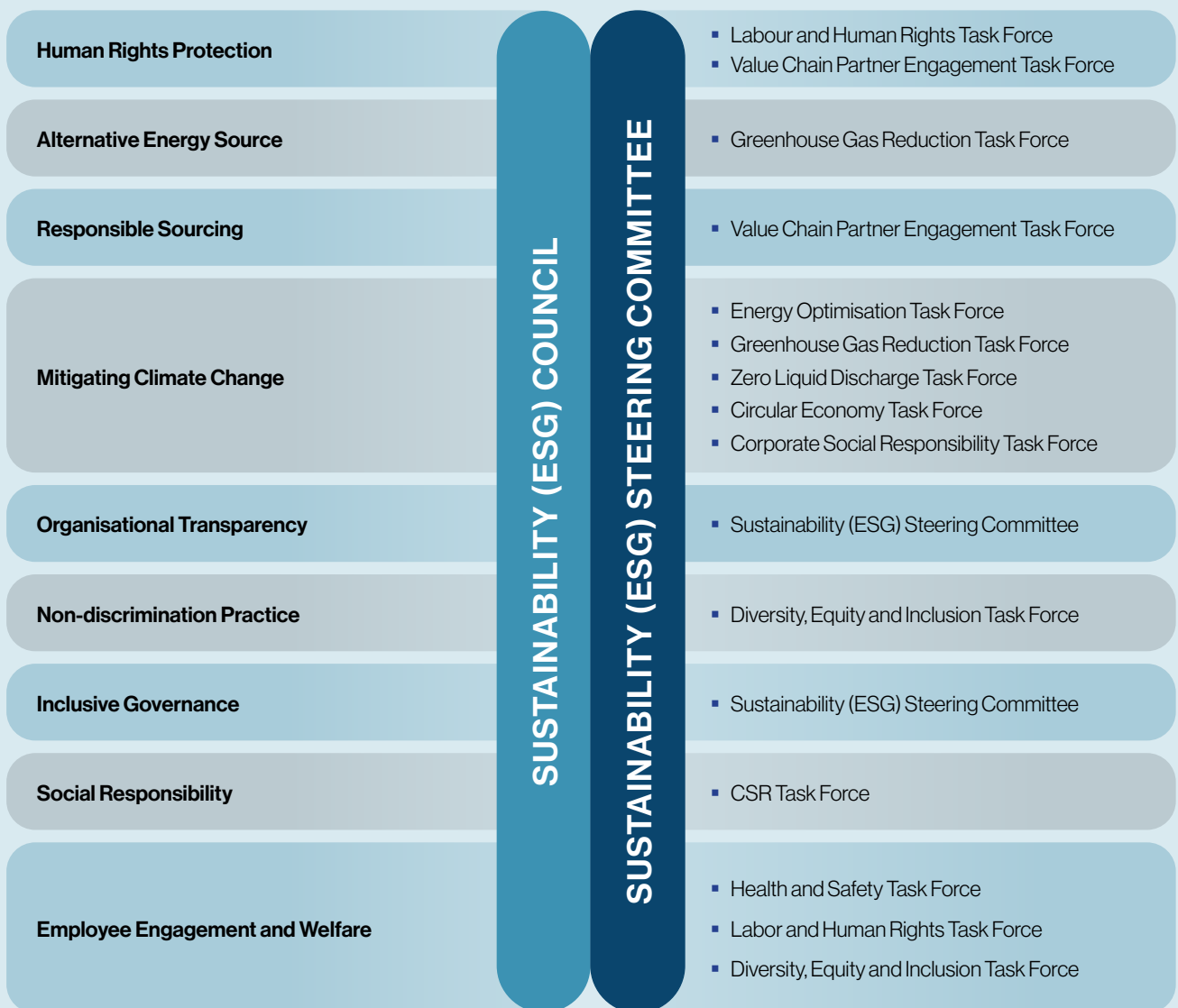
The significant functions of Sustainability Steering Committee are given below:

- Executes strategies and setting priorities
- Oversees the unit's sustainability activities
- Monitors progress against targets
- Ensures a complete compliance
- Enhances KPIs for continuous improvements

Expansion into ESG change initiatives to realise HARMONISE framework: Sustainability (ESG) task forces










To implement ESG initiatives at the employee and organisational levels, Himadri started objective-related task forces. The Company is interlinking ESG strategy based on materiality and initiatives measured through data-driven KPIs. HARMONISE themes driven by sustainability task forces are

the most crucial part of Himadri's ESG aspiration. Insights of linkage between Sustainability (ESG) Council, Business Unit (BU) level Sustainability (ESG) Steering Committees and working of the sustainability (ESG) task forces aligned with HARMONISE framework are given below



Our HARMONISE framework

Setting futuristic and realistic targets

	H uman rights protection	Ensuring equality: Upholding human rights for all
	A lternative energy sources	Harnessing evolving technologies to power our future
	R esponsible sourcing	Empowering communities through responsible sourcing
	M itigating climate change	Climate action: Driving change, shaping our sustainable future
	O rganisational transparency	Creating pathways to trust and accountability
	N on-discrimination practices	Embracing diversity, eliminating discrimination
	I nclusive governance	Driving change through inclusive governance
	S ocial responsibility	Building resilience through community engagement
	E mployee engagement and welfare	Flourishing together: Fostering employee empowerment and well-being

Health and Safety Task Force: The Health and Safety Task Force is committed to a safe and healthy workplace environment. This task force is responsible for implementing and monitoring safety protocols, conducting safety audits, and employee training. It identifies and mitigates potential hazards, ensuring a compliance with safety regulations. The task force promotes safety awareness and responsiveness, aiming to minimise risks and enhance plant safety. The Health and Safety Task Force plays a crucial role in protecting employee well-being.

Energy Optimisation Task Force: The Energy Optimisation Task Force is focused on enhancing energy efficiency and reducing energy consumption. This task force is responsible for identifying opportunities for energy savings, implementing energy-efficient technologies and monitoring energy usage. It conducts energy audits, analyzes data, and adheres to energy management best practices. The task force promotes energy conservation awareness, moderating costs and minimizing environmental impact. By driving energy optimisation, the task force contributes to efficient plant operations.


Greenhouse Gas Reduction Task Force: The GHG Reduction Task Force is dedicated to minimise greenhouse gas emissions from operations. This task force develops and implements strategies to reduce carbon emissions, focusing on Scope 1 and Scope 2 emissions. Key activities include identifying emission sources, optimizing processes, adopting cleaner technologies, and increasing energy efficiency. The task force reports emission levels, ensuring a compliance with regulatory requirements and alignment with sustainability goals. By promoting environmental responsibility, the GHG



Reduction Task Force plays a crucial role in the Company's commitment to net-zero emissions and countering climate change.

Zero Liquid Discharge Task Force:

The Zero Liquid Discharge (ZLD) Task Force at Himadri is dedicated to eliminating wastewater discharge from operations. This task force develops and implements strategies to recycle and reuse water, ensuring that no liquid waste is released into the environment. Key activities comprise the installation of advanced treatment systems, continuous water use monitoring, and optimizing processes to reduce water consumption. By promoting innovative water management practices and ensuring compliance with environmental regulations, the ZLD Task Force supports the Company's commitment to sustainable operations and environmental stewardship.

 **Circular Economy Task Force:** The Circular Economy Task Force at Himadri integrates circular economy principles into operations. It helps minimise waste, promote recycling, and extend products lifecycle. Key initiatives include optimised resource use, redesigning products for easier recycling, and implementing take-back programs. The task force collaborates with departments to embed sustainability through the supply chain, fostering innovation and reducing environmental impact. Through these efforts, the Circular Economy Task Force aims to create a sustainable, closed-loop

system that benefits the Company and environment.

 **Diversity, Equity and Inclusion (DE&I) Task Force:** The Company's Diversity, Equity, and Inclusion (DE&I) Task Force fosters a workplace environment that values diverse employee perspectives and backgrounds. This task force focuses on creating and implementing initiatives that promote inclusivity, equitable employee opportunities, culture of respect and belonging. Key activities include DE&I training programs, monitoring and addressing workplace diversity metrics, and organizing events and forums that celebrate diversity. By championing DE&I principles, the task force enhances employee engagement, innovation, and organisational culture.

 **Value Chain Partner Engagement Task Force:** The Value Chain Partner Engagement Task Force at Himadri strengthens relationships with suppliers and partners while focusing on Scope 3 emission reduction. It force alignment with sustainability goals through the value chain. Key activities include outreach programs, training to partners, and assessing their ESG performance. By engaging with these partners, the task force aims to enhance overall efficiency, promote responsible sourcing, and drive collective progress towards our environmental and social objectives, including a reduction in Scope 3 emissions.

Labor and Human Rights Task Force:

The Labor and Human Rights Task Force at Himadri is dedicated to uphold and advance labor standards and human rights across operations. This task force ensures a compliance with international labor laws and ethical practices, focusing on fair employee treatment, safety and respect. Its policies promote a positive work environment, addresses grievances or violations, and works towards a continuous improvement in labour practices. By fostering respect and inclusivity, the task force supports Himadri's commitment to social responsibility and ethical conduct.

 **Corporate Social Responsibility (CSR) Task Force:** A CSR Task Force drives the Company's science-based corporate social responsibility initiatives, focusing on impactful community engagement and sustainable development projects. It implements strategies to address social, environmental, and economic issues in the communities where Himadri operates. It oversees the execution of CSR programs, evaluates their effectiveness, and ensures an alignment with the Company's sustainability goals. By fostering partnerships with local organisations and stakeholders, the CSR Task Force aims to enhance societal well-being and contribute positively to communities, supporting a commitment to ethical and responsible practices.

Investor engagement

Himadri is dedicated to governance; its Board engages with shareholders on climate change issues. Utilizing formal and informal communication channels, Himadri ensures that shareholder perspectives are understood. Discussions on climate change are key to investor interactions, including results presentations by the CMD and meetings between the Board and the investors.

Public advocacy on climate change matters

Climate change is a global challenge that warrants collaboration; the industry

has a crucial role in shaping effective policy development. The Company engages with industry bodies and stakeholders to help create a robust, long-term policy framework for transitioning to a low-carbon economy.

The Company's involvement includes formal and informal discussions with industry associations, particularly related to the stance on sustainability issues like climate change. As a signatory of the United Nations Global Compact (UNGC), we work with companies and governments to support Paris Agreement goals. An effective policy framework included complementary measures, such as

support for low-emission technologies and resilience-building initiatives.

