VARUN BEVERAGES LIMITED

TCFD Report 2023

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

MESSAGE FROM THE EXECUTIVE VICE CHAIRMAN

Varun Jaipuria
Promoter, Executive Vice-Chairman
and Whole-time Director

Sustainable action has never been more critical. Today, the need for embracing sustainability transcends beyond - combating climate change and creating social equality - to foster innovation, build trust and steer long-term profitability. In this evolving business landscape, Varun Beverages, along with refreshing billions of consumers through its ever-expanding portfolio of beverages, prioritizes environmental stewardship, social responsibility and robust governance practices. Together, these will help us meet our ESG Goals of optimizing carbon footprints, promoting social equity, and adding more value to our employees, vendors, suppliers and other stakeholders.

Grow Consistently. Sustain Constantly.

Growth and sustainability are mutually inclusive concepts at Varun Beverages; one cannot happen without the other. In this context, our business strategy and growth enablers are closely tied to our ESG priorities and its key pillars: Environmental Protection, Social Capital, Human Capital Development, Business Model & Innovation, and Leadership & Governance. Prioritizing the material aspects under each of these pillars help us to consistently focus on most significant sustainability issues and create long-term value for our stakeholders.

This report covers the sustainability initiatives taken and progress made in CY 2023 in detail. Flipping through the pages will give you an insight on the processes initiated and actions taken across environment, social and governance aspects of our ESG policy. It also defines our plans for the future, establishing our ambitious goals to recycle plastic waste by 2025, achieve water positivity as well as improve our renewable energy share by 2030.

Demonstrating Environmental Stewardship

Refreshing billions of consumers comes with the responsibility to ensure that we leave minimum environmental footprints as we do so. As a responsible business, we take significant initiatives to optimize resource efficiency, reduce and manage waste and increase our share of renewable energy.

Reduce, reuse and recycle served as a key mantra across the value chain in CY 2023. Continued engagement with GEM Enviro Management Pvt. Ltd. built up awareness about waste management and pushed waste collection. In addition, alliance with Deutsch Quality Systems (India) Private Limited enabled measurement and improvement in the Company's carbon footprint and water footprint assurance.

Achieving water positivity through focused initiatives for water stewardship, including pond adoption, maintenance and rejuvenation, continued to remain a key priority during the year. This resulted in positive water recharge and reaped multiple benefits for the farmer community. Emphasis on responsible sourcing of raw materials from suppliers who follow PepsiCo's Global Supplier Code of Conduct also helped us to achieve desirable environmental and social impact.

Upholding Social Responsibility

Our deep-rooted commitment and care for our employees, contractors, and consumers reflects through a bunch of health, safety and quality measures that we took throughout the year. An ESG-linked incentive framework was implemented to steer our employees to follow sustainable practices and contribute to

the Company's ESG goals. Consistent efforts towards building a safe, nurturing and inclusive work-environment supported by continuous training and development resulted in a culture of diversity, performance and growth. Equal efforts were placed towards boosting employee health and wellness.

Safety is paramount to us. DuPont Safety Solutions was engaged for implementing best practices in safety at all of our manufacturing plants in India. A robust safety strategy supported by an incident management system, continuous trainings, and strict vigilance has also been put in place to drive zero incidents at workplace. An Employee Passport and Contractor Safety Management System further tracks and ensures contractor safety.

Manufacturing and distributing safe and high-quality products form the core of our social responsibility. Year after year, we have successfully achieved this goal with our commitment to responsible and ethical sourcing and manufacturing practices; conformation with global quality standards; transparent product labelling; and sustainable marketing strategy. Persistent focus on aligning with the changing needs of our consumers have also inspired us to provide an assortment of product mix with healthier and low sugar beverage options for refreshment.

Robust Governance Practices

Our robust governance framework and well-structured policies and practices serve an instrumental role in driving ethical conduct, accountability and transparency within the system and all its stakeholders. We take pride in expanding the reach of our rigorous policies to include contractors and suppliers, prioritizing an ESG-centric approach. A crisis management team has also been formed and is regularly trained to ensure business continuity in case of an adversity. Our commitment to corporate governance has garnered many awards and accolades.

Our sustainability agenda includes uplifting the underprivileged and beneficiaries from economically weaker sections through initiatives that provide them better access to education, health and livelihoods. In the education sphere, we collaborated with Shiksha Kendra School to provide free education and related resources to 32,500+ underprivileged students.

Ten AARU Clinics in India and one in Nepal were set-up near our manufacturing sites with the objective of providing free healthcare services to marginalized communities residing in the rural areas. 110,000+ beneficiaries received free medical assistance, medicines and underwent diagnostic tests under this initiative. Pravah, another initiative by VBL, empowered the unemployed youth through skill development and provision of sustainable livelihood opportunities. 17,000+ youth were trained under this initiative.

Paving the way for a Sustainable Future

For the world to become a better place, each of us needs to take consistent sustainable action. Our steadfast commitment to sustainability in the recent years is demonstrated through our initiatives and their significant impact. Through an indomitable spirit and continuous innovations, we aspire to steer our ESG journey further and inspire several others to pave the way towards a brighter, more sustainable future. Together, let us make responsible decisions and take conscious action to protect our environment and create equal and consistent opportunities for the communities we live and operate in.

Warm Regards,

Varun Jaipuria

Promoter, Executive Vice-Chairman and Whole-time Director

About the Report

This is Varun Beverages Limited's inaugural climate-related financial report, prepared in accordance with the framework recommended by the Task Force on Climate-related Financial Disclosures (TCFD). The report provides a comprehensive discussion of our approach to the TCFD disclosure recommendations, focusing on the four core elements: climate-related governance, strategy, risk management, and metrics and targets. The scope of the 2023 TCFD report encompasses Varun Beverages Limited.

We understand that the beverage industry is closely tied to the health of our planet and that climate change significantly impacts both business and society. Consequently, our strategy focuses not only on addressing the transition and physical risks of climate change to our business but also on taking proactive steps to combat climate change at its core, ensuring the long-term resilience of our operations. For instance, we are actively pursuing our ambitious Net Zero Roadmap, which aims to reduce in-scope emissions to zero by 2050, even as our business expands. This approach helps us minimize our environmental footprint while enhancing our ability to adapt to a changing world, thereby mitigating risks to our business.

Our Sustainability report 2023 is prepared in accordance with the Global Reporting Initiative (GRI) Universal Standards 2021

As part of our reporting, we also recognize other sustainability reporting frameworks, such as SASB Standards and the United Nations Sustainable Development Goals (UN SDGs) recommendations.

Varun Beverages Limited's sustainability strategy, selected initiatives, and ESG risks and opportunities are also discussed in our corporate annual reports. These include our annual financial reports and other disclosures. The Board review of Varun Beverages Limited's 2023 Annual Accounts by our Board of Directors includes non-financial information as required by relevant regulations and directives.

Information in this report should be read in conjunction with the information provided in our interim reports, annual financial reports, and sustainability reports, as well as with the risk factors and forward-looking statements included in such reports. For more information on our financial results, operations, and reporting structure, please visit our company's website.

INTRODUCTION TO VARUN BEVERAGES LIMITED

Varun Beverages Limited ("VBL" or the "Company") is a key player in beverage industry and one of the largest franchisees of PepsiCo in the world (outside USA).

VBL has been associated with PepsiCo since the 1990s and have over three decades consolidated its business association with PepsiCo, increasing the number of licensed territories and sub-territories covered by the Company, producing and distributing a wider range of PepsiCo beverages, introducing various SKUs in the portfolio, and expanding the distribution network.

The Company manufactures, distributes and sells a wide range of carbonated soft drinks (CSDs), as well as a large selection of non-carbonated beverages (NCBs), including packaged drinking water sold under trademarks owned by PepsiCo.

PepsiCo CSD brands produced and sold by VBL include Pepsi, Pepsi Black, Mountain Dew, Sting, Seven-Up, Mirinda Orange, Seven-Up Nimbooz Masala Soda, Dukes and Evervess. PepsiCo NCB brands produced and sold by the Company include Tropicana Slice, Tropicana Juices (100% and Delight), Seven-Up Nimbooz, Gatorade, Lipton Ice tea as well as packaged drinking water under the brand Aquafina.

VBL has been granted franchisees for various PepsiCo products across 27 States and 7 Union Territories in India (responsible for ~90% beverage sales volume of PepsiCo India). VBL has also been granted the franchise for the territories of Nepal, Sri Lanka, Morocco, Zambia and Zimbabwe. India is the largest market and contributed ~79% of revenues from operations (net) in Fiscal 2023.

INTRODUCTION TO TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)

This Task Force on Climate-related Financial Disclosures (TCFD) report serves as Varun Beverage Limited's 2024 disclosure of the climate-related risks and opportunities to our business.

The TCFD recommendations provide eleven recommendations structured into four core pillars to guide users in their analysis and disclosures. The four pillars do not operate in isolation, there is an interdependence between the pillars, as are the common themes and challenges that can occur.

Governance	Strategy	Risk Management	Metrics and Targets
Disclose the organization's governance around climate-related risks and opportunities.	Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	Disclose how the organization identifies, assesses, and manages climate-related risks.	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.
Recommended Disclosures	**Recommended Disclosures**	**Recommended Disclosures**	**Recommended Disclosures**
a) Describe the board's oversight of climate-related risks and opportunities.	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	a) Describe the organization's processes for identifying and assessing climate-related risks.	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.
b) Describe management's role in assessing and managing climate-related risks and opportunities.	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	b) Describe the organization's processes for managing climate-related risks.	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

Figure 1 Recommendations and Supporting Recommended Disclosures

(Source: Recommendations of the Task Force on Climate-related Financial Disclosures)

The need for the Task Force on Climate-related Financial Disclosures (TCFD) arises from the urgency to address climate-related risks and opportunities, meet investor expectations, comply with evolving regulations, and promote transparency and consistency in reporting practices across the business landscape.

1. GOVERNANCE

Strong corporate governance principles are embedded into every facet of our organization, helping us to seamlessly achieve our ESG goals. By instilling a culture of integrity, accountability, and ethical conduct, we are steering sustainability across the value chain and contributing positively to the environmental and social landscapes, under the able guidance of our leadership team.

A combination of both top-down and bottom-up approach has been significant in effectively embedding our ESG goals within our corporate governance framework. Together, they ensure a balanced governance structure aligned to the organizational goals while facilitating innovation, adaptability, and a deeper understanding of ground-level challenges.

Robust mechanisms to implement and measure the effectiveness of our sustainability practices are also in place. Pivotal role of monitoring the policies, processes and related risks related to environmental, social, regulatory and public policy matters, and the progress made thereof, is served by the Company's ESG framework. Additionally, we closely evaluate and review current social and environmental trend with oversight of our ESG goals and human rights practices. Doing this enables identification and management of issues that may affect VBL's business, shareholders, other stakeholders or the general public.