We prioritise climate action and long-term policy frameworks aligned with the Paris Agreement's goals. We collaborate with agencies to enhance global policy and market responses, developing mechanisms that reduce global greenhouse gas emissions. We work with key climate change influencers like the Securities and Exchange Board of India (SEBI), UNGC, and the Science Based Targets Initiative (SBTi) in various capacities, addressing climate change.

Risk management & strategy

Risk management accountability and oversight are integral to Himadri's governance framework. We believe that fostering a robust risk management culture is crucial to long-term success, making clear management and reporting of risks, including climate change-related issues, essential for the Board.

We evaluate internal and external risks, cost of mitigating risks, and the incorporation of risk mitigation into strategy. To identify risks and take action, we developed a comprehensive Risk Management Policy (Risk Assessment and Minimisation Process), crafted under the guidance of our senior management and involving risk identification, assessment, monitoring, and reporting.

The framework covers all facets of risk, related to operations, finance, strategy, and reputation. Within this framework, we prioritise climate change as a significant risk that requires immediate mitigation.

The ESG Committee at the Board, serving as the flagship body, is empowered to manage climate-related and ESG risks. Collaborating with the Audit Committee and ESG Council, the ESG Committee addresses significant climate change risks and implements mitigation actions. Identified risks are managed using appropriate controls, which are reviewed to ensure effectiveness.

Our risk management process employs a bottom-up approach, integrating

decentralised internal controls to capture risks at a granular level, including physical and transition risks. Executives at the operating business and group levels ensure comprehensive risk management.

At the group level, risk registers are aggregated to identify the Company's material risks based on three factors: frequency, potential magnitude, and risks impact. The comprehensive company risk register comprises climate change risks, encompassing physical cum transition risks and opportunities. This holistic approach ensures that we proactively address and manage a wide risks array associated with climate change as described below:

Corporate risk

- Climate and sustainability risks identified in group risk register.
- Incorporation of climate-related risk into risk reporting and internal controls

Business risk

- Climate and sustainability risks identified in Business Unit (BU) risk registers
- Grouping of climate related material issues in Corporate risk system

Project risk

- Project short-term climate related risks captured

Process for identifying and assessing climate-related risks

We employ analytical tools using a bottom-up approach to generate climate change forecast ranges, explore diverse hypotheses, and consider various scenarios. These tools help assess the potential impact of policy changes, regulations, technological advancements, market dynamics, and societal shifts on our business.

We monitor a range of data sources to stay informed about climate-related

developments. This vigilance allows us to identify significant changes that may require strategic re-evaluation and appropriate action.

For this report, Himadri has utilised MIT-SLOAN En-Roads Climate Simulator to simulate different Representative Concentration Pathways (RCP) while conducting climate-change risk assessment.^{3,4,5} Furthermore, Science

Based Target tools are employed to align our net-zero initiatives with Paris Agreement, which subsequently allows us to identify climate change opportunities.⁶ For the financial analysis, Network for Greening the Financial System (NGFS) scenarios are considered.⁷

Physical risk

- RCP 1.9 is a pathway that limits global warming to below 1.5 °C, the aspirational goal of the Paris Agreement.
- RCP 2.6 is a 'very stringent' pathway. According to the IPCC, RCP 2.6 requires that carbon dioxide (CO₂) emissions start declining by 2020 and go to zero by 2100. It also requires that methane emissions (CH₄) go to approximately half the CH₄ levels of 2020, and that sulphur dioxide (SO₂) emissions decline to approximately 10% of those of 1980-1990. Like all the

other RCPs, RCP 2.6 requires negative CO₂ emissions (such as CO₂ capture and utilisation). For RCP 2.6, those negative emissions would be on average 2 Gigatons of CO₂ per year (GtCO₂/year). RCP 2.6 is likely to keep global temperature rise below 2 °C by 2100.

- RCP 3.4 represents an intermediate pathway between the 'very stringent' RCP 2.6 and less stringent mitigation efforts associated with RCP 4.5. As well as just providing another option a variant of RCP

3.4 includes considerable removal of greenhouse gases from the atmosphere. RCP 3.4 is likely to contain global temperature rise at 2.0-2.4 °C by 2100.

Several climate change effects (drought, extreme heatwave, cyclone etc.) are analysed employing Government of India's Meteorological Database, World Resources Institute's Aqueduct tool and ThinkHazard website.

A summary of how our business locations may impacted by physical risks due to climate change

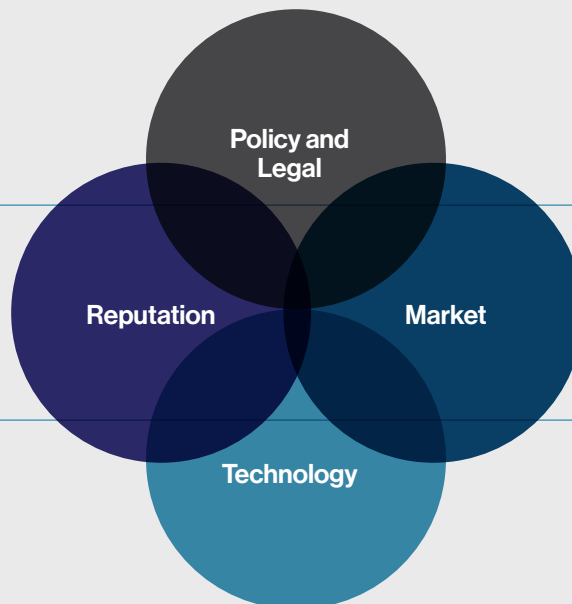
Location	Time Period	Draught	Heatwave	Flood	Rainfall	Cyclone	Wildfire
West Bengal	Short-term	Low ■	High ■	Very Low ■	Very Low ■	Very High ■	Very Low ■
	Mid-term	Low ■	High ■	Low ■	Very Low ■	Very High ■	Very Low ■
	Long-term	Medium ■	Very High ■	Low ■	Low ■	Very High ■	Very Low ■
Odisha	Short-term	Medium ■	Very High ■	Low ■	Low ■	High ■	High ■
	Mid-term	High ■	Very High ■	Low ■	Low ■	Very High ■	Very High ■
	Long-term	Very High ■	Very High ■	Low ■	Low ■	Very High ■	Very High ■
Chhattisgarh	Short-term	Very Low ■	Very High ■	Very Low ■	Very Low ■	High ■	High ■
	Mid-term	Very Low ■	Very High ■	Very Low ■	Very Low ■	High ■	High ■
	Long-term	Low ■	Very High ■	Low ■	Low ■	Very High ■	Very High ■
Andhra Pradesh	Short-term	Very Low ■	Very High ■	Very Low ■	Medium ■	Very High ■	Very Low ■
	Mid-term	Very Low ■	Very High ■	Very Low ■	Medium ■	Very High ■	Very Low ■
	Long-term	Very Low ■	Very High ■	Very Low ■	High ■	Very High ■	Very Low ■

Figure 8: Regions specific analysed physical risks and its impacts

Transition risk

- Regulatory emission curtailment
- Implementation of a carbon price
- Regulatory change in the energy mix
- Implementation of tax on fossil fuels
- Implementation of subsidies on renewable energy

- Change in customer reputation
- Change in investor reputation



- Change in energy mix
- Decreased availability of raw materials
- Alternative green products
- Change in prices

- Rise of technology disruption impacting competitive edge
- Integration of next generation technologies

To comprehend potential climate change options on our business, we have established long-term perspectives on common assumptions affecting our

markets. These include factors such as regulatory curtailment of emissions, carbon pricing, and economic and regional variables (market competition and alternate green

products). These assumptions are in line with an overarching description of the international policy environment.

Climate-related physical risks for Himadri Speciality Chemical Limited

At Himadri, we conducted a comprehensive assessment of acute and chronic risks that could impact our business locations. To understand how our operations might encounter risks under various climate scenarios—RCP 1.9, RCP 2.6, and RCP 3.4—we analyzed historical trends and generated projections for five climate hazards: extreme heatwaves, droughts, cyclones, floods, rainfall, and other relevant hazards.

This thorough analysis allowed us to gauge the potential exposure and vulnerability of our locations to climate hazards. By examining historical data and projections, we aim to develop risk mitigation strategies and ensure climate change resilience.

A normalisation was conducted to build a risk index that ranged from 1 (low risk) and 100 (high risk). The risks were aligned with three (3) timelines of occurrence: Short-term (1-3 years), medium-term (3-10 years),

and long-term (more than 10 years), aligning the analysis with Science Based Targets requirements.

We recognise that climate risk assessment is an evolving science; we will need to periodically update physical and transition risks. This will help us align our strategy with the most accurate projections and build a responsive resilience framework for tackling the impact of climate change.

Risk Score	
Very low	<20
Low	20-39
Medium	40-59
High	60-79
Very high	>80

Figure 9: Normalised Risk Index for Analysing Physical Climate Change Risks

Physical Risks Under RCPs Analysed

Unit Name	Time Horizon	Risk Description	RCP 1.9	RCP 2.6	RCP 3.4
Mahistikri	Short	Draught	Very low	Low	Medium
		Heatwave	Very high	Very high	Very high
		Flood	Very low	Very low	Very low
		Rainfall	Very low	Very low	Medium
		Wildfire	Very low	Very low	Very low
		Cyclone	Very high	Very high	Very high
	Medium	Draught	Low	Low	Medium
		Heatwave	Very high	Very high	Very high
		Flood	Low	Low	Low
		Rainfall	Very low	Very low	Very low
		Wildfire	Very low	Very low	Very low
		Cyclone	Very high	Very high	Very high
	Long	Draught	Medium	Medium	Medium
		Heatwave	Very high	Very high	Very high
		Flood	Low	Low	Low
		Rainfall	Low	Low	Low
		Wildfire	Very low	Very low	Very low
		Cyclone	Very high	Very high	Very high

Unit Name	Time Horizon	Risk Description	RCP 1.9	RCP 2.6	RCP 3.4
Liluah	Short	Draught	●	●	●
		Heatwave	●	●	●
		Flood	●	●	●
		Rainfall	●	●	●
		Wildfire	●	●	●
		Cyclone	●	●	●
	Medium	Draught	●	●	●
		Heatwave	●	●	●
		Flood	●	●	●
		Rainfall	●	●	●
		Wildfire	●	●	●
		Cyclone	●	●	●
	Long	Draught	●	●	●
		Heatwave	●	●	●
		Flood	●	●	●
		Rainfall	●	●	●
		Wildfire	●	●	●
		Cyclone	●	●	●
Korba	Short	Draught	●	●	●
		Heatwave	●	●	●
		Flood	●	●	●
		Rainfall	●	●	●
		Wildfire	●	●	●
		Cyclone	●	●	●
	Medium	Draught	●	●	●
		Heatwave	●	●	●
		Flood	●	●	●
		Rainfall	●	●	●
		Wildfire	●	●	●
		Cyclone	●	●	●
	Long	Draught	●	●	●
		Heatwave	●	●	●
		Flood	●	●	●
		Rainfall	●	●	●
		Wildfire	●	●	●
		Cyclone	●	●	●

Unit Name	Time Horizon	Risk Description	RCP 1.9	RCP 2.6	RCP 3.4
Vizag	Short	Draught	●	●	●
		Heatwave	●	●	●
		Costal Flood	●	●	●
		Rainfall	●	●	●
		Wildfire	●	●	●
		Cyclone	●	●	●
	Medium	Draught	●	●	●
		Heatwave	●	●	●
		Costal Flood	●	●	●
		Rainfall	●	●	●
		Wildfire	●	●	●
		Cyclone	●	●	●
	Long	Draught	●	●	●
		Heatwave	●	●	●
		Costal Flood	●	●	●
		Rainfall	●	●	●
		Wildfire	●	●	●
		Cyclone	●	●	●
Sambalpur	Short	Draught	●	●	●
		Heatwave	●	●	●
		Flood	●	●	●
		Rainfall	●	●	●
		Wildfire	●	●	●
		Cyclone	●	●	●
	Medium	Draught	●	●	●
		Heatwave	●	●	●
		Flood	●	●	●
		Rainfall	●	●	●
		Wildfire	●	●	●
		Cyclone	●	●	●
	Long	Draught	●	●	●
		Heatwave	●	●	●
		Flood	●	●	●
		Rainfall	●	●	●
		Wildfire	●	●	●
		Cyclone	●	●	●

Unit Name	Time Horizon	Risk Description	RCP 1.9	RCP 2.6	RCP 3.4
Falta	Short	Draught	●	●	●
		Heatwave	●	●	●
		Flood	●	●	●
		Rainfall	●	●	●
		Wildfire	●	●	●
		Cyclone	●	●	●
	Medium	Draught	●	●	●
		Heatwave	●	●	●
		Flood	●	●	●
		Rainfall	●	●	●
		Wildfire	●	●	●
		Cyclone	●	●	●
	Long	Draught	●	●	●
		Heatwave	●	●	●
		Flood	●	●	●
		Rainfall	●	●	●
		Wildfire	●	●	●
		Cyclone	●	●	●

Figure 10: Analysis of physical risks due to climate change.

Potential business impacts related to climate change: Physical risks

Operation: Standard productivity will be affected due to water shortage. Water intake quality will be affected; this may affect water treatment plants and processes. Third-party water purchase will be an additional cost. Cyclones can impact production and related infrastructure, disrupting operations. Wildfire can destroy production infrastructure leading to operational damages.

Health and safety: Hot ambient conditions at the workplace can lead to productivity loss in human-intensive processes; they can affect health conditions of those directly engaged on the shop floor where temperatures are not regulated. A

continuous exposure to heatwave can lead to acute and chronic effects in terms of heat stress and heat stroke. Production hours could decrease due to increase in break-timing regulated by local authorities.

Financial planning: Cyclones can impact production and production related infrastructure, affecting operations. A cyclone can impact the transportation sector leading value chain disruption. A disruption in utilities could impact the captive power plant that could affect production. Production cost could increase due to third party resource procurement.

Value chain: Cyclones can damage roads, bridges, and tunnels through floods, landslides, and high winds that halt goods delivery. High winds and storm surges can damage port infrastructure (docks, cranes, and storage facilities), disrupting maritime transport. Port closures and rough seas can delay cargo ships and ferries, disrupting global and local shipping schedules. Damaged infrastructure and service interruptions can delay goods transportation, affecting supply chains, productivity and viability.

Results of Physical Risk assessment

We compiled an overview of potential risks in a high-risk scenario, contrasting them with risks in moderate-risk and low-risk scenarios. We examined the impacts of

different climate change scenarios - RCP 1.9, RCP 2.6 and RCP 3.4 - and the findings were as follows:

In a moderate-risk scenario corresponding to RCP 2.6, there could be a high probability of the following:



Assessing transition risks

To comprehend the potential outcomes of climate change, we developed long-term perspectives based on common assumptions that impact all our markets. These assumptions encompass various factors, including regulatory restrictions on emissions, carbon pricing mechanisms, and economic and regional variables such as market competition and the availability of alternative green products.

We ensure that these assumptions align with a comprehensive understanding of the international environmental policy. This approach allows us to anticipate how global and regional regulatory landscapes may evolve, potential economic impacts, and shifts in market dynamics due to climate-related policies. By integrating these into strategic planning, we aim to navigate challenges and opportunities presented

by climate change. This ensures that our business remains resilient and competitive in a low-carbon economy.

To build a comprehensive risk index, we conducted a normalisation process that resulted in a scale ranging from 1 (low risk) to 100 (high risk). This risk index helps quantify and evaluate potential risks associated with climate change.

Risk Score	
● Very low	<20
● Low	20-39
● Medium	40-59
● High	60-79
● Very high	>80

Figure 11: Normalised risk index for analysing transitional risks.

We aligned these risks with three specific timelines to decipher their occurrence and impact:

- **Short-term (1-3 years):** These are immediate risks that could affect our operations and market position within the next one to three years. They require prompt attention and mitigation strategies to ensure business continuity.
- **Medium-term (3-10 years):** These risks could emerge or escalate in three to ten years. They necessitate strategic planning and investment to address potential challenges and opportunities.
- **Long-term (more than 10 years):** These long-range risks could impact business beyond the decade. Long-term risks require forward-thinking approaches and sustainable practices to safeguard operations and market relevance.

Our analysis is enhanced by aligning it with the MIT-SLOAN En-Roads Climate Simulator, a robust tool that models the impact of various climate policies and interventions. This alignment ensures that our risk assessment remains grounded in scientifically validated scenarios, a reliable foundation for strategic decision-making.

By considering these timelines and using advanced simulation tools, we can develop a nuanced risk understanding posed by climate change and implement appropriate mitigation measures.

	CLIMATE CHANGE RELATED TRANSITION RISKS	Time Horizon	Potential impacts on business						Potential financial impacts			
			Loss of Competitive edge	Regulatory Curtailment	Reduced Production	Increased Operating Cost	Reputational Damage	Reduced Demands for Products	Revenue	Expenditures	Assets	Capital Cost
Policy and legal	Regulatory change (cap and trade)	Mid-term		●	●	●				●		●
	Regulatory change (carbon price)	Short				●				●		
	Regulatory change (energy policy)	Short				●					●	●
	Fossil fuel taxed	Long			●	●		●	●	●		
	Renewable energy subsidies	Short	●								●	●
Market	Change in energy mix	Short		●		●				●		●
	Decreased availability of RM	Long	●		●	●			●	●		
	Alternative greener product	Mid-term	●					●	●			
	Changes in prices	Short	●					●		●		
Technology	Rise of technology disruption impacting competitive edge	Mid-term	●					●	●		●	●
	Opportunity to reduce resource consumption	Mid-term									●	
	Opportunity to use sustainable feedstocks	Long								●		
	Integration of next generation technologies	Long					●	●		●	●	●
Reputation	Change in customer reputation	Long					●	●	●			
	Change in investor's reputation	Long					●				●	

Figure 12: Analysed Transitional Risks due to Climate Change.

Results of Transition Risk assessment

Policy and legal risks

We perceive legal and regulatory risks as moderately significant at the end of the first Nationally Determined Contributions reporting period (till 2030). However, depending on the pace of policy and regulatory evolution, this can change following 2030.

At Himadri, we have founded our value chain on the processing of other sectors' by-products. The petrochemical and steel sectors (raw material suppliers) are exposed to global carbon prices. The exposure is limited, considering that these sectors are progressively becoming less carbon intensive. We do not perceive any policy or legal risk due to carbon prices, even as operating costs could increase moderately.

Policy and legal risk in taxing fossil fuels could have an adverse impact on the value chain by increasing costs and reducing products demand.

Market risk

Our business remains vital in a low-carbon transition as our intermediary chemicals help the transition. Our carbon black and new energy materials could experience market growth across all scenarios. In low-carbon scenarios, the oil and gas and thermal power businesses could encounter the risk of losing business over the long-term due to direct and indirect impacts on demand and costs, affecting raw material availability.

However, the risk of competitors transitioning to greener alternative products could impact demand.

Technology risk

The production of carbon black and coal tar pitch could encounter technological risks due to increased research and development investments in new technologies (low-carbon or recycled feedstock). The

advancement of technologies (carbon capture and utilisation) necessitates a production shift from standalone operations without technological upgrades. The integration of next generation technologies could require significant investments. Existing assets could necessitate technology upgrades involving substantial capital investment.

However, under low carbon scenarios, speciality carbon black and energy material demand could increase because of electric vehicle and energy storage solutions (used in their manufacture).

Reputational risk

We anticipate that emissions and environmental awareness could generate consumer backlash. There could be reputational risks from local communities if we fail to control waste, water, and other pollutants. However, Reputational Risks could remain constant for all businesses.



Capitalising on climate opportunities at Himadri Speciality Chemical Limited

			Potential opportunities		
	CLIMATE CHANGE RELATED TRANSITION RISKS	Time horizon	More efficient production	Increased market share	Integration of new technologies
Policy and legal	Regulatory change (cap and trade)	Mid-term	●		●
	Regulatory change (carbon price)	Short	●		
	Regulatory change (energy policy)	Short			
	Fossil fuel taxed	Long	●		
	Renewable energy subsidies	Short			●
Market	Change in energy mix	Short			
	Decreased availability of RM	Long			
	Alternative greener product	Mid-term	●	●	
	Changes in prices	Short			
Technology	Rise of technology disruption	Mid-term			●
	Opportunity to reduce resource	Mid-term	●		●
	Opportunity to use sustainable	Long	●	●	●
	Integration of next generation	Long		●	●
Reputation	Change in customer reputation	Long		●	
	Change in investor's reputation	Long		●	

Figure 13: Analysed climate change related opportunities.