1.1 Committee(s) and Personnel with Responsibility of Climate-Related, Water & Biodiversity Issues

Board Level ESG Committee

The Board of Directors and executive leadership team at Varun Beverages Limited recognize that managing climate-related risks and reducing our environmental footprint are crucial to our long-term success. We are dedicated to incorporating climate considerations into our organization, making them a fundamental part of our business practices. Specialized teams of professionals oversee different aspects of our operations, ensuring that climate considerations are integrated seamlessly into our strategic and operational decision-making. This approach fosters robust communication between Varun Beverages Limited's management and the Board, enhancing the transparency of our ESG disclosures.

ESG Steering Committee

The ESG Steering Committee at Varun Beverages Limited (VBL) plays a vital role in steering our sustainability journey. This committee is at the heart of our efforts to integrate environmental, social, and governance principles into every facet of our business. Their responsibilities are comprehensive, ensuring that VBL not only meets but exceeds its commitments to sustainable practices.

The committee is tasked with assessing and managing our environmental dependencies, impacts, risks, and opportunities. By forecasting future environmental trends, they ensure that VBL remains proactive in addressing emerging challenges. Their work extends to managing engagements within landscapes and jurisdictions, advocating for public policies that align with our environmental goals, and ensuring that our suppliers and value chain partners comply with stringent environmental standards.

Moreover, the ESG Steering Committee monitors our progress towards corporate and science-based environmental targets, sets ambitious environmental policies, and guides the implementation of business strategies related to environmental issues. They also oversee major capital and operational expenditures, manage acquisitions and divestitures with environmental considerations, and provide incentives for employees to enhance environmental performance.

Through the collective efforts of both the Board and the ESG Steering Committee, VBL is committed to navigating the complexities of sustainability with expertise and dedication, reinforcing our pledge to responsible business practices and comprehensive sustainability across all operations.

Chief Technical Head (CTH) and Whole-time Director

As a key leader within the organization, the Chief Technical Head (CTH) is responsible for setting and enforcing corporate environmental policies and commitments, ensuring that VBL stays at the forefront of sustainable innovation.

One of the CTH's primary responsibilities is to establish ambitious corporate environmental targets that align with VBL's long-term sustainability goals. These targets guide the organization in reducing its environmental footprint and advancing its commitment to responsible business practices.

The CTH also plays a pivotal role in monitoring compliance with these environmental policies and commitments, ensuring that all operational activities align with VBL's sustainability objectives. This rigorous oversight guarantees that VBL not only meets regulatory requirements but also adheres to the highest standards of environmental responsibility.

Reporting directly to the Board, the CTH ensures that environmental considerations are fully integrated into VBL's strategic decision-making processes. This direct reporting line underscores the importance of sustainability within the organization's overall business strategy and reinforces the CTH's role as a key advocate for environmental leadership at VBL.

President and Whole-time Director:

As the President and Whole-time Director at Varun Beverages Limited (VBL), this executive leader is at the forefront of integrating environmental sustainability into the core of our business strategy. Tasked with developing and implementing a business strategy that prioritizes environmental considerations, the President ensures that VBL's growth is aligned with our commitment to sustainable practices.

In this role, the President is responsible for overseeing acquisitions, mergers, and divestitures with a keen focus on environmental impact, ensuring that all major business decisions contribute to the company's sustainability objectives. Additionally, the President manages the annual budgets allocated to environmental initiatives, ensuring that financial resources are effectively utilized to support VBL's environmental goals.

The President also plays a critical role in managing major capital and operational expenditures related to environmental issues, ensuring that investments are made with a long-term vision for sustainability. This strategic oversight guarantees that VBL's operations are not only economically viable but also environmentally responsible.

Reporting directly to the Board, the President ensures that environmental considerations are fully integrated into the company's strategic direction, reinforcing VBL's position as a leader in sustainable business practices.

Figure 2 ESG Head & Investor Relations Head

Responsibilities of the Board Level ESG Committee (Climate-related & Water)

1. Approve the Company's ESG strategy including related targets and incentives;
2. Provide oversight of the execution of the ESG Strategy and the Company's progress on its long-term ESG commitments and targets;
3. Provide oversight of the key policies and programs required to implement the ESG Strategy;
4. Provide advice and direction to the Company's management on implementation of the Company's ESG Strategy;
5. To identify opportunities and risks to the Company's operations, its reputation and its corporate responsibility.
6. Reviewing and guiding the assessment process for dependencies, impacts, risks, and opportunities
7. Approving corporate policies and/or commitments
8. Monitoring compliance with corporate policies and/or commitments
9. Overseeing the setting of corporate targets
10. Monitoring progress towards corporate targets
11. Overseeing and guiding public policy engagement
12. Monitoring the implementation of a climate transition plan
13. Overseeing and guiding the development of a business strategy
14. Overseeing and guiding acquisitions, mergers, and divestitures
15. Overseeing and guiding major capital expenditures
16. Approving and/or overseeing employee incentives

Responsibilities of the ESG Steering Committee (Climate-related & Water)

1. Consulting regularly with an internal, permanent, subject-expert working group
2. Engaging regularly with external stakeholders and experts on environmental issues
3. Regular training for directors on environmental issues, industry best practice, and standards (e.g., TCFD, SBTi)

Managing Public Engagements

All public engagements related to ESG require a discussion with the ESG committee of the board the same board which is responsible for approving and monitoring environmental commitments and action plans including the climate transition plan. The responsibility of aligning public engagements with policy stand lies with the board level ESG committee and if they find an engagement to be non-compliant to company policy they have the authority to reject the engagement immediately. The responsibility of escalating environmental impacts of external engagements lies with the Chief compliance officer of the company also called the company secretary while the responsibility of identifying environmental impacts lies with the chief sustainability officer.

1.2 Incentives for the Management of Climate-Related issues

ESG principles are not merely a slogan within VBL but are ingrained in the very essence of our existence. The strategic integration of our ESG goals with the performance metric of our employees is a testament of our commitment to create a culture of sustainable business practices as well as positively impact the planet. Recognizing the crucial role played by our employees in driving our ESG objectives – an imperative to our overall success, the Board approved a policy to establish a robust ESG-linked incentive framework. The policy is applicable to all employees including the KMPs and Board of Directors.

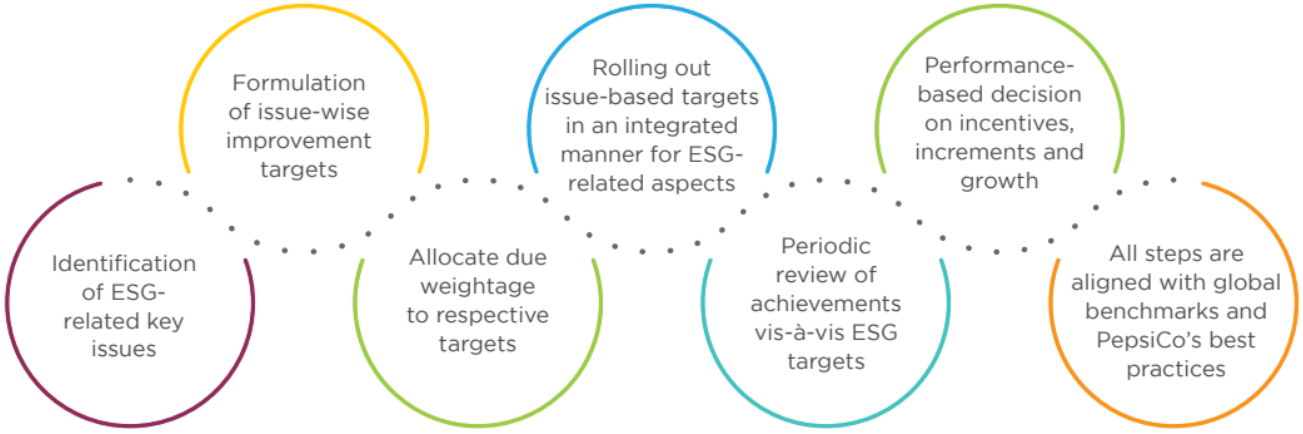

Figure 3 ESG-linked incentive framework

1.3 Organization's role within each framework or initiative

Science Based Targets initiative (SBTi)

- Setting Targets:
  - We develop and set science-based targets that are consistent with the level of decarbonization required to keep global temperature increases below 1.5°C compared to pre-industrial levels.
- Implementation:
  - We implement strategies and actions to meet these targets across our entire value chain, ensuring that our business operations, products, and services contribute to a low-carbon economy.

- Reporting:
  - We report our progress towards achieving these targets annually, ensuring transparency and accountability in our climate action efforts.
- Continuous Improvement:
  - We continuously review and update our targets to align with evolving scientific guidance and enhance our contributions to global climate goals.

Race to Zero Campaign

- Commitment:
  - We publicly commit to the Race to Zero goals, signalling our dedication to rapid, impactful climate action.
- Action Plan:
  - We develop a comprehensive action plan to reduce emissions across our operations and supply chain, focusing on energy efficiency, renewable energy adoption, and innovative technologies.
- Collaboration:
  - We collaborate with other businesses, governments, and organizations within the Race to Zero network to share best practices, leverage collective action, and drive systemic change.
- Advocacy:
  - We advocate for robust climate policies and support initiatives that accelerate the transition to a net-zero economy.

2 STRATEGY

Scenario Analysis

Scenario analysis is a crucial tool for anticipating and preparing for the uncertain future of climate change. It involves exploring and evaluating a range of plausible future states of the world, considering various climate-related risks and opportunities. This forward-looking approach enables companies to enhance their strategic resilience by understanding how different climate scenarios might affect their business environment.

The purpose of scenario analysis is to provide a robust framework for identifying and managing climate-related risks and opportunities. By examining potential future scenarios, we aim to:

- Assess the resilience of our business strategy under different climate conditions.
- Identify and evaluate the potential financial implications of climate-related risks and opportunities.
- Inform our strategic planning and risk management processes to enhance our ability to adapt and thrive in a changing climate.

2.1 Climate change Scenario Analysis

1. IEA NZE 2050

For our climate-change scenario analysis, VBL has chosen the International Energy Agency's Net Zero Emissions by 2050 (IEA NZE 2050) scenario. Our approach combines both qualitative and quantitative analyses to provide a comprehensive assessment across the organization. The scenario considers a

range of climate-related risks, including policy, market, liability, reputation, and technology risks, with a focus on maintaining a temperature alignment of 1.5°C or lower. Using 2019 as the reference year, the analysis covers multiple timeframes: 2025, 2030, 2040, and 2050, ensuring a forward-looking strategy for climate resilience and adaptation.