Aligning our strategy with analysis

Our goal is to develop and align our strategy according to the influence that climate-related risks and opportunities have on operations and financial planning. The strategic measures we have taken to address this impact on our business can be broadly categorised under products, value chain, R&D investments, partnerships, and operations.

Product and services

At Himadri, we recognise opportunities from consumer shifts towards low-carbon products. In FY 21-22, we launched our speciality carbon black grade called Tyre Gold, which reduced rolling resistance (hysteresis Loss) of Truck Tyre Tread Compound and improved tyre life (enhanced mileage). During FY 23-24, we reduced energy and emission intensity. In FY 22-23, we re-used captured steam in place of heavy oils, reducing our carbon footprint. Certain products (speciality

carbon black, materials for energy storage solutions) are expected to experience increased demand due to their use in electric vehicles, batteries, and solar panels.

Himadri comprises a range of clean JETEX blacks used in primarily films, general plastics and pressure pipe application. The blacks offer good UV protection, extending the life of pressure pipes. Thin films made with this grade offer superior mechanical properties, enhancing life, reducing plastic

scrap generation and moderating power consumption.

Himadri's ELECTRA series helps reduce volume and surface resistivity while incorporating into polymer matrix. The ELECTRA series is used for cable, ESD, anti-static and battery applications. A high conductive speciality carbon black called ELECTRA 295 provides better conductivity at lower carbon black loading, requiring less polymer for cleaning and reducing polymer wastage and power consumption.

Value chain

We are in the process of evaluating the impact of identified climate-related risks and opportunities on our value chain. We developed a supplier selection criterion that considers a compliance with the supplier audit (includes aspects related to

environment, social, and climate change). We expect to implement plans in engaging with our value chain based on these criteria.

During the reporting year, Himadri built on the Sustainable Procurement framework. This policy and practice were assessed

according to ISO 20400 standards by a third party during the reporting year. With internal stakeholders' consultation, the focus on enhancing execution and integrating ESG deeper into procurement through the following roadmap:

Upstream Categories

Supplier risk assessment, engagement and capacity building

Vulnerability assessment: Conduct detailed climate risk assessments for suppliers to identify potentially vulnerable operations.

Resilient practices: Encourage suppliers to adopt climate-resilient practices, such as improving energy efficiency, diversifying energy sources, and enhancing water management.

Capacity building: Provide training and resources to help suppliers understand and implement climate resilience measures.

Sustainable procurement

Climate criteria: Integrate climate-related criteria into supplier selection and evaluation processes.

Sustainable sourcing: Prioritise sourcing from suppliers who demonstrate strong climate resilience and sustainability practices.

Diversification and localisation

Supplier diversification: Diversify the supplier base to avoid over-reliance on a single supplier or region, reducing the risk of supply chain disruptions.

Local sourcing: Increase the share of local sourcing to minimise transportation emissions and enhance resilience against global supply chain shocks.

Collaborative initiatives

Industry collaboration: Collaborate with industry associations and other organisations to promote best practices in climate resilience.

Joint projects: Engage in joint projects with suppliers and other stakeholders to develop and implement innovative climate resilience solutions.

Infrastructure investment

Resilient infrastructure: Encourage suppliers to invest in resilient infrastructure that can withstand extreme weather events.

Energy efficiency: Support suppliers in adopting energy-efficient technologies and practices to reduce their carbon footprint.

Downstream Categories

Customer engagement and capacity building

Awareness campaigns: Conduct campaigns to educate customers about the importance of climate resilience and sustainable practices.

Sustainable products: Promote and highlight the benefits of climate-resilient and environmentally friendly products.

Product innovation and lifecycle management

Climate-resilient products: Develop and market products that are designed to be resilient to climate change impacts.

Lifecycle assessment: Conduct lifecycle assessments to understand and mitigate the environmental impact of products from production to disposal.

Logistics and distribution

Optimised transportation: Optimise logistics and transportation routes to reduce emissions and improve resilience against climate disruptions.

Green logistics: Invest in green logistics solutions, such as electric or hybrid delivery vehicles, to minimise the carbon footprint.

Customer collaboration

Partnerships: Form partnerships with customers to jointly develop and implement climate resilience initiatives.

Feedback mechanisms: Establish feedback mechanisms to gather customer insights on climate resilience and sustainability practices.

Waste management and recycling

Circular economy: Promote a circular economy approach by encouraging the reuse and recycling of products and materials.

End-of-life programs: Develop end-of-life recycling programs for products to minimise waste and reduce environmental impact.

Monitoring and reporting

Performance metrics: Establish metrics to track the climate resilience and sustainability performance of downstream operations.

Regular reporting: Provide regular reports on progress towards climate resilience goals to customers and stakeholders.

Continuous improvement

Innovation and R&D: Invest in research and development to continuously improve the climate resilience of products and processes.

Adaptive strategies: Regularly review and adapt strategies based on emerging climate science and market trends.



Himadri is addressing scope 3 emissions within its supply chain. We are employing a dual approach, using activity-based data and spend data, to map Scope 3 emissions. This will provide a comprehensive understanding of how our suppliers' greenhouse gas emissions impact our environmental performance, while aligning with the net-zero target.

We are conducting hotspot analysis and developing strategic roadmaps.

This two-pronged approach allows us to prioritise and focus on achieving our net-zero ambition effectively. We recognise that certain categories within Scope 3 emissions will require attention; we will shift from using spend data to activity-based data where necessary. This transition will enable us to create performance indicators that accurately reflect the impact of our initiatives.

Our goal is to develop comprehensive strategies for implementing and optimizing sustainability practices within the supply chain. We will engage in collaborative initiatives with suppliers to promote sustainable practices and products throughout our supply chain. Our commitment will extend to strengthening suppliers' capabilities, providing training and awareness on sustainable practices, and emphasising their pivotal role in reducing carbon emissions.

Investment in R&D and partnerships

Our research and development commitment drives innovation and inspiration across ventures. We offer cutting-edge, eco-friendly solutions that not only address consumer needs but reduce our carbon footprint. Our success and industry leadership are built on the sustainable growth nurtured by R&D and the adoption of transformative technologies. We challenge the status quo through R&D across

multiple segments, widening offerings and remaining at the forefront of technological advancements.

The funds allocated for R&D are categorised as revenue expenditure or capital expenditure, recorded in the relevant accounts within the year of occurrence.

The Company's product innovation pipeline showcases the positive outcomes of our

research and development investment resulting in a competitive edge. Our objectives towards products development encompass climate-change resilience, evolving customer needs and minimised environment impact.

Himadri's R&D strategy is multipronged (described below):

Eco-friendly materials:

Invest in R&D to create products using sustainable and recyclable materials that reduce environmental impact.

Energy-efficient products:

Design products that consume less energy during their lifecycle, contributing to lower carbon emissions.

Climate-resilient solutions:

Develop products specifically designed to withstand extreme weather conditions and other climate-related challenges.

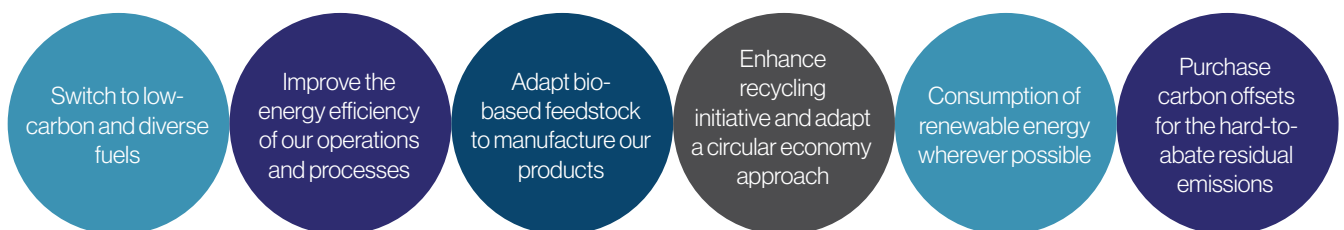
Customer-centric innovation:

Engage with customers to understand their needs and incorporate feedback into product design, ensuring products meet climate resilience and sustainability criteria.

Process development innovation has strengthened efficiency, translating into lower product costs, improved quality, and superior yields. We are focused on creating new products, particularly in the lithium-ion battery (LIB) materials domain. We are working on reducing energy consumption and carbon footprint in select processes through inventive techniques.

Operations

Himadri deployed a multi-lever strategy to moderate carbon footprint and achieve net-zero emissions (indicated below):



Our management pledged a budget of ₹100 Cr over the decade to facilitate our journey towards net-zero by 2050. Himadri's Board Level Sustainability Committee formulated an internal carbon pricing to drive these investment decisions. The Company started integrating environmental impact assessments into the evaluation of each capital expenditure project, recognizing that these decisions influence long-term sustainability, particularly in terms of GHG emissions.

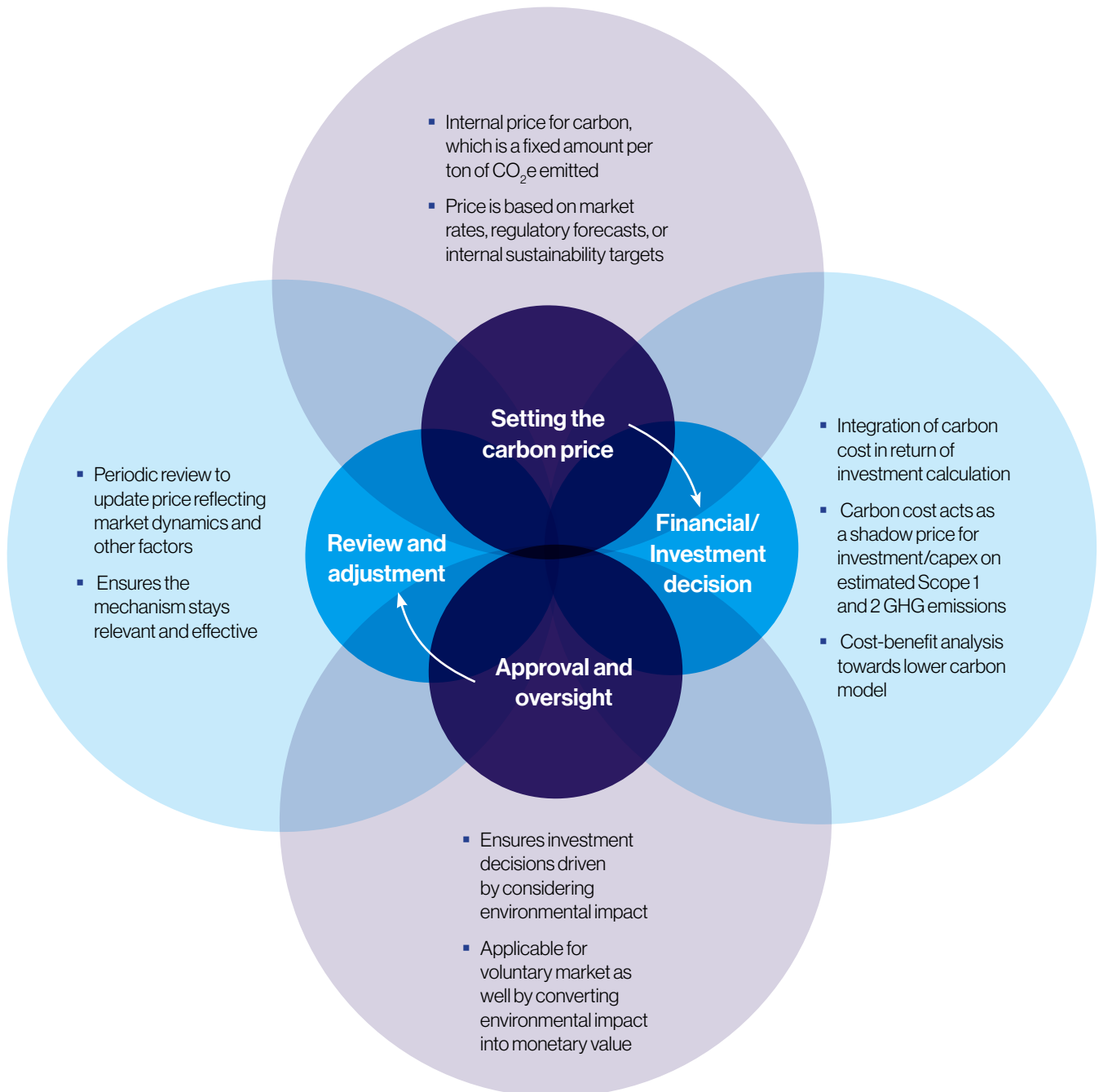
Our Environmental Policy, overseen by the ESG Committee at the Board, applies across our operations and mandates that all investment decisions must consider

environmental impact. We incorporated an internal carbon pricing for Scope 1 and Scope 2 emissions into payback calculations. When evaluating capital expenditures or new projects, the potential CO₂ emissions (Scope 1 and Scope 2) were estimated. The internal carbon price is then applied to these emissions to calculate a 'carbon cost,' which is included in the cost-benefit analysis. This ensures that projects with lower carbon emissions are more financially attractive, incentivizing investments.

Himadri implements the shadow pricing mechanism in which we assign a monetary value to each ton of carbon dioxide. Shadow

pricing mechanism is a crucial tool to ensure that the environmental implications of long-term investment decisions are fully understood. With India fast becoming a compliance market for emissions, internal carbon pricing mechanism assists Himadri become future-ready for sustainable business practices.

Derived from the global trading platform, the internal carbon price is fixed by the ESG Council at ₹6,220 per ton of carbon dioxide (reviewed every six months). This value is considered as an add-on virtual ROI from FY 24-25. The detailed implementation of internal carbon pricing is given as below:



Himadri is aligned with implementing an internal carbon fee to drive expenditures towards environmental stewardship in the near future.

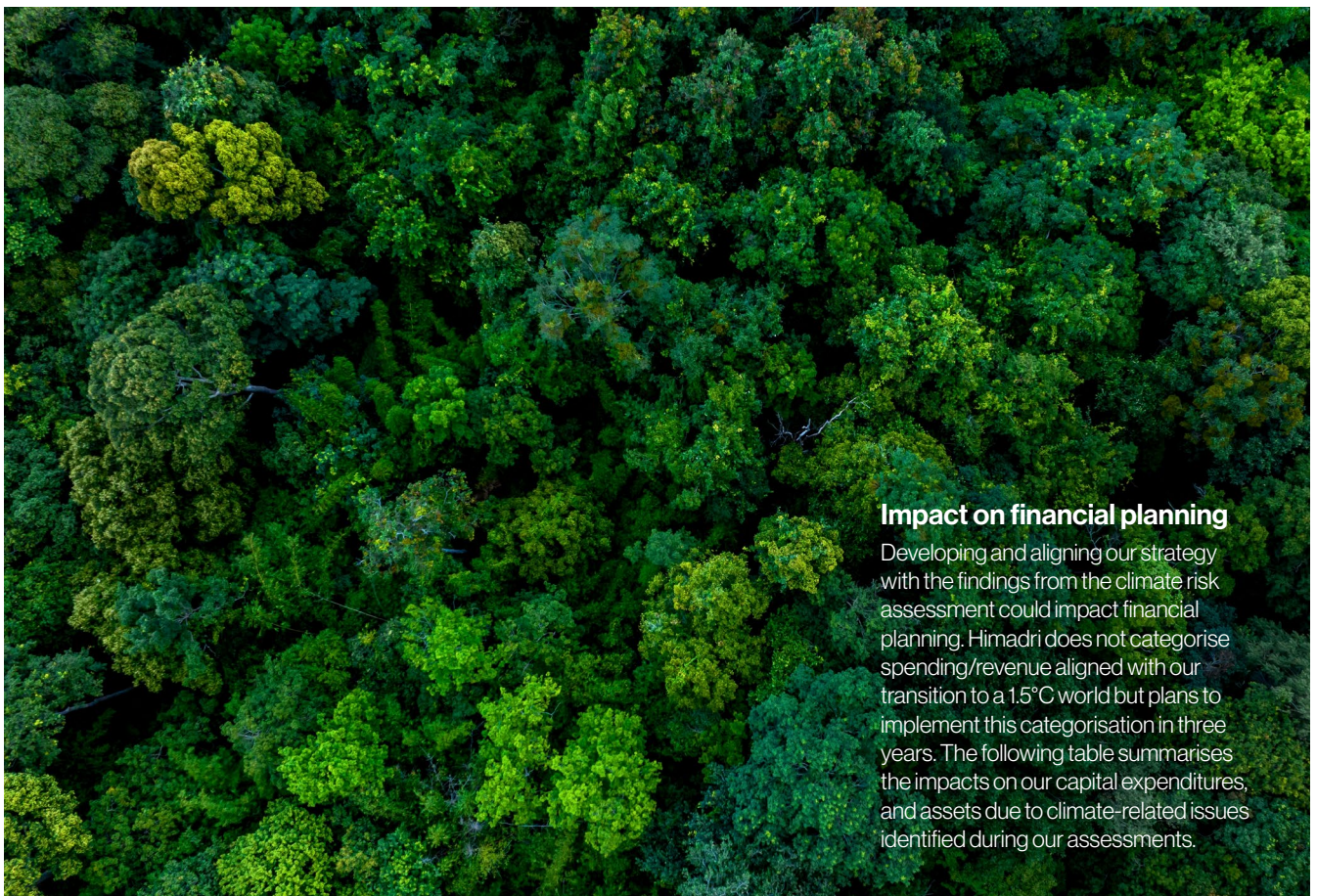
Figure 14: Implementation mechanism of Internal Carbon Pricing.

Impact of identified climate-related issues on Himadri’s financial planning

We utilised the Intergovernmental Panel on Climate Change (IPCC) and Network for Greening the Financial Systems (NGFS) scenarios to evaluate the financial impacts and prioritise risks for our business units operating in various regions. At Himadri, EBITDA serves as a crucial

performance indicator, enabling us to assess both significant financial impacts and management effectiveness. We deem an impact equal to 2% of EBITDA as potentially having a substantial influence on economic outcomes or project decisions for stakeholders.

In our financial planning, we consider a range of climate-related issues that could affect our business and stability. The following table summarises these issues and their potential impacts on operations and financial health.



Impact on financial planning

Developing and aligning our strategy with the findings from the climate risk assessment could impact financial planning. Himadri does not categorise spending/revenue aligned with our transition to a 1.5°C world but plans to implement this categorisation in three years. The following table summarises the impacts on our capital expenditures, and assets due to climate-related issues identified during our assessments.

Financial element	Impact
Capital expenditure	<ul style="list-style-type: none"> Investments in developing low-carbon solution, piloting projects that reduce carbon footprint, enabling recycling initiatives. Redevelopment of damaged infrastructure impacted by chronic or physical climate change hazards. Investments required to achieve GHG reduction targets.
Assets	<ul style="list-style-type: none"> Modification in assets due to energy policy which promotes consumption of renewable energy Assets may require significant technological upgrades. Otherwise there is a risk of rendering the assets obsolete Change in investors perspective in low carbon economy may depreciate assets without timely intervention

Responding to risks and opportunities: Mitigation and adaptation strategy

Despite the diversity of risks, all of Himadri's business units are dedicated to lowering their carbon footprint and enhancing climate resilience. We are undertaking several measures to reduce emissions, such as investing in enhancing energy efficiency, creating low-carbon products that align with the EU's emission intensity standards,

and transitioning operations towards sustainability.

Our corporate strategy emphasises reducing energy intensity for Scope 1 and Scope 2 emissions and become an industry benchmark. We initiated an inventory of our Scope 3 activities, identifying and accounting relevant categories. We are considering initiatives to reduce Scope 3

emissions, underscoring our commitment to sustainability.

To achieve net-zero, we have identified three areas aligned with the global SBTi standard (short-term, mid-term, and long-term targets). This approach ensures a comprehensive and phased plan for sustainability.



Short-term targets

We aim to deepen climate change resilience by incorporating diverse fuels and minimizing energy consumption. We are exploring product end-of-life recycling initiatives and are committed to reduce emissions across our value chain.

We implemented a sustainable procurement policy and during the reporting year, we launched an outreach program for value chain partners to align them with our sustainability journey.