2.1.1 Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

- Climate change (one of five drivers of nature change)

Finance and insurance

- Cost of capital

Stakeholder and customer demands

- Consumer sentiment
- Consumer attention to impact

Regulators, legal and policy regimes

- Global targets
- Global regulation
- Level of action (from local to global)
- Political impact of science (from galvanizing to paralyzing)

Relevant technology and science

- Granularity of available data (from aggregated to local)

Direct interaction with climate

- On asset values, on the corporate

Macro and microeconomy

- Domestic growth
- Globalizing markets

2.1.2 Assumptions, Uncertainties, and Constraints in IEA NZE 2050

Assumptions

1) Technological Advancements:
    a. Renewable Energy: Rapid advancements and cost reductions in solar and wind technologies.
    b. Battery Storage: Significant improvements in storage technologies.
    c. Carbon Capture: Widespread deployment of CCUS technologies.
2) Energy Efficiency:
    a. Efficiency Gains: Major improvements across buildings, industry, and transport.
    b. Behavioural Changes: Adoption of energy-efficient lifestyles and increased use of public transport.
3) Policy and Regulatory Support:
    a. Government Policies: Strong global policies, including carbon pricing and subsidies for clean energy.

   b. International Cooperation: Global alignment on climate policies and technology sharing.
4) Investment:
   a. Capital Investment: Over $4 trillion per year by 2030 in clean energy infrastructure.

Uncertainties

1) Technological Uncertainty:
   a. Innovation Pace: Uncertain speed of technological innovations and scalability.
   b. Cost Variability: Future costs of technologies like CCUS and hydrogen production.
2) Economic and Social Factors:
   a. Economic Growth: Varying growth rates, especially in developing nations.
   b. Social Acceptance: Public acceptance of new technologies and behavioural changes.
3) Policy Implementation:
   a. Political Will: Variable political commitment and policy consistency.
   b. Geopolitical Risks: Potential disruptions due to international relations.

Constraints

1) Infrastructure:
   a. Grid Upgrades: Need for significant upgrades to electricity grids.
   b. EV Charging: Widespread deployment of electric vehicle charging infrastructure.
2) Resource Availability:
   a. Critical Minerals: Availability of minerals like lithium and cobalt.
   b. Land Use: Space for renewable energy projects.
3) Financial Constraints:
   a. Investment Requirements: Mobilizing necessary capital, especially in developing countries.
   b. Funding Mechanisms: Developing mechanisms to attract private investment.

2.1.3 Why We Chose the IEA NZE 2050 Scenario for our Company

The IEA's Net Zero by 2050 (NZE 2050) scenario provides a comprehensive and actionable roadmap for achieving significant reductions in greenhouse gas emissions. Here are the key reasons why we have chosen this framework:

1) Alignment with Global Standards
   a. Paris Agreement Compliance: The IEA NZE 2050 scenario is aligned with the goals of the Paris Agreement to limit global temperature rise to well below 2°C, aiming for 1.5°C. This ensures our company is contributing to global efforts to mitigate climate change.
   b. Science-Based Targets: The scenario provides a clear and science-based pathway, ensuring that our emission reduction targets are robust and credible.
2) Comprehensive Strategy
   a. Holistic Approach: NZE 2050 covers all aspects of the energy system, including electricity, transport, industry, and buildings. This holistic approach aligns well with our operations, which span production, distribution, and retail.
   b. Technological Advancements: It emphasizes the adoption of advanced technologies such as renewable energy, electric vehicles, and energy efficiency measures, which are essential for reducing our environmental impact.
3) Financial and Operational Benefits
   a. Cost Savings: By improving energy efficiency and transitioning to renewable energy, we can significantly reduce our operational costs in the long term.

   b. Risk Management: Adopting the NZE 2050 scenario helps mitigate risks associated with regulatory changes, energy price volatility, and supply chain disruptions.
4) Stakeholder Engagement
   a. Investor Confidence: Demonstrating a commitment to the NZE 2050 scenario enhances investor confidence and aligns with the growing trend of ESG (Environmental, Social, and Governance) investing.
   b. Customer Loyalty: Consumers are increasingly seeking out environmentally responsible brands. Our alignment with NZE 2050 strengthens our market position and appeals to eco-conscious customers.
5) Innovation and Leadership
   a. Industry Leadership: By adopting ambitious and science-based targets, we position ourselves as leaders in the beverage industry, setting a benchmark for sustainability.
   b. Encouraging Innovation: The framework encourages us to invest in innovative solutions and technologies, fostering a culture of continuous improvement and sustainability.
6) Compliance and Future Preparedness
   a. Regulatory Compliance: As governments worldwide implement stricter environmental regulations, aligning with NZE 2050 ensures we stay ahead of compliance requirements.
   b. Future Preparedness: Preparing for a net-zero future makes our business more resilient and adaptable to future environmental and market changes.

2. RCP 2.6

VBL has chosen the RCP 2.6 scenario for its climate-change scenario analysis. This scenario is designed to explore potential impacts under a pathway aligned with a global temperature increase of 1.5°C or lower. Our approach integrates both qualitative and quantitative methods, providing an organization-wide assessment of climate-related risks. The analysis specifically considers acute physical risks, such as extreme weather events, and chronic physical risks, such as long-term shifts in climate patterns. Using 2019 as the reference year, the analysis covers multiple future timeframes—2030, 2050, and 2080—enabling us to enhance our strategic planning and resilience against climate change.

2.1.4 Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

- Changes to the state of nature
- Changes in ecosystem services provision
- Climate change (one of five drivers of nature change)
- Speed of change (to state of nature and/or ecosystem services)

Finance and insurance

- Sensitivity of capital (to nature impacts and dependencies)

Stakeholder and customer demands

- Sensitivity to inequity of nature impacts
- Impact of nature service delivery on consumer

Regulators, legal and policy regimes

- Global targets
- Global regulation
- Level of action (from local to global)

Relevant technology and science

- Granularity of available data (from aggregated to local)

Macro and microeconomy

- Domestic growth
- Globalizing markets

2.1.5 Assumptions, Uncertainties, and Constraints in RCP 2.6

- RCP 2.6 assumes aggressive mitigation policies leading to substantial reductions in greenhouse gas emissions.
- The scenario assumes that global policy frameworks and agreements are implemented effectively and adhered to by all countries.
- Assumes significant technological innovation in clean energy technologies.
- Assumes wide-scale deployment of these technologies, supported by substantial investments and regulatory support.
- Assumes changes in consumer behaviour towards more sustainable practices.
- Assumes a global economic transition towards low-carbon industries
- Although, there is an Uncertainty about the pace at which new technologies will develop and be deployed.
- Uncertainty about the effectiveness and scalability of technologies like CCS and advanced nuclear power.
- Uncertainty about the consistency and longevity of policy commitments across different countries and political cycles.
- Variability in global and regional economic growth rates can impact the availability of resources for mitigation efforts.
- Uncertainty about public acceptance of new technologies and lifestyle changes.
- The scenario requires significant investments in clean energy, infrastructure, and R&D, which may be challenging to secure.
- Availability of critical materials (e.g., rare earth metals for batteries) needed for renewable energy technologies and storage solutions.
- Constraints related to land availability for large-scale deployment of renewable energy projects, such as solar and wind farms.
- Need for significant upgrades to electricity grids to handle increased loads and integrate variable renewable energy sources.
- Development of widespread electric vehicle charging infrastructure.

2.1.6 Why We Chose the RCP 2.6 Scenario for our Company

- RCP 2.6 is the only Representative Concentration Pathway (RCP) that aims to keep global temperature rise below 2°C, with a strong chance of limiting it to 1.5°C. This aligns with the most ambitious targets of the Paris Agreement, making it crucial for avoiding the most severe impacts of climate change.

- Promotes investment in and development of clean technologies, fostering innovation and economic opportunities in the green sector.
- Sends strong market signals to industries and investors, encouraging the transition to low-carbon technologies and sustainable practices.
- By aiming for lower temperature increases, RCP 2.6 helps mitigate the risks associated with extreme weather events, sea-level rise, and biodiversity loss.
- Reduces health risks related to air pollution and climate change, improving overall societal well-being.

3. RCP 8.5

VBL has selected the RCP 8.5 scenario for its climate-change scenario analysis. This scenario represents a high-emissions pathway, with a projected global temperature increase of 3.5ºC to 3.9ºC. Our analysis employs both qualitative and quantitative approaches to assess climate-related risks across the organization. The scenario considers both acute physical risks, such as extreme weather events, and chronic physical risks, including long-term environmental changes. Using 2019 as the reference year, the analysis examines potential impacts across several future timeframes—2030, 2050, and 2080—providing insights to strengthen our resilience and adaptive strategies in response to climate change.

2.1.7 Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

- Changes to the state of nature
- Changes in ecosystem services provision
- Climate change (one of five drivers of nature change)
- Speed of change (to state of nature and/or ecosystem services)

Finance and insurance

- Sensitivity of capital (to nature impacts and dependencies)

Stakeholder and customer demands

- Sensitivity to inequity of nature impacts
- Impact of nature service delivery on consumer

Regulators, legal and policy regimes

- Global targets
- Global regulation
- Level of action (from local to global)

Relevant technology and science

- Granularity of available data (from aggregated to local)

Macro and microeconomy

- Domestic growth

2.1.8 Assumptions, Uncertainties, and Constraints in RCP 8.5

- Assumes minimal to no significant efforts to mitigate greenhouse gas emissions. Emissions continue to rise throughout the 21st century.
- Assumes continued heavy reliance on fossil fuels for energy, with significant increases in coal, oil, and natural gas consumption.
- Assumes high economic growth, especially in developing countries, leading to increased energy demand.
- a global population growth reaching around 12 billion by 2100, significantly increasing demand for energy and resources.
- Assumes extensive land use changes, including deforestation and conversion of land for agriculture and urbanization.
- Significant urban growth, contributing to increased energy consumption and emissions.
- Uncertainty about the development and deployment of new technologies that could mitigate emissions even under high growth scenarios.
- Potential improvements in energy efficiency are uncertain and could alter the trajectory of emissions.
- for future policy shifts that could either exacerbate or mitigate emissions is uncertain.
- Uncertainty regarding the level of international cooperation on climate change mitigation in the future.
- Uncertainty about how societal behaviours and consumption patterns might change in response to climate impacts.
- Uncertainty about economic stability and growth, which can significantly influence emissions.
- Uncertainty in climate feedback mechanisms, such as permafrost melt and methane release, which could accelerate warming.
- Uncertainty about the frequency and intensity of extreme weather events under higher temperature scenarios.
- Constraints related to the availability of critical resources, such as freshwater and arable land, which may be further stressed under high emissions.
- Dependence on finite fossil fuel reserves and potential geopolitical constraints on their distribution.
- Many regions may face constraints due to aging energy and water infrastructure that is not equipped to handle increased stress from high emissions and climate impacts.
- Significant infrastructure investments needed for adaptation to higher temperatures and more extreme weather events.
- High emissions scenarios could require substantial financial investments for adaptation and mitigation technologies, which may be challenging to secure.
- Disparities in economic resources can limit the ability of developing countries to invest in necessary mitigation and adaptation measures.

2.1.9 Why We Chose the RCP 8.5 Scenario for our Company

- RCP 8.5 represents a worst-case scenario, providing a basis for understanding the potential upper bounds of climate impacts. This is crucial for risk assessment and preparing for extreme outcomes.
- Helps plan for extreme climate events and develop robust emergency response strategies.
- Using RCP 8.5 can underscore the severe consequences of inaction or insufficient climate policies, motivating stronger mitigation efforts.
- Provides a benchmark for long-term planning and developing policies that can prevent the worst outcomes projected by this scenario.
- Understanding the impacts of RCP 8.5 can drive innovation in climate adaptation and mitigation technologies, as the need for advanced solutions becomes more apparent.