Governance and initiatives

- Draft a climate resilience response strategy covering identified climate risks.
- Develop mandatory mitigation assessment guidelines for all new projects, mergers and acquisitions including mandate to increase energy efficiency, mandating use of diverse fuels etc.
- Integrate de-carbonisation goals with annual business planning.
- Embed climate KPIs into performance appraisal for executives managers.
- Develop a supplier engagement programme to strengthen climate action across the value chain.
- Engage with community members to deepen climate resilience programs and integrate climate adaptation into CSR programmes specific to the identified risks.
- Initiate a carbon capture pilot project.
- Enhance the role of renewable energy consumption wherever possible
- Deepen a circular economy approach through recycling
- Reduce upstream and downstream emissions

Risk management

- Adapt enterprise-level and other risk management processes to factor loss and damages from climate calamities.
- Use the same quality assurance and compliance approaches for climate-related information as for finance, management, and governance disclosures.
- Initiated a program to develop a sustainable packaging solution to replace virgin plastic from the value chain.
- Reduce upstream and downstream transportation emissions.
- Moderate customers' carbon footprint by developing and offering novel products.
- Initiate science-based offset projects.
- Integrate ESG KPIs in supplier assessments.

Targets and metrics

- Define a framework to consolidate business unit-level targets and achievements to align with and track progress against Group level targets.
- Achieve net zero by 2050; 30% absolute reduction in Scope 1 emissions by 2030;
- 20% absolute reduction in Scope 3 emissions by 2030.
- Strengthen Scope 3 accounting and the identification of emission hotspots within the value chain.
- Announce annualised targets for energy efficiency, water conservation, and waste generation.
- Ensure that value chain partners align with Group targets.
- Integrate renewable energy sources into operations with incremental annual consumption



Medium-term targets

We are accelerating green initiatives to reduce our carbon footprint through the use of next-generation fuels that enhance our environment stewardship.

As a part of our corporate strategy, we set a goal to electrify our operation, reducing our reliance on fossil fuels and greenhouse gas emissions.

We will emphasise a reduction in emissions throughout our value chain. We recognise that our sustainability efforts must extend beyond our operations to include those of our suppliers and partners. We are implementing measures to assess and mitigate value chain emissions, ensuring that every link in our supply chain contributes to our environment goals. By fostering a spirit of collaboration in innovation, we aim to set a new sustainability standard within our industry.

Governance and initiatives

- Identify and pilot green business opportunities involving energy storage technologies, low carbon footprint grades of carbon black and coal tar pitch etc.
- Identify and engage in policy advocacy on specific areas - policy towards mitigating technological and contractual barriers of moving away from coal, removal of infrastructural bottlenecks in the use of clean fuels.
- Identification of opportunities due to carbon tax in operations.
- Building climate change-resilient infrastructure.

Risk management

- Develop business unit-level adaptation plans based on identified climate risks and techno-feasibility assessments.
- Engage with external key stakeholders to manage risks.
- Collaborate with business-critical suppliers of goods and services exposed to Physical and Transition Risks to mitigate those risks.
- Assess and quantify the impact of a loss of critical suppliers in the event of climate disasters, or in case of low carbon transitions.
- Develop products for a low carbon economy.
- Integrate carbon removal projects within operations.
- Achieve 100% electrification of our operations.
- Adopting science based successful off-sets projects.

Targets and metrics

- Absolute contraction of Scope 1 emissions by 30%.
- Absolute reduction of Scope 3 emissions by 40%.
- Ensure 50% consumption of recycled raw materials.
- Reduction of freight emissions by 50%
- Elimination of virgin plastic from packaging by 100%.
- Decide on the key suppliers, customers to handhold with for reduction of their scope 1 and 2 targets (i.e., Himadri's scope 3 target).
- Drive adoption of science-based emission reduction targets by suppliers and/or customers.
- Define climate change relevance of the CSR programmes - carry out business unit wise studies on how and to what extent the CSR programmes are addressing the climate change risks and vulnerabilities as identified.



Long-term targets

We are committed to scale proven technologies to position ourselves as future-ready. We will integrate relevant next-generation technologies to ensure that we stay at the forefront of innovation and sustainability.

By embracing advanced technologies, we will aim to enhance Operational, reduce environmental impact, and drive sustainable growth. This will include the adoption of cutting-edge digital tools, automation, and smart systems that could optimise processes and enhance productivity.

We will incorporate renewable geo-thermal energy solutions and energy-efficient technologies that moderate our carbon footprint. Our commitment to integrating these next-generation technologies reflects our commitment to continuous improvement and addressing global environmental and technological trends.

Governance and initiatives

- Update the net zero plan taking into consideration new regulatory, market requirements and achievements of short-to-medium term targets
- Develop and implement a Just Transition plan.
- Scale the use of renewable fuels and energy in transportation.
- Initiate the consumption of renewable geo-thermal energy.
- Integrate carbon capture across business units.

Risk management

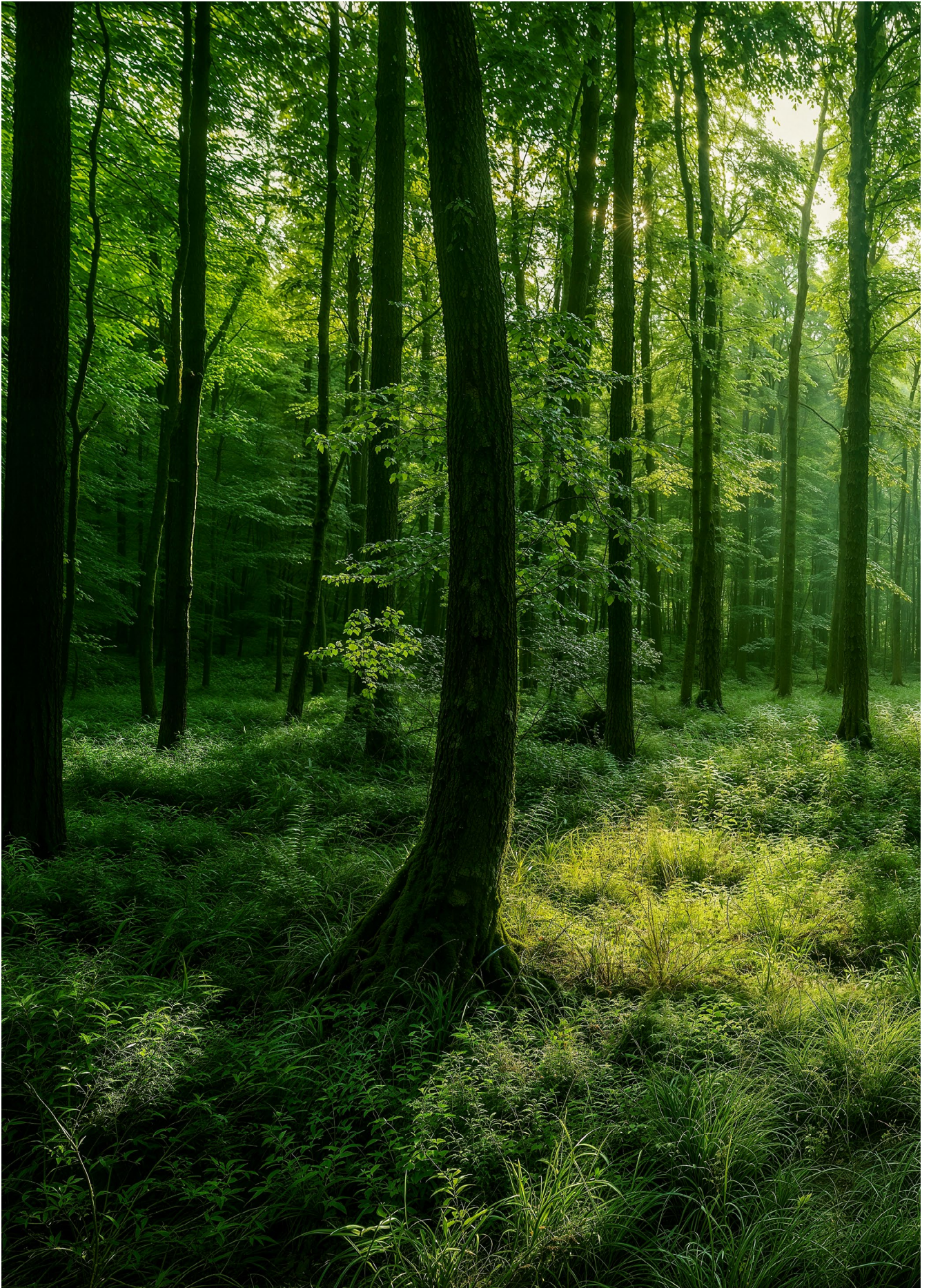
- Consider insurance or additional climate fund (enhanced ICP) for emergency purposes.
- Install measures to reduce an exposure to identified physical climate risks
- Strategise a just transition plan.

Targets and metrics

- Revise our climate change budget
- Reduce absolute Scope 1 by 30%.
- Reduce absolute Scope 3 by 30%.
- Commissioned specific targets for the use of clean technologies.

Our climate strategy includes a detailed plan outlining the specific steps required for effective implementation. It emphasises the alignment of our financial capital allocation framework and social values with our overarching goal of achieving net-zero emissions, in accordance with the target of limiting global temperature rise to 1.5 degrees Celsius. This involves not only addressing climate change but also deepening relationships with local, regional, and global stakeholders.




Beyond primary de-carbonisation strategies, we monitor emerging technologies that could accelerate our progress toward net-zero. While some technologies may not yet be feasible from a techno-commercial standpoint, we are collaborating with industry partners and technology providers to catalyse their development. This proactive approach ensures that we are ready to deploy these technologies as soon as they become viable, keeping us at the forefront of innovation and sustainability.



Himadri's Road Map: Net Zero by 2050

Achieve (2023 to 2030)





Accelerate (2030 to 2040)

-  Reduce packaging emission.
-  Reduction of upstream and downstream emission
-  Lowering customer's carbon footprint by novel products.
-  Science based off-set, pilot projects.
-  Focus on adding renewable energy source.
-  Deployment of sustainable procurement framework.





Reduction of Scope 3 by 20%

-  Introduction of fuel diversification/greener technologies.
-  Capture and convert carbon emissions.
-  Recycling initiatives.
-  Adapt circular economy products.
-  Deployment of sustainable procurement framework.
-  Consumption of renewable energy.
-  Reduce waste generated.