- Supports scientific research into extreme climate dynamics and feedback mechanisms that may only become evident under high emissions scenarios
- Serves as an educational tool for explaining the importance of aggressive climate mitigation to avoid the severe impacts predicted by RCP 8.5.

4. RCP 7.0

VBL has adopted the RCP 7.0 scenario for its climate-change scenario analysis. This scenario explores a pathway where global temperatures are projected to rise by 3.0ºC to 3.4ºC. The analysis utilizes both qualitative and quantitative methods to provide an organization-wide assessment of climate-related risks. It considers both acute physical risks, such as extreme weather events, and chronic physical risks, such as gradual changes in climate patterns. Using 2019 as the reference year, the scenario analysis covers multiple future timeframes—2030, 2050, and 2080—enabling us to develop robust strategies to enhance our resilience and adaptability to climate impacts.

2.1.10 Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

- Changes to the state of nature
- Changes in ecosystem services provision
- Climate change (one of five drivers of nature change)
- Speed of change (to state of nature and/or ecosystem services)

Finance and insurance

- Sensitivity of capital (to nature impacts and dependencies)

Stakeholder and customer demands

- Consumer attention to impact
- Sensitivity to inequity of nature impacts
- Impact of nature service delivery on consumer

Regulators, legal and policy regimes

- Global targets
- Level of action (from local to global)

Relevant technology and science

- Granularity of available data (from aggregated to local)

Macro and microeconomy

- Domestic growth
- Globalizing markets

2.1.11 Assumptions, Uncertainties, and Constraints in RCP 7.0

- Assumes moderate climate policies and measures are implemented, resulting in stabilization of greenhouse gas emissions at intermediate levels by the end of the century.
- Assumes moderate adoption and improvement of technologies for energy efficiency, renewable energy, and carbon capture and storage (CCS).
- Assumes continued economic growth and development, especially in emerging economies, leading to increased energy demand and emissions.
- Assumes urbanization trends continue, with growing cities driving energy consumption and associated emissions.
- Assumes global population growth follows medium projections, with significant increases in developing regions.
- Assumes continued expansion of agricultural land to meet food demand, impacting carbon sinks and contributing to emissions.
- Assumes moderate improvements in forestry management to reduce deforestation and promote afforestation.
- Uncertainty about the effectiveness and consistency of climate policies across different countries and over time.
- Uncertainty regarding the extent of international cooperation and alignment on climate mitigation efforts.
- Uncertainty about the pace of technological advancements and the adoption rate of clean energy technologies.
- Uncertainty about future cost reductions for key technologies like renewables and CCS, which can affect their deployment.
- Uncertainty about the extent to which consumers and industries will adopt more sustainable practices and reduce their carbon footprints.
- Uncertainty about how economic fluctuations will impact energy demand and emissions.
- Uncertainty regarding climate feedback mechanisms and their impact on global temperature and weather patterns.
- Uncertainty about the frequency and intensity of extreme weather events and their socio-economic impacts.
- Constraints related to the availability of critical materials needed for renewable energy technologies and batteries.
- Constraints on land availability for renewable energy projects and agricultural expansion.
- Need for significant investments in energy infrastructure to support a moderate transition to cleaner energy sources.
- Constraints related to upgrading electricity grids to handle increased loads and integrate variable renewable energy sources.
- Significant investments required for deploying clean technologies and improving energy efficiency may be challenging to mobilize, particularly in developing regions.
- Financial constraints and disparities in economic development can limit the ability of some countries to implement necessary measures.

2.1.12 Why We Chose the RCP 7.0 Scenario for our Company

- RCP 7.0 represents a more moderate and arguably realistic pathway compared to the more aggressive or conservative scenarios. It considers moderate policy actions and technological adoption, making it a valuable tool for planning in a less ambitious but plausible future.
- Helps in planning for incremental improvements in climate policies and technological adoption, offering a stepwise approach to enhancing climate action which aligns well with the needs of third world countries.

- Useful for assessing and managing risks associated with moderate climate change impacts, including the potential for increased extreme weather events and their socio-economic consequences.
- Supports adaptation planning by highlighting the areas and sectors most likely to be affected by moderate climate change, enabling targeted resilience-building efforts.
- Provides market signals about the likely direction of future climate policies and technologies, helping businesses align their strategies with expected developments.

2.2 Water Scenario Analysis

For our water scenario analysis, VBL has selected the WRI Aqueduct tool to assess water-related risks. This analysis employs both qualitative and quantitative approaches to provide a comprehensive, organization-wide understanding of potential water risks. The scenario considers both acute physical risks, such as floods and droughts, and chronic physical risks, including long-term changes in water availability. Using 2019 as the reference year, the analysis evaluates the potential impacts across several timeframes: 2030, 2050, and 2080, allowing us to develop strategies for sustainable water management and long-term resilience.

2.2.1 Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

- Changes to the state of nature
- Changes in ecosystem services provision
- Climate change (one of five drivers of nature change)
- Speed of change (to state of nature and/or ecosystem services)

Finance and insurance

- Sensitivity of capital (to nature impacts and dependencies)

Stakeholder and customer demands

- Sensitivity to inequity of nature impacts
- Impact of nature service delivery on consumer

Regulators, legal and policy regimes

- Global targets
- Global regulation
- Level of action (from local to global)

Relevant technology and science

- Granularity of available data (from aggregated to local)

Macro and microeconomy

- Domestic growth
- Globalizing markets

2.2.2 Assumptions, Uncertainties, and Constraints in WRI Aqueduct Scenarios

- The scenarios use historical climate data to model future conditions. Assumptions include the reliability of past data and its applicability to future predictions.
- Analysis is based on climate projection scenarios (RCPs and SSPs) from global climate models like CMIP5 and CMIP6, which assume specific pathways for greenhouse gas emissions and socio-economic developments.
- Assumes specific rates of economic growth and population increases, which influence water demand and stress projections.
- Assumes certain patterns of urbanization and industrial development that affect water usage.
- Assumes improvements in water use efficiency in agriculture, industry, and domestic sectors due to technological advancements.
- Assumes specific rates of adoption for water-saving technologies and infrastructure improvements.
- Uncertainty regarding the frequency and intensity of extreme weather events like droughts and floods, which can significantly impact water availability.
- Variability and differences among climate models lead to uncertainties in predicting future water conditions.
- Uncertainty about how societies and industries will adapt their water usage behaviors in response to water scarcity and policy changes.
- Uncertainty regarding the effectiveness and enforcement of water management policies and regulations.
- Uncertainty about the speed and extent of technological advancements that can enhance water efficiency and management.
- Variability in the implementation and maintenance of water infrastructure improvements.
- Limited availability of high-resolution, real-time water data in certain regions constrains the accuracy of risk assessments.
- Inconsistencies in data quality and reporting standards across different regions and sources.
- Constraints related to the scale at which models operate; local water risks may not be fully captured in global or regional models.
- Difficulty in modelling complex interactions between various factors such as climate, socio-economic conditions, and technological changes.
- Limited financial resources for implementing large-scale water management projects, especially in developing countries.
- Constraints related to the availability of skilled personnel and institutional capacity to manage and implement water strategies effectively.
- Constraints posed by weak regulatory frameworks and governance structures in certain regions, hindering effective water management.
- Challenges in achieving coordinated action among diverse stakeholders, including governments, industries, and local communities.

2.2.3 Why We Chose the WRI Aqueduct Scenario for our Company

Using the WRI Aqueduct tool for water-related scenario analysis offers several advantages that make it an invaluable resource for understanding and managing water risks. Here are the key reasons:

Comprehensive and High-Resolution Data with Global coverage and Detailed indicators

- Aqueduct uses peer-reviewed methodologies and the best-available data to ensure accuracy and reliability in its projections and assessments. It incorporates various climate scenarios and socio-economic pathways (e.g., RCPs and SSPs) to model future water risks under different

conditions, helping users understand potential impacts of climate change and economic development.
- The tool's interactive platform allows users to customize analyses based on specific needs, such as selecting different time periods, scenarios, and geographic scales. This flexibility makes it accessible for a wide range of stakeholders
- Aqueduct translates complex hydrological data into intuitive indicators and composite risk scores, making it easier for VBL to prioritize actions and investments
- By using Aqueduct, organizations can align their water management strategies with global sustainability goals, such as the Sustainable Development Goals (SDGs), particularly SDG 6 on Clean Water and Sanitation

Adopting an operational control approach allows VBL to maintain comprehensive control over its environmental impact, ensuring compliance, improving efficiency, and enhancing stakeholder trust. It supports the company's commitment to sustainability and positions it as a leader in environmental management within the beverage industry.

2.3 Outcomes of the climate change scenario analysis

2.3.1 IEA NZE 2050

- India: Transition risks from strict emissions regulations; opportunities in renewable energy adoption and emission reduction technologies.
- Zimbabwe & Zambia: Moderate transition risks; benefits from renewable energy initiatives and reduced reliance on fossil fuels.
- Sri Lanka: Compliance with emissions regulations; investment in sustainable practices and renewable energy.
- Nepal: Adaptation to stringent emissions policies; opportunities in green technology and infrastructure.
- Morocco: High transition risks due to strict emissions targets; focus on renewable energy and sustainable practices.

2.3.2 RCP 2.6:

- India: Lower climate risks with stable operations; emphasis on maintaining sustainable practices and reducing emissions.
- Zimbabwe & Zambia: Reduced climate risks; focus on sustainable agricultural practices and climate-resilient infrastructure.
- Sri Lanka: Lower climate risks; stable operations with a focus on sustainable development.
- Nepal: Moderate climate risks; management of glacier melt impacts with sustainable practices.
- Morocco: Lower climate risks; stable operations with emphasis on renewable energy and sustainable practices.

2.3.3 RCP 7 & RCP 8.5:

- India: Severe climate impacts with increased frequency of extreme weather events; significant adaptation needs and resilience building.
- Zimbabwe & Zambia: High climate risks from extreme weather and prolonged droughts; critical need for climate-resilient infrastructure and practices.
- Sri Lanka: High flood risks and extreme weather events; focus on adaptive measures and disaster risk management.
- Nepal: Significant impact from glacial melt and extreme weather; need for comprehensive adaptation strategies.

- Morocco: Severe desertification and extreme weather impacts; urgent need for large-scale climate adaptation and resilience initiatives.

2.3.4 Overall Summary-

1. **India:**
    a. High transition and physical risks under NZE 2050 and high-emission scenarios, requiring robust adaptation strategies and emission reduction investments.
2. **Zimbabwe & Zambia:**
    a. Significant physical risks from high-emission scenarios, demanding climate-resilient infrastructure and sustainable agricultural practices.
3. **Sri Lanka:**
    a. High flood risks under high-emission scenarios necessitating investment in flood management and adaptive measures.
4. **Nepal:**
    a. Significant adaptation needs under high emissions due to accelerated glacial melt and extreme weather impacts.
5. **Morocco**
    a. High desertification risks requiring comprehensive adaptation and renewable energy investments.

2.4 Outcomes of the Water scenario analysis

2.4.1 IEA NZE 2050:

- India: Adoption of advanced water-saving technologies and wastewater recycling to comply with stringent water usage regulations.
- Zimbabwe & Zambia: Implementation of efficient irrigation systems and rainwater harvesting to mitigate water scarcity.
- Sri Lanka: Investment in desalination plants and sustainable water management practices.
- Nepal: Development of infrastructure to manage glacier-fed water sources and prevent glacial lake outburst floods.
- Morocco: Enhanced water conservation strategies, including the use of drip irrigation and water-efficient crops.

2.4.2 RCP 2.6:

- India: Moderate water stress with improved water use efficiency through technological advancements and regulatory support.
- Zimbabwe & Zambia: Reduced physical water risks, focusing on sustainable agricultural practices and water management.
- Sri Lanka: Stable water supply with emphasis on maintaining current sustainable practices.
- Nepal: Management of glacier-fed water resources with minimal impact from glacial melt.
- Morocco: Moderate water conservation efforts with continued investment in water-efficient technologies.

2.4.3 RCP 7 & RCP 8.5:

- India: Severe water scarcity leading to increased dependency on water-saving innovations and alternative water sources.
- Zimbabwe & Zambia: Extreme drought conditions necessitating emergency water management measures and increased investment in water infrastructure.
- Sri Lanka: High risk of water shortages and need for advanced water conservation measures.

- Nepal: Significant impact on water supply due to accelerated glacial melt, requiring adaptive management strategies.
- Morocco: Severe water scarcity driving the need for large-scale water conservation projects and alternative water sourcing.

2.4.4 Overall Summary-

1. **India:**
   a. Severe scarcity under RCP 7 & 8.5 necessitating significant efficiency improvements and alternative sourcing.
2. **Zimbabwe & Zambia:**
   a. Extreme drought under RCP 7 & 8.5 driving the need for emergency management and infrastructure improvements.
3. **Sri Lanka:**
   a. Moderate risks across scenarios with opportunities for sustainable water use technologies.
4. **Nepal:**
   a. Glacial melt impacts under high-emission scenarios requiring adaptive management and infrastructure.
5. **Morocco:**
   a. Severe scarcity under high-emission scenarios necessitating large-scale conservation and alternative sourcing projects.

2.5 Region-wise Risks & Opportunities (Climate-related & Water)

Particulars	Risks	Opportunities
Northern India: Delhi, Haryana		
Regulatory	• Stricter Emission Standards: Potential for higher compliance costs due to stringent emission regulations. • Carbon Pricing: Introduction of carbon taxes can increase operational costs.	• Incentives: Access to government subsidies for renewable energy projects.
Market	• Consumer Shift: Rapidly changing consumer preferences towards sustainable products.	• High Demand: Increased demand for sustainable products in urban areas.
Technology	• Technology Investment: High initial investment costs for adopting new technologies.	• Renewable Energy: Potential for solar energy projects.
Reputational	• Brand Image: Failure to meet sustainability targets can harm brand reputation.	• Brand Differentiation: Enhancing brand loyalty through strong sustainability practices.
Central India: Uttar Pradesh, Madhya Pradesh		
Regulatory	• Environmental Regulations: Increasing regulatory pressure to reduce emissions.	• Government Programs: Access to state incentives for sustainability projects.
Market	• Consumer Adoption: Slower adoption of sustainable products in rural areas.	• Rural Market: Growing rural market for sustainable products.

Technology	• High Costs: Significant costs associated with transitioning to sustainable technologies.	• Solar Projects: Potential for large-scale solar energy projects.
Reputational	• Negative Perception: Risk of being perceived as not doing enough for sustainability.	• Community Engagement: Enhancing community engagement through sustainability initiatives.
Western India: Gujarat, Maharashtra		
Regulatory	• Emission Control: Strict emission control laws can increase costs.	• Green Finance: Availability of green bonds and climate finance.
Market	• Competitive Pressure: High competition from other brands adopting sustainability.	• Export Potential: Opportunities to export sustainable products.
Technology	• Technology Upgradation: Risk of technological investments becoming obsolete.	• Wind Energy: Potential for wind energy projects in coastal areas.
Reputational	• Sustainability Expectations: High expectations from stakeholders.	• Investor Attraction: Attracting ESG-focused investors.
Southern India: Karnataka, Tamil Nadu, Andhra Pradesh		
Regulatory	• Environmental Standards: Increasing environmental standards and compliance costs.	• Government Support: State incentives for renewable energy projects.
Market	• Consumer Trends: Varied consumer preferences towards sustainability.	• Tech-Savvy Consumers: High demand from tech-savvy consumers for sustainable products.
Technology	• Adoption Costs: High costs of adopting new technologies.	• Renewable Projects: Potential for solar and biomass energy projects.
Reputational	• Brand Risk: Risk of negative perception if sustainability targets are not met.	• Brand Loyalty: Building brand loyalty through sustainability initiatives.
Eastern India: West Bengal, Odisha, Bihar		
Regulatory	• Emission Regulations: Stricter emission regulations increasing costs.	• International Aid: Access to international funding for sustainability projects.
Market	• Slow Adoption: Slower adoption of sustainable products.	• Growing Demand: Increasing demand for eco-friendly products.
Technology	• High Investment: High investment required for new technologies.	• Hydropower: Potential for hydropower projects.
Reputational	• Stakeholder Expectations: High expectations from stakeholders.	• Global Standards: Meeting global sustainability standards enhances reputation.
Northeastern India: Assam		
Regulatory	• Environmental Laws: Increasing environmental regulations.	• Government Programs: Access to government programs supporting sustainability.

Market	• Consumer Behaviour: Slow shift in consumer behaviour towards sustainability.	• Eco-Tourism: Leveraging eco-tourism to promote sustainable products.
Technology	• High Costs: High costs associated with new technologies.	• Renewable Energy: Potential for solar and wind energy projects.
Reputational	• Negative Perception: Risk of negative perception if sustainability targets are not met.	• Sustainability Leadership: Establishing a reputation as a sustainability leader.
Morocco		
Regulatory	• Emission Regulations: Stricter emission control laws, potentially increasing operational costs. • Carbon Pricing: Potential introduction of carbon pricing mechanisms.	• Government Incentives: Potential access to subsidies for renewable energy projects. • Green Financing: Availability of international funds and loans for green projects.
Market	• Consumer Preferences: Growing local demand for sustainable and eco-friendly products. • Competition: Other companies might adapt faster to sustainable practices.	• Sustainable Demand: Increasing demand for products with sustainable credentials. • Export Potential: Opportunities to export eco-friendly products to Europe and other markets.
Technology	• High Initial Costs: Investments required for transitioning to renewable energy sources. • Technological Adaptation: Risk of current technology becoming obsolete quickly.	• Renewable Energy: High potential for solar and wind energy projects. • Operational Efficiency: New technologies can reduce long-term operational costs.
Reputational	• Brand Impact: Failure to meet sustainability expectations could harm brand image locally and internationally.	• Brand Differentiation: Positioning as a leader in sustainability can enhance brand loyalty. • Investor Attraction: Attracting investors focused on ESG criteria.
Nepal		
Regulatory	• Environmental Laws: Increasing environmental regulations and standards. • Carbon Policies: Potential introduction of carbon reduction policies.	• Government Initiatives: Government programs to support renewable energy and sustainability. • International Aid: Access to international aid focused on environmental projects.
Market	• Consumer Trends: Slow adaptation to sustainable products among local consumers.	• Eco-Tourism: Capitalizing on the eco-tourism market to promote sustainable products. • Local Initiatives: Collaborating with local initiatives for

	• Market Entry: Difficulties in entering new markets with sustainable products.	community-based sustainable projects.
Technology	• Investment Needs: High investment required for sustainable technologies. • Technological Infrastructure: Lack of infrastructure for advanced technologies.	• Hydropower: Significant potential for hydropower projects. • Renewable Resources: Utilization of abundant natural resources for renewable energy.
Reputational	• Perception Risks: Risk of being perceived as not doing enough for sustainability.	• Global Standards: Positioning as a company meeting global sustainability standards. • NGO Partnerships: Partnering with NGOs for sustainability projects.
Sri Lanka		
Regulatory	• Stringent Regulations: Increasingly strict environmental regulations. • Carbon Pricing: Potential introduction of carbon taxes.	• Government Support: Government incentives for adopting renewable energy and sustainable practices. • International Support: Access to international grants and aid for sustainable development.
Market	• Changing Preferences: Rapidly changing consumer preferences towards sustainability. • Competitive Pressure: Intense competition from other sustainable brands.	• Tourism Synergies: Leveraging the country's tourism sector to promote sustainable products. • Local Demand: Increasing local demand for eco-friendly products.
Technology	• Cost of Transition: High costs associated with transitioning to new technologies. • Technological Compatibility: Risk of new technologies not being fully compatible with existing systems.	• Renewable Energy: Potential for solar and biomass energy projects. • Waste Management: Opportunities in improving waste management practices.
Reputational	• Sustainability Expectations: High expectations from both local and international stakeholders.	• Global Recognition: Enhancing global brand recognition through sustainable practices. • Partnerships: Forming partnerships with international NGOs and sustainability organizations.
Zambia		
Regulatory	• Environmental Regulations: Stricter environmental regulations and enforcement. • Carbon Taxes: Potential imposition of carbon taxes.	• Government Programs: Government programs supporting renewable energy and sustainability. • International Funding: Access to international funding for sustainable projects.

Market	• Consumer Adoption: Slow adoption of sustainable products among consumers. • Market Competition: Competition from companies with more advanced sustainability practices.	• Growing Demand: Increasing demand for sustainable products. • Export Potential: Opportunities to export sustainable products to international markets.
Technology	• High Costs: High costs of implementing new technologies. • Technology Access: Limited access to advanced sustainable technologies.	• Renewable Energy: Potential for solar and wind energy projects. • Energy Efficiency: Opportunities to improve energy efficiency in operations.
Reputational	• Stakeholder Expectations: High expectations from stakeholders for sustainability.	• Sustainability Leadership: Establishing a reputation as a leader in sustainability. • Investor Confidence: Attracting ESG-focused investors.
Zimbabwe		
Regulatory	• Environmental Compliance: Increasing environmental compliance requirements. • Carbon Regulation: Introduction of carbon regulation policies.	• Government Support: Government support for renewable energy and sustainability projects. • International Assistance: Access to international assistance and funding.
Market	• Consumer Behaviour: Slow shift in consumer behaviour towards sustainability. • Market Penetration: Challenges in penetrating new markets with sustainable products.	• Sustainable Demand: Growing demand for eco-friendly and sustainable products. • Regional Export: Opportunities to export sustainable products to neighbouring countries.
Technology	• Implementation Costs: High costs associated with implementing new sustainable technologies. • Technological Advancements: Risk of rapid technological advancements making current investments obsolete.	• Renewable Energy: Potential for significant investment in solar and wind energy. • Waste Management: Opportunities to improve waste management practices.
Reputational	• Brand Perception: Risk of negative brand perception if sustainability targets are not met.	• Sustainability Credibility: Building credibility as a sustainable company. • Stakeholder Engagement: Enhancing engagement with stakeholders on sustainability issues.