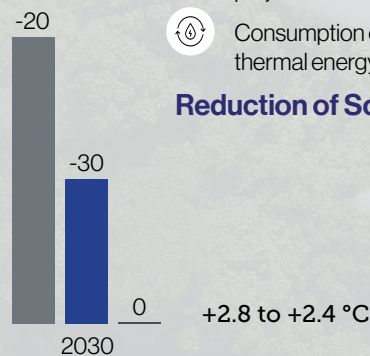
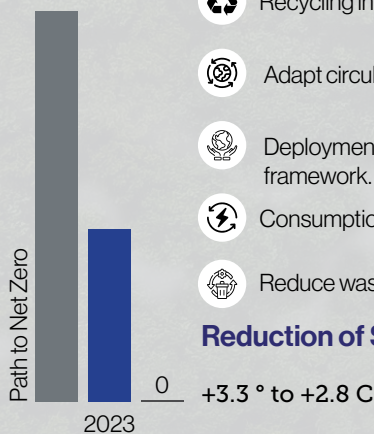
Reduction of Scope 1 by 30 %

-  Elimination of virgin plastic in packaging by 100%
-  Reduction of freight emission by 50%
-  Science based off-set, broadening horizon of successful pilot projects.
-  Reinforcing sustainable procurement framework to make it more effective and efficient.

Reduction of Scope 3 by 40%

-  Consumption of new generations/ carbon neutral fuel.
-  100% electrification of our operations
-  Consumption of recycled RM by 50%.
-  Carbon removal projects
-  Consumption of renewable thermal energy

Reduction of Scope 1 by 30%



Scope 1,2 & 3 targets include science based projects aligning SBTi tools and MIT-SLOAN En-roads climate simulator.

SBTi - absolute Contraction Approach has been applied to freeze the target against the timeline.



OUR AMBITION

Scale
(2040 to 2050)

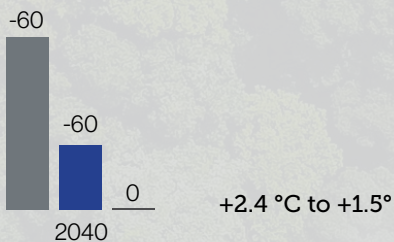
Assumption: India will be regulated carbon market with high tax imposed on conventional Fuel & PLI for clean fuel and technologies

- Scale successful science based offset projects.
- Zero tolerance on sustainable procurement framework and collaboration with value chain partners.

Reduction of Scope 3 by 30%

- Scale carbon capture and utilisation
- Scale renewable thermal energy consumption
- Scale usage of owned recycled plastics as packaging material
- Scale recycled and upcycled raw material input
- Scale usage of renewable fuels and energy for transportation

Reduction of Scope 1 by 30%



- Scope 3 – Baseline Year 2023 (FY 23-24)
- Scope 1 – Baseline Year 2021 (FY 21-22)
- Scope 2 = 0, Baseline Year 2021 (FY 21-22)

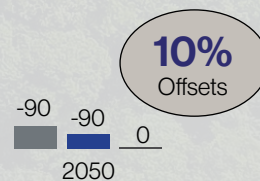


Figure 15: Himadri's Net-Zero Roadmap

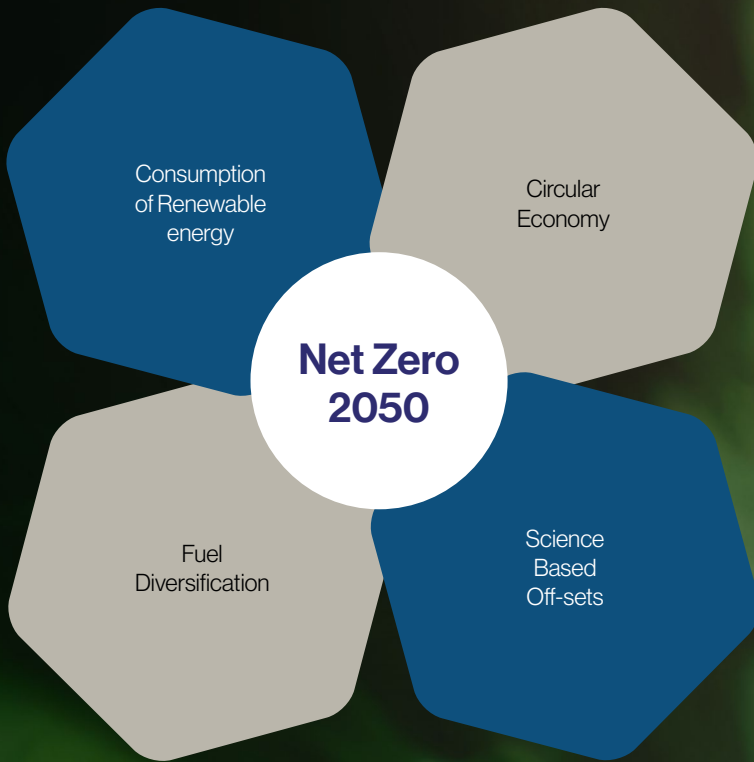


Figure 16: Key Net-Zero Plan Levers Detailed in Net-Zero Roadmap

Metrics and targets

We integrated climate-related risks and opportunities into our financial, operational, technological, and broader ESG frameworks. To evaluate the current and future implications of these factors, we employ diverse metrics.

We outlined measurable goals aimed at mitigating the impact of our emission-generating activities. By actively reducing emissions, we not only contribute to our broader sustainability objectives but also strengthen risk management. This proactive stance ensures that we are prepared to address challenges posed by climate change, reinforcing our commitment to sustainable growth and resilience.

Himadri established enablers or task force-specific KPIs to drive progress. These KPIs focus on areas to our sustainability goals. Key focus areas include reducing energy intensity and emissions, implementing initiatives to target Scope 3 emissions, enhancing water conservation, and promoting a circular economic model. By mapping these contributing areas, we are ensuring that our sustainability initiatives are comprehensive and impactful, driving progress towards long-term objectives.



Sustainability Objectives 2024-25

Objectives	Measures	Target FY 24-25	FY 23-24 Progress	Plan vs Progress	Main domain	UNGC-SDG
Vision Zero Accident/ Incident	By 2025, Loss Time Injury Frequency Rate below 1(Vs 2021)	<1	1.18		People	
Energy Consumption	By 2025, Reduce Energy Intensity per metric ton of product sold (Vs 2021)	-10%	-12.29%		Planet	
CO2e emission Intensity (Scope-1 & scope-2)	By 2025, Reduce Scope 1 and Scope 2 CO2e emission intensity per metric ton of product sold (Vs 2021)	-25%	-24.20%		Planet	
CO2e emission Intensity (Scope-3)	By 2025, Reduce scope 3 CO2e emission intensity per metric ton of product sold (Vs 2024)	-5%*	NA*	NA*	Planet	
Zero Liquid Discharge	All plant must operate with ZLD status(Vs 2021)	100%	100%		Planet	
Solid Waste	Reduce solid waste (Hazardous and sent to landfill) per metric ton of product sold (Vs 2021)	<1%	0.01%		Planet	
Recycle Materials	Increase the proportion of Non-virgin raw material from external sources used in production to avoid depletion of natural resources(Vs 2021)	>95%	98%		Planet	
Gender Diversity	Increase female representation in management team(vs 2021)	5%	4.5%		People	
Compliance Training	Increase percentage of Targeted staff, who completed anti-bribery and corruption training (Vs 2021)	>95%	99.8%		Governance/ Communities	
Value Chain Management	By 2023, conduct sustainability assessment of our value chain partners covering at least 70% of group spend(Vs 2021)	85%	84% (against 50% spend)		Communities	
Carbon Neutrality by Product Design	Introduce recycled raw material or bio sourced materials into product to reduce customer's carbon footprint - % RM in MT	0.1%	NA*	NA*	Planet	

Behind Plan: On Schedule: Ahead of Schedule: New Benchmark: * New Objective

Himadri's Group Level Sustainability Objectives for FY 24-25.

Figure 17: Himadri's Group Level Sustainability Objectives for FY 24-25.

GHG emissions

- We are aggregating GHG data, creating inventories, and reporting Scope 1, 2 and 3 emissions outlined by the GHG Protocol Standard. We used the following methodologies for collecting activity data and calculating emissions:
 - IPCC Guidelines for National Greenhouse Gas Inventories, 2006
 - The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
 - The Greenhouse Gas Protocol: Scope 1, 2, and 3 Guidance
 - EcolIntvent 3.9.1 Database
 - DEFRA Database
 - United States Environmental Protection Agency Database

Energy intensity trend

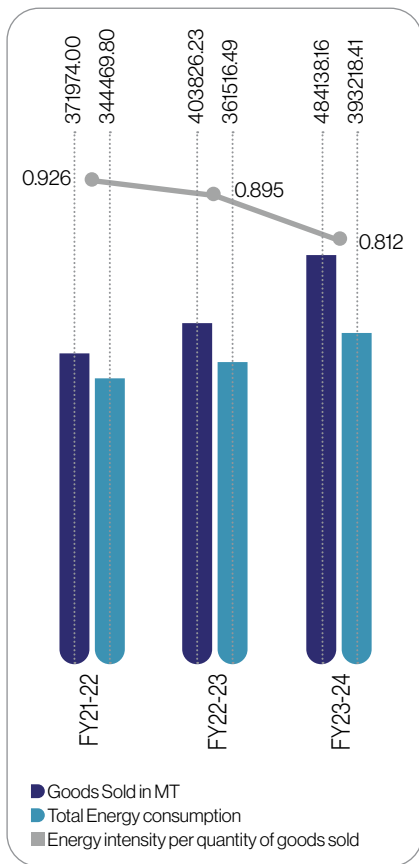


Figure 18: Energy Profiling for Last 3 Years

GHG emission trend

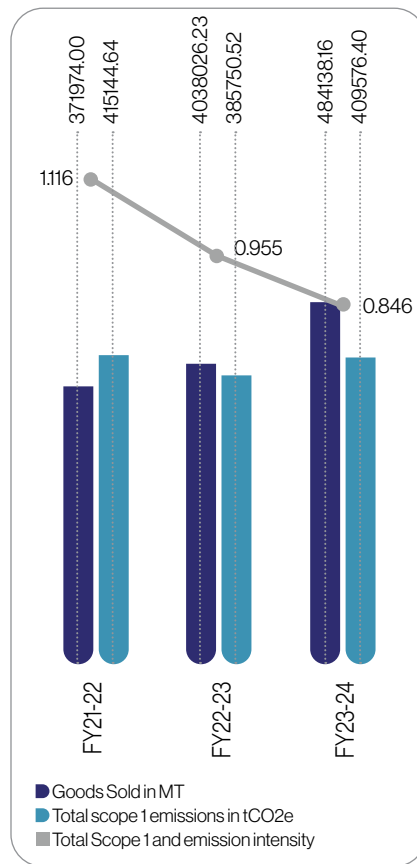


Figure 19: GHG Emission Profile for the Last 3 years

In the FY 23-24, Scope 1 and Scope 2 emissions from our operations were 4,09,576.4 metric tons CO₂e. The Scope 2 emission became zero due to Himadri being a net exporter of electricity (generated reusing waste gas produced in carbon black manufacture) in our captive power plants. The drop in emissions intensity was due to initiatives like capturing and reusing steam, and energy efficiency measures (detailed in the above chapters).