Table 1 Physical Risk Assessment

			Averaged climate risk predictions under RCP 2.6, 7 and 8.5 on a scale of 1-5								
Location name	**Latitude**	**Longitude**	**Cyclone**	**Glacial melt**	**Desertification**	**Temp increase**	**precipitation variability**	**Drought**	**Flood**	**Days of heavy rain**	**Days of high heat**
Kosi	27.7629	77.47115	2	2	3	4	3	4	3	3	4
Greater Noida 1	28.49632	77.48657	2	1	4	5	4	5	2	3	5
Greater Noida 2	28.53667	77.47362	2	1	4	5	4	5	2	3	5
Sathariya 1	25.6585	82.23072	2	2	3	4	3	4	3	3	4
Sathariya 2	25.65859	82.2309	2	2	3	4	3	4	3	3	4
Sandila	27.09448	80.43966	2	2	3	4	3	4	3	3	4
Jainpur	26.36249	79.98912	2	2	3	4	3	4	3	3	4
Bazpur	29.14723	79.18691	2	2	3	4	3	4	3	3	4
Kathua	32.48152	75.43916	2	2	3	4	3	4	3	3	4
Alwar	27.52657	76.69165	2	2	3	4	3	4	3	3	4
Bhiwadi	28.14957	76.88172	2	2	3	4	3	4	3	3	4
Jodhpur	26.17643	72.92564	2	1	4	5	4	5	2	3	5
Jaipur	26.84168	75.60424	2	1	4	5	4	5	2	3	5
Panipat	29.55627	76.99482	2	2	3	4	3	4	3	3	4
Nuh	28.03425	77.11034	2	2	3	4	3	4	3	3	4
Phillaur	31.04121	75.7851	2	2	3	4	3	4	3	3	4
Pathankot	32.32789	75.63231	2	2	3	4	3	4	3	3	4
Paithan	19.85347	75.22634	2	2	3	4	3	4	3	3	4
Mahul	19.02262	72.90548	2	2	3	4	3	4	3	3	4
Goa	15.20926	74.16276	4	1	2	4	5	3	5	5	4
Bharuch	21.6214	73.12698	2	2	3	4	3	4	3	3	4
Bhopal	23.0906	77.51833	2	2	3	4	3	4	3	3	4
Sricity	13.51588	79.97149	2	2	3	4	3	4	3	3	4

Dharwad	15.47684	74.98419	2	2	3	4	3	4	3	3	4
Nelamangala	13.14164	77.34211	2	2	3	4	3	4	3	3	4
Mamandur	12.63666	79.93316	2	2	3	4	3	4	3	3	4
Tirunelveli	8.8474	77.76027	2	2	3	4	3	4	3	3	4
Sangareddy	17.5902	78.07339	2	2	3	4	3	4	3	3	4
Sonarpur	22.45699	88.39414	2	2	3	4	3	4	3	3	4
Guwahati I & II	26.09051	91.61135	2	2	3	4	3	4	3	3	4
Jamshedpur	22.79294	86.13866	2	2	3	4	3	4	3	3	4
Cuttack	20.49326	85.92123	2	2	3	4	3	4	3	3	4
Begu Sarai	25.42204	86.12297	2	2	3	4	3	4	3	3	4
Kota	25.41617	76.07393	2	2	3	4	3	4	3	3	4
Morocco	33.4409	-7.64221	1	1	5	5	4	5	3	3	5
Sri lanka	6.891973	79.88962	4	1	2	4	5	3	5	5	4
Nepal 1	27.64673	83.61978	1	5	2	4	4	4	5	4	3
Nepal 2	27.82583	85.37159	1	5	2	4	4	4	5	4	3
Nepal 3	26.87547	86.77982	1	5	2	4	4	4	5	4	3
Zambia	-15.2547	28.23359	1	1	5	5	4	5	3	3	5
Zimbabwe	-17.816	31.04864	1	1	5	5	4	5	3	3	5

Table 2 Chronic Water-Related Risks

			Current scenario		Average predicted	
location_name	**Latitude**	**Longitude**	**water stress**	**Groundwater depletion**	**water stress**	**Groundwater depletion**
Kosi	27.7629	77.47115	5	5	4	3
Greater Noida 1	28.49632	77.48657	5	5	5	5
Greater Noida 2	28.53667	77.47362	5	5	5	5
Sathariya 1	25.6585	82.23072	3	5	4	3
Sathariya 2	25.65859	82.2309	3	5	4	3
Sandila	27.09448	80.43966	5	5	4	3
Jainpur	26.36249	79.98912	5	5	4	3
Bazpur	29.14723	79.18691	3	5	4	3
Kathua	32.48152	75.43916	5	5	4	3
Alwar	27.52657	76.69165	1	5	4	3
Bhiwadi	28.14957	76.88172	1	5	4	3
Jodhpur	26.17643	72.92564	1	5	5	5
Jaipur	26.84168	75.60424	5	5	5	5
Panipat	29.55627	76.99482	5	5	4	3
Nuh	28.03425	77.11034	1	5	4	3
Phillaur	31.04121	75.7851	5	3	4	3
Pathankot	32.32789	75.63231	5	5	4	3
Paithan	19.85347	75.22634	1	4	4	3
Mahul	19.02262	72.90548	1	2	4	3
Goa	15.20926	74.16276	1	2	3	4
Bharuch	21.6214	73.12698	5	4	4	3
Bhopal	23.0906	77.51833	1	5	4	3
Sricity	13.51588	79.97149	1	5	4	3
Dharwad	15.47684	74.98419	1	5	4	3
Nelamangala	13.14164	77.34211	1	3	4	3
Mamandur	12.63666	79.93316	1	5	4	3
Tirunelveli	8.8474	77.76027	1	5	4	3
Sangareddy	17.5902	78.07339	1	5	4	3
Sonarpur	22.45699	88.39414	3	1	4	3
Guwahati I & II	26.09051	91.61135	3	1	4	3
Jamshedpur	22.79294	86.13866	1	4	4	3
Cuttack	20.49326	85.92123	3	3	4	3
Begu Sarai	25.42204	86.12297	3	5	4	3
Kota	25.41617	76.07393	1	5	4	3
Morocco	33.4409	-7.64221	1	5	5	4
Sri lanka	6.891973	79.88962	1	3	3	4
Nepal 1	27.64673	83.61978	3	5	4	3
Nepal 2	27.82583	85.37159	1	4	4	3

Nepal 3	26.87547	86.77982	1	1	4	3
Zambia	-15.2547	28.23359	1	1	5	4
Zimbabwe	-17.816	31.04864	1	4	5	4

2.5.1 Risks & Opportunities Assessment

Climate change presents both risks and opportunities for businesses, impacting operations, financial performance, and strategic planning. As part of Varun Beverages Limited's commitment to sustainable growth and resilience, we have conducted a thorough assessment of climate-related risks and opportunities, in line with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. This assessment is integral to our overall strategy, helping us to identify, evaluate, and manage the various ways in which climate change could affect our business.

Strategic Implications

The insights gained from our risk and opportunity assessment inform our strategic planning and decision-making processes. By integrating climate-related considerations into our overall business strategy, Varun Beverages Limited aims to:

- Enhance our ability to anticipate and respond to regulatory and market changes.
- Improve our operational efficiency and reduce our environmental footprint.
- Strengthen our competitive advantage through innovation and sustainability.
- Ensure long-term business resilience and value creation in a changing climate.

2.6 Transition Plan

VBL operates in third-world economies which are highly dependent of fossil fuels as the primary source of energy except countries like Nepal that have a strong potential for renewables. Although we are committed towards achieving global climate objectives and we have set up targets which are aligned to a 15 DC world, at this stage our market segmentation and targeting does not allow us to exclude expansion in such fossil fuel dependent countries. We anticipate organic and inorganic growth opportunities from fossil fuel dependent countries and hence we cannot make such a commitment although we have a detailed strategy to ensure that all expansions align to the transition plan of VBL and decarbonize VBL on set timelines including a reduction of 60 GHG emissions in scope 1, 2 and 3 from a 2023 baseline by 2033 on an absolute basis.

2.6.1 Feedback Mechanism

Varun Beverages Limited VBL employs several mechanisms for collecting feedback on transition plans:

1. Stakeholder Engagement: Regular engagement with stakeholders including employees, customers, suppliers, and local communities to gather feedback and address environmental concerns.
2. Surveys and Questionnaires: Conducting surveys and questionnaires to collect data on stakeholder perceptions and inputs.
3. Grievance Redressal Mechanism: A formal grievance mechanism for stakeholders to report issues and receive timely responses.
4. Audits and Assessments: Regular GHG audits and assessments to identify areas for improvement and gather feedback.

2.6.2 Key Assumptions:

1. Regulatory Landscape: Assumes increasing global and local regulatory pressure on carbon emissions and sustainability practices.
2. Technological Advancements: Assumes availability and adoption of advanced technologies for energy efficiency, renewable energy, and water management.
3. Market Trends: Assumes a continued shift in consumer preferences towards sustainable products and practices.
4. Investor Expectations: Assumes growing importance of ESG criteria in investment decisions. Access to green finance will support the transition.
5. Climate Scenarios: Assumes scenarios outlined in the IEA NZE 2050, RCP 2.6, RCP 7, and RCP 8.5.
6. Products: Market demand for sustainable and eco-friendly products will continue to grow.
7. Stakeholder Support: Support from value chain partner, especially suppliers and their interest in decarbonization of their operations will be high.
8. Logistics: Adoption of alternate fuel vehicles and electric vehicles running on renewables.
9. Refrigerants: Development of low GWP efficient refrigerants.
10. Plastic recycling: A circular plastics value chain and high recycled material content in plastic raw materials.

2.6.3 Dependencies:

1. Renewable Energy Infrastructure: Dependence on the development and feasible availability of renewable energy infrastructure in operating regions. Availability of neutral fuels and development of technologies to utilize them.
2. Water Resource Management: Dependence on access to advanced water conservation and recycling technologies.
3. Supply Chain Cooperation: Dependence on suppliers adopting sustainable practices.
4. Financial Mechanisms: Dependence on access to green finance options like green bonds and climate finance.
5. Stakeholder Engagement: Dependence on effective stakeholder engagement, including employee training and community involvement.
6. Products: Research and development capabilities to innovate and produce sustainable products.

2.7 Progress Against Transition Plan-

2.7.1 Climate Objectives-

1. **Emission Reduction:**
    a. VBL has implemented measures to enhance energy performance, such as installing solar power panels and procuring hydrocarbon coolers. For example, In India, we have installed capacity of 53 MW of renewable energy which accounts for 13% renewable energy mix. In Morocco, VBL installed rooftop solar power capacity of 1.6 MW and reduced electricity consumption by 10% from 2022 levels.
    b. The company aims to reduce its carbon footprint through initiatives like using hydrocarbon coolers and deploying solar coolers in the market.
    c. We have reduced our GHG footprint in scope 1, 2 and limited categories of scope 3 by 44% in 2023 from a baseline of 2020. We have now taken the coverage to all categories across entire scope with a target of 60% reduction by 2033 from a 2023 baseline.
    d. Aspiring to optimize energy efficiency across our value chain, we are building a fleet of ~1,200 electric vehicles, in partnership with our distributors.
    e. We have planted ~249,000 saplings till end of CY'2023.

2. **Renewable Energy:**
    a. Transition to renewable energy is underway, with significant installations of solar power panels in various locations to reduce reliance on conventional power sources.
    b. We are sourcing over 58 million KWH units electricity from renewable sources with a target of taking renewable energy share to 25% by 2023.
3. **Energy Efficiency:**
    a. Implementing energy-efficient technologies, such as the use of flowmeters to optimize water usage and improving RO efficiency, has been prioritized to reduce overall energy consumption. Some of our initiatives in the reporting year are:
        i. Use of frequency drive in ammonia and air compressor which saves electric energy.
        ii. Use of frequency drive in boiler for ID and FD fan which saves electric energy.
        iii. Heat recovery from hot compressed gases and used for heating water.
        iv. Recovery of treated hot water from three stage syrup transfer PHE.
        v. Beverage filling at ambient temperature leading to huge power savings in refrigeration.
        vi. Replacement of CFL/FTL lamps with LED lamps.
        vii. Replacement of low efficiency pump with high energy efficient pump.
        viii. Improving efficiency on critical resources like water and energy by doing water recoveries and optimizing energy consumption.
        ix. Optimizing the resource consumptions and minimizing wastages by automations and controls.
        x. Installation of steam operated pump trap - SOPT for better steam condensate recovery across all units.
        xi. Direct Coupled HP Compressors (No gear box).
        xii. IE 5 permanent magnet motor.
        xiii. Adiabatic cooling tower.
        xiv. Improving condensate recovery by installation of SOPT and better technology equipment which helped in improving boiler efficiency.
        xv. Heat recovery from High Pressure Air Compressors and Ammonia Refrigeration Compressors.
        xvi. Installation of de-superheaters.
        xvii. Installation of Godrej Control Air-IFC for optimizing HP requirements at preform blow moulding machines and Cold CIP which requires no heat during operation.
4. **Plastic recycling:**
    a. Our main source of emissions under the entire inventory comes from the use of plastics and the scope 3 category 1 emissions of their production. To mitigate this, we have employed various measures including packaging weight reduction, increased recycled content in packaging, piloting 100% recycled PET based bottles, plastic waste recycling with an objective of achieving 30% recycled PET usage by 2025 and 100% of equivalent PET recycling by 2025. We have also partnered with GEM enviro to run upskilling and training/awareness programs and increase direct waste collection.

2.7.2 Water Objectives-

1. **Water Conservation:**
    a. VBL has made notable progress in water conservation across its operations. In Morocco, the company reduced water consumption by 19% per liter of beverage produced from 2022 levels.

b. We have achieved a water usage per litre product of 1.54, a 9% improvement from last year with a target to take it to 1.4 by 2025 and a water recharge to consumption ratio of 2.02 times with a target to retain above 2. This was possible with the following efforts:
    i. 12.95 billion Liters rainwater recharged back to ground.
    ii. Adopted 118 ponds and 6 check dams. 47% ponds rejuvenated in water-stressed zones.
    iii. 150+ process improvements including:
        1. Connected all filters (ACF/PSF) for water recovery.
        2. Optimized drainage timing at ACF / PSF.
        3. Bottle washer recovery in glass lines.
        4. Reuse ETP water in utilities.
        5. Improved RO efficiency wherever RO recovery is less than designed recovery.
        6. Sensors / Foot operated taps for hand wash at plants.
        7. Completed Air Scoring across all manufacturing plants.

2. **Sustainable Water Management:**
    a. Advanced water management practices, including the installation of flowmeters and efficient irrigation systems, have been implemented to optimize water usage.
    b. VBL continues to invest in technologies to improve water use efficiency, such as the recovery and recycling of wastewater.
3. **Community Engagement:**
    a. VBL engages in community projects focused on water conservation and management, contributing to broader environmental sustainability efforts.

Governance and Strategy -

- Board-Level Oversight: A Board level ESG Committee oversees and guides the company's climate strategies, ensuring alignment with business goals.
- Climate Integration: Climate-related risks and opportunities are embedded into VBL's business strategy, reflecting the company's commitment to sustainable growth.

Reporting and Transparency-

- Annual Reporting: VBL publishes detailed sustainability reports, including progress on emissions reductions, water usage, and other environmental metrics.
- Independent Verification: The company engages third-party auditors to verify environmental performance and compliance with sustainability targets.

Engagement and Monitoring -

- Employee Training: VBL provides sustainability training for employees to ensure they understand and contribute to the company's climate goals.
- Stakeholder Engagement: The company promotes sustainable products to customers and engages in environmental projects with local communities.

2.8 Carbon Pricing

2.8.1 Objectives:

1. Incentivize Emission Reductions: Drive internal efforts to reduce Scope 1 and 2 emissions with low carbon investments.
2. Prepare for Regulatory Compliance: Align with future carbon regulations.

3. Internalize Environmental Costs: Reflect environmental costs in financial decisions by incentivizing them to influence strategy and financial planning.
4. Low carbon opportunities: Identify and seize low carbon opportunities by using carbon price in cost benefit analysis.
5. Enhance Transparency: Improve accountability in carbon management.

2.8.2 Calculation Methodology:

1. **Determine Emissions:**
    a. Measure Scope 1 and 2 emissions in tCO2e.
2. **Set Initial Price:**
    a. Benchmark against global carbon prices.
    b. Scenario-specific starting prices: $50 (IEA NZE 2050), $40 (RCP 2.6), $35 (RCP 7), $30 (RCP 8.5).
3. **Benchmark against peers:**
    a. Confirm the prices being used by peers.
    b. Check for variation in peer prices and strive for a higher pricing.

2.8.3 Assumptions:

- Technological Feasibility: Availability of emission reduction technologies.
- Market Conditions: Stable market conditions without drastic changes in carbon prices.
- Regulatory Environment: Future regulatory changes align with scenario assumptions.
- Financial Impact: Company can absorb and reinvest carbon costs into sustainability initiatives.

2.9 Monitoring and Evaluation Approach for VBL's Carbon Pricing Scheme

2.9.1 Monitoring

1. **Emission Tracking:**
    a. Continuous monitoring and recording of Scope 1 and 2 emissions at all facilities.
    b. Use of advanced monitoring systems to ensure accurate and timely data collection.
2. **Price Adjustments:**
    a. Annual review of the carbon price based on updated scenario models.
3. **Financial Reporting:**
    a. Inclusion of carbon pricing impacts in regular reports.
    b. Assessment of the cost implications on operational budgets and profitability.

2.9.2 Evaluation

1. **Performance Metrics:**
    a. Regular review of emission reduction progress against targets.
    b. Evaluation of the financial performance and cost savings from implemented reduction measures.
2. **Compliance and Adaptation:**
    a. Ensuring compliance with local and global carbon regulations.
    b. Adapting strategies based on regulatory changes and market dynamics.
3. **Technology and Innovation:**
    a. Assessing the effectiveness of adopted technologies in reducing emissions.
    b. Identifying and investing in new technologies to enhance emission reduction efforts.

2.9.3 Reporting

1. **Internal Reporting:**
    a. Monthly and quarterly reports on emission levels, carbon costs, and progress towards reduction targets.
    b. Regular updates to the Sustainability Committee and executive leadership.
2. **External Reporting:**
    a. Annual sustainability reports detailing carbon pricing impacts, emission reductions, and financial implications.
    b. Transparency in communicating progress to stakeholders, including investors, customers, and regulatory bodies.

2.10 Impact of Transition plan on Business Strategy

S.No	Particular	Risks	Opportunities
1	Product Strategy	• Water Scarcity: Water-intensive production makes VBL vulnerable to water shortages. To mitigate this, VBL has focused on implementing water-saving technologies and optimizing water use in production processes. • Climate Regulations: Stricter regulations on carbon emissions have led VBL to shift towards low-emission production methods and energy sources.	• Eco-Friendly Products: The growing demand for sustainable products has driven VBL to introduce beverages with eco-friendly packaging and reduced environmental footprints. For example, they are developing bottles using recycled PET (r-PET). • Renewable Energy Integration: Utilizing renewable energy not only reduces operational costs but also enhances VBL's brand image as a sustainable company. Solar panels and hydrocarbon coolers are examples of this shift.
2	Value Chain Strategy	• Supply Chain Disruptions: Climate change can disrupt supply chains, particularly in regions prone to extreme weather. VBL has enhanced supply chain resilience by working with suppliers who follow sustainable practices and by diversifying its supplier base. • Resource Dependency: Heavy reliance on water and carbon-intensive inputs can pose risks. VBL is reducing dependency by sourcing sustainable raw materials and implementing efficient logistics.	• Sustainable Partnerships: Developing partnerships with suppliers who prioritize sustainability helps ensure a consistent supply of eco-friendly raw materials. • Green Logistics: Implementing logistics optimization strategies, such as using electric vehicles and optimizing delivery routes, reduces the carbon footprint of VBL's supply chain.

3	R&D Investment Strategy	• Regulatory Compliance: Future regulatory changes could impose stricter requirements. Investing in R&D ensures that VBL remains compliant with emerging regulations by developing new technologies and practices that reduce emissions and water use.	• Innovation in Sustainability: R&D investments are focused on creating innovative products and processes that minimize environmental impact. This includes developing water-efficient technologies and packaging solutions using recycled materials. • Product Development: VBL is investing in the development of new products that cater to the increasing demand for sustainable and health-conscious options.
4	Operations Strategy	• Operational Disruptions: Extreme weather events can disrupt operations. VBL has strengthened its operational resilience by adopting robust risk management strategies and improving infrastructure to withstand such events.	• Efficiency Enhancements: Continuous investment in energy and water efficiency improvements leads to cost savings and reduced environmental impact. Technologies like flowmeters for water optimization and energy-efficient machinery are being deployed. • Renewable Integration: Increasing the use of renewable energy sources, such as solar power, reduces reliance on fossil fuels and aligns with global sustainability goals. This transition helps in mitigating the risks associated with fluctuating fossil fuel prices and supply chain disruptions.

2.10.1 Climate-Related Financial Impact on VBL

Revenues -

- Positive Impact:
  - Eco-Friendly Products: Increased demand for sustainable products boost revenues.
- Negative Impact:
  - Operational Disruptions: Extreme weather events can disrupt production and supply chains, affecting sales.