Scope-3 emission FY 23-24 in tCO₂e

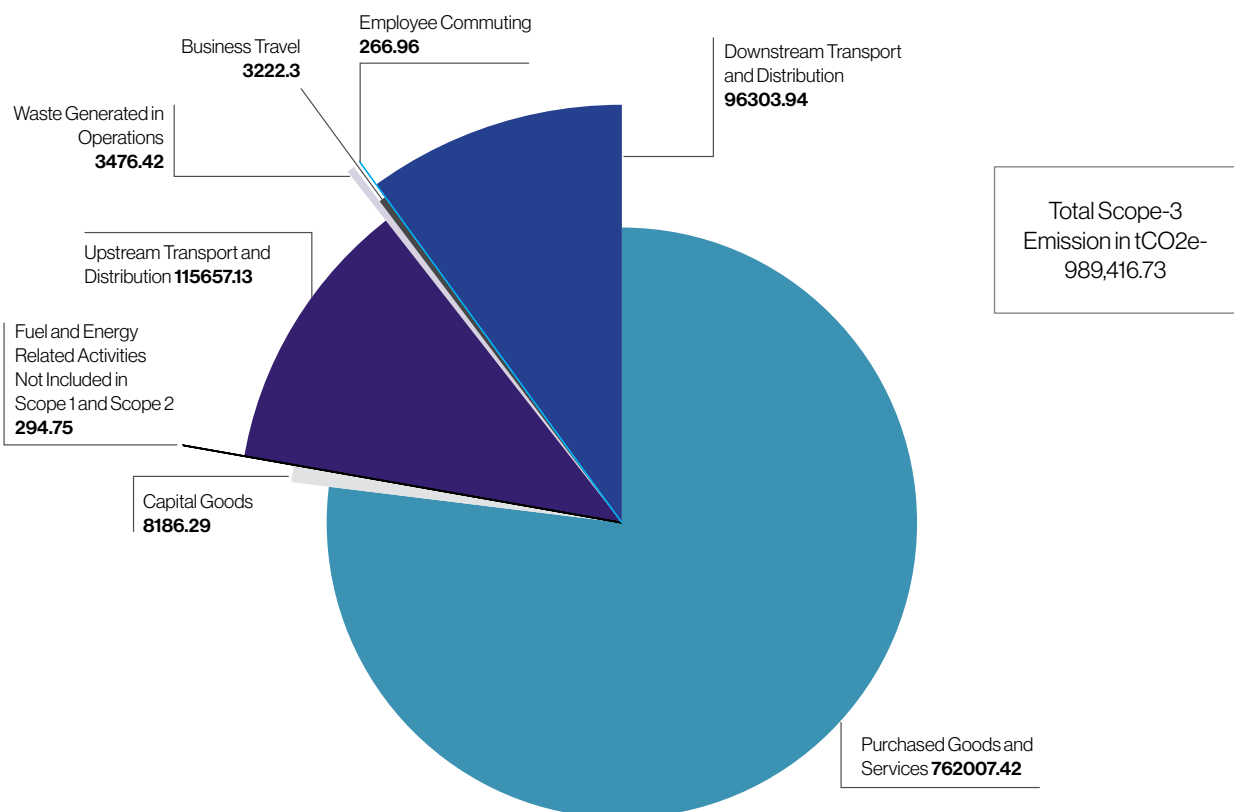


Figure 20: Category-wise Scope 3 GHG Emission

Other metrics

This section outlines our performance metrics beyond GHG emissions, focusing on energy consumption, water usage, and waste management. The TCFD recommends including these metrics to facilitate a comprehensive tracking of overall climate performance.

Himadri established targets related to these non-GHG metrics, which are crucial for achieving broader sustainability in a holistic manner. These metrics and targets help us identify potential risks and capitalise on opportunities, enhancing our sustainability efforts across multiple dimensions.

Waste recycling

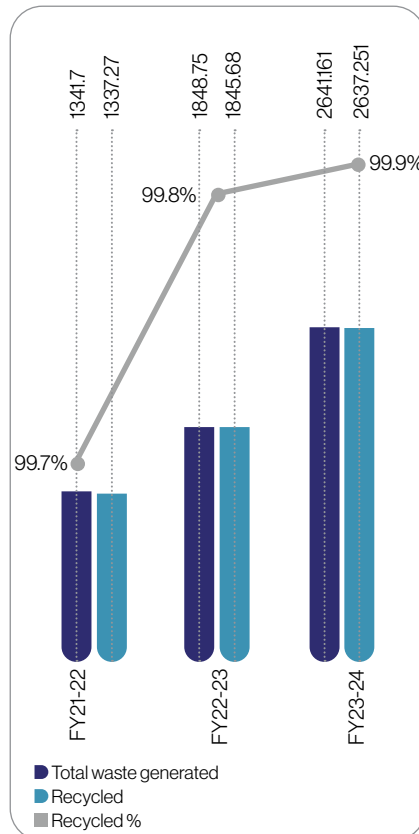


Figure 21: Waste Management Profile for the Last 3 Years

Water management

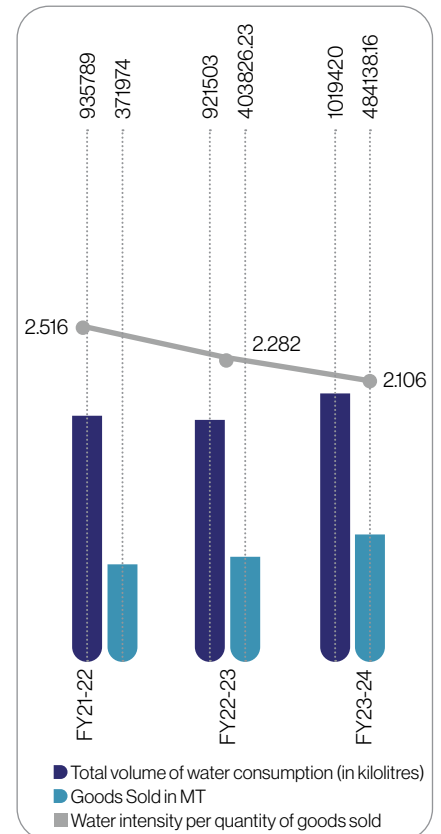
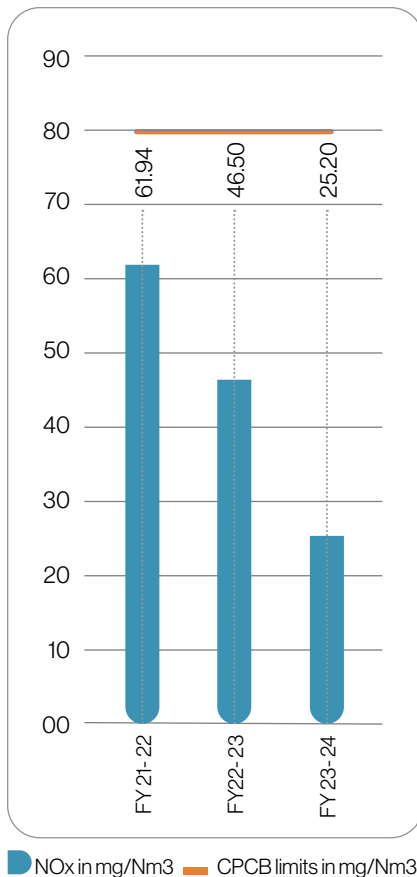
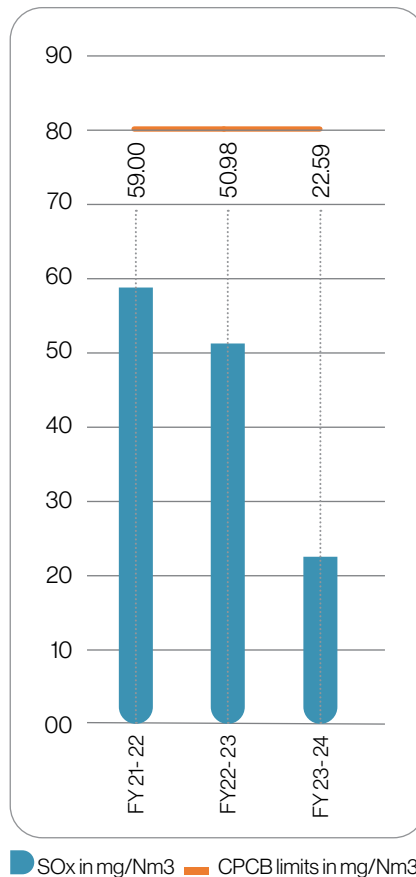


Figure 22: Water Management Profile for the Last 3 Years.

Air emission - NOx



Air emission - SOx



Air emission - Particulate matter

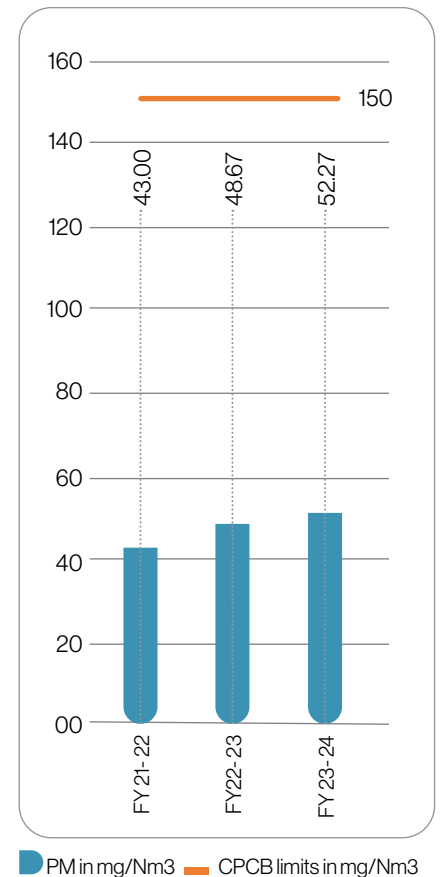


Figure 23: Air Emission Profiling for the Last 3 Year.