Direct Costs -

- Increased Costs:
  - Sustainable Materials: Higher costs for sourcing low-emission materials.
  - Compliance: Increased costs for complying with energy linked regulations.
- Cost Savings:
  - Efficiency Improvements: Savings from energy-efficient technologies and reduced fossil fuel usage.

Capital Allocation -

- Sustainability Investments:
  - Significant allocation towards renewable energy projects and energy-efficient technologies.
- Risk Mitigation:
  - Investments in infrastructure resilience and regulatory compliance to mitigate climate risks.

Capital Expenditure (CapEx) -

- Renewable Energy:
  - Investments in solar panels and wind energy to reduce carbon footprint.
- Energy Efficiency:
  - Upgrading machinery and infrastructure for improved energy efficiency.

2.10.2 Water-Related Financial Impact on VBL

Revenues -

- Positive Impact:
  - Water-Efficient Products: Enhanced reputation and sales through water-efficient production methods.
- Negative Impact:
  - Water Scarcity: Production disruptions due to water shortages, affecting product availability and sales.

Direct Costs -

- Increased Costs:
  - Water Management: Higher costs for implementing advanced water-saving technologies.
  - Compliance: Costs associated with adhering to water usage regulations.
- Cost Savings:
  - Water Recycling: Long-term savings from water recycling and conservation measures.

Capital Allocation -

- Sustainability Investments:
  - Funds allocated to advanced water management technologies and efficient water use practices.
- Risk Mitigation:
  - Investments in water-saving infrastructure and practices to mitigate risks of water scarcity.

Capital Expenditure (CapEx)

- Water Management:
  - Investments in water recycling, efficient irrigation systems, and advanced water-saving technologies.
- Infrastructure Upgrades:
  - Upgrading facilities to optimize water use and reduce waste.

3 RISK MANAGEMENT

Effective risk management is fundamental to Varun Beverages Limited's approach to achieving long-term sustainability and business resilience. In alignment with the TCFD recommendations, we have developed a comprehensive climate-related risk management framework. This framework enables us to identify, assess, and manage the diverse and evolving risks posed by climate change, ensuring that our business remains resilient and adaptable in the face of these challenges.

3.1 Process for identifying, assessing, and managing environmental dependencies, impacts, risks, and/or opportunities.

1. Identification
   a. Dependencies:
      i. Identify key natural resources for operations.
      ii. Map out the supply chain to understand dependency on environmental factors.
      iii. Consult with stakeholders (employees, suppliers, local communities) to gather insights.
      iv. Use tools such as Encore and techniques such as materiality assessment, scenario analysis etc to conclude.
      v. Key identified dependencies for us are water resources, Energy sources and raw materials- plastic packaging and agricultural production of sugar, fruits and dairy.
   b. Impacts:
      i. Identify potential positive and negative environmental impacts of your operations, products, or services. Continuously audit.
      ii. Key impact areas for us are water availability, water pollution, GHG emissions and impacts of plastic waste management.
   c. Risks:
      i. Identify potential environmental risks, including regulatory changes, resource scarcity, and extreme weather events.
      ii. Develop scenarios to anticipate and prepare for potential future environmental risks.
      iii. Key risks for us include water scarcity, extreme weather events, supply chain disruption and loss in brand value.
   d. Opportunities:
      i. Identify opportunities for innovation and technology that can reduce environmental impact.
      ii. Monitor market trends and consumer preferences for sustainable products and services.
      iii. Identify incentives for environmental performance improvements offered by governments or other organizations.
      iv. Identify aspects of operations where resilience can be built to ensure continuity and protect against risks.

v. Key opportunities for us include innovation in packaging, water and energy conservation, investment in renewables, water source restoration.

2. Assessment
    a. Dependencies: Assess the extent and criticality of dependencies on environmental factors. Evaluate how changes in environmental conditions could affect operations.
    b. Impacts: Quantify environmental impacts using metrics such as carbon footprint, water usage, and waste generation.
    c. Risks:
        i. Use risk matrix to evaluate the likelihood and severity of environmental risks.
        ii. Prioritize risks based on their potential impact on operations and likelihood of occurrence. Use impacts and dependencies into the prioritization process.
        iii. Identify potential dependencies and impacts that can stem out of risk mitigation or realization and update the assessment.
    d. Opportunities:
        i. Conduct feasibility studies to assess the potential benefits and costs of identified opportunities.
        ii. Perform cost-benefit analysis to evaluate the financial and environmental returns of opportunities. Identify potential dependencies and impacts that can stem out of opportunity realization and update the assessment.
3. Management
    a. Dependencies:
        i. Develop plans to manage and conserve critical resources.
        ii. Diversify supply chains to reduce dependency on vulnerable environmental resources.
    b. Impacts: Implement strategies to mitigate negative environmental impacts.
    c. Risks:
        i. Develop and implement plans to mitigate identified risks.
        ii. Establish emergency preparedness and response plans for environmental incidents.
        iii. Consider environmental liability insurance to manage financial risks.
    d. Opportunities:
        i. Implement sustainable practices such as energy efficiency, waste reduction, and renewable energy use.
        ii. Invest in research and development for sustainable technologies and practices.

3.2 Description of how interconnections are assessed

Procedure for assessing interconnections:

- Use impact aspect to visualize how environmental dependencies lead to specific environmental impacts.
- Use scenario analysis to explore how different environmental risks could amplify or mitigate your environmental impacts. Analyse correlations between historical risk events and observed environmental impacts to identify patterns.
- Map out how identified opportunities can reduce dependencies on critical environmental resources. Look for synergies where a single opportunity addresses multiple dependencies or impacts.
- Conduct workshops and engagement sessions with stakeholders to gather insights on interconnections.
- Work with stakeholders to validate findings and identify additional interconnections.

- Develop strategies that address multiple interconnections simultaneously, maximizing positive outcomes and minimizing risks. Create detailed action plans for implementing integrated strategies, including timelines, responsibilities, and resource allocations.
- Incorporate scenario planning to prepare for different future conditions and their impacts on interconnections.
- Establish KPIs to monitor the impacts of integrated actions on environmental dependencies, impacts, risks, and opportunities.
- Establish feedback loops to ensure that new insights and data inform ongoing strategy development and implementation.

Objectives

The primary objectives of our climate-related risk management framework are to:

- Identify and Evaluate Risks: Systematically identify and evaluate climate-related risks that could impact our business operations and strategic objectives.
- Integrate Risk Management: Integrate climate-related risk management into our overall enterprise risk management processes.
- Develop Mitigation Strategies: Develop and implement effective mitigation and adaptation strategies to manage identified risks.
- Enhance Resilience: Strengthen our organizational resilience to climate-related risks through continuous monitoring, assessment, and improvement.

3.3 Substantive Effects on Our Organization

Risk - If the average annual decrease in EBIDTA calculated across 5 years from the time of realization of the risk, including multiple occurrences crosses the value of 5,00,00,000 INR, with a high or very high likelihood, it is considered as a substantive risk.

Opportunities - If the average annual increase in EBIDTA calculated across 5 years from the time of realization of the opportunity, including multiple occurrences crosses the value of 3,00,00,000 INR, with a high or very high likelihood, it is considered as a substantive opportunity.

3.4 Short-, medium- and long-term time horizons

Short-term (0-1years): This horizon signifies the timeline for annual budgeting in the organization that happens for operational expenses and small capital expenses.

Medium-term (2-5 years): This horizon signifies the timeline for planning of financial instrument-based assets and liabilities. From a strategic perspective it signifies the timeline of financial performance estimations for new products and markets.

Long-term (from 6 years onwards): This timeline signifies the timeline for strategic planning in terms of long-term business diversification and related strategies.

3.5 Climate Related Risks

Climate-related risks are integrated into the Risk Management of the company as described in the above section. A list of relevant risk types is mentioned below.

3.5.1 Transition Risks

S.No	Particular	Risks	Mitigation Strategies	Opportunities
1	Temperature Increase	• Operational Efficiency: Higher temperatures can reduce the efficiency of manufacturing processes and increase cooling costs. • Workforce Health: Increased risk of heat stress affecting worker productivity and health.	• Energy-Efficient Technologies: Invest in energy-efficient cooling systems and insulation to reduce the impact of higher temperatures. • Workforce Adaptation: Implement measures such as heat-resistant work environments and flexible working hours to protect worker health and maintain productivity. Provide drinking water and Electrolytes to employees during heat waves. Do heat stress assessments of specific jobs to identify high stress jobs and use higher frequency job rotation to reduce impact.	Renewable Energy: Investing in renewable energy sources like solar can help mitigate the increased energy demands for cooling.
2	Water Availability	• Droughts: Drought conditions can lead to water scarcity, affecting production that relies on significant water usage. • Groundwater depletion: Non availability of groundwater can impact production at sites that are heavily reliant on it. This can also lead to an	• Water Management Systems: Implement advanced water recycling and conservation systems to manage water use efficiently. • Alternative Water Sources: Invest in technologies to utilize alternative water sources such as desalination or rainwater harvesting.	Sustainable Practices: Developing products and processes that require less water or can be run on alternate water sources can lead to cost reductions.

		increase in water costs. • Floods: Excessive precipitation and flooding can disrupt operations, damage infrastructure, and affect supply chains.		
3	Extreme Weather Events	• Cyclones and Storms: Increased frequency and intensity of cyclones and storms can lead to supply chain disruptions, infrastructure damage, and operational shutdowns.	• Infrastructure Resilience: Strengthen infrastructure to withstand extreme weather events, including robust building designs and backup power systems. • Supply Chain Diversification: Diversify supply chains to reduce reliance on single regions that may be prone to extreme weather.	Insurance: Utilize climate risk insurance to mitigate financial losses from extreme weather events.
4	Water Sources	• Glacial Melt: Changes in water availability from glacial melt can affect regions dependent on glacial-fed water sources.	• Water Efficiency: Improve water efficiency to reduce dependency on glacial-fed water sources. • Monitoring Systems: Implement monitoring systems to predict and adapt to changes in water availability from glacial sources.	Community Engagement: Engage with local communities to develop collaborative approaches to managing water resources.
5	Land Degradation	• Desertification: Loss of arable land due to desertification can impact agricultural supply chains and increase costs for raw materials.	• Sustainable Sourcing: Source raw materials from regions less prone to desertification. • Land Restoration: Invest in land restoration projects to combat desertification and maintain agricultural productivity.	R&D in Agriculture: Aid in Research and development of drought-resistant crops and agricultural practices to ensure a stable supply chain.

3.5.2 Physical Risks

S.No	Particular	Risks	Mitigation Strategies	Opportunities
	Regulatory	• Stringent Emission Standards: Increased operational costs due to compliance with stricter emission regulations. • Carbon Pricing: Introduction of carbon taxes leading to higher operational costs.	• Compliance Management: Implement robust systems to ensure compliance with evolving regulations. • Proactive Engagement: Engage with policymakers to stay ahead of regulatory changes and advocate for favourable policies. • Utilize Incentives: Actively pursue government incentives and subsidies for renewable energy and sustainability projects.	Government Incentives: Potential access to subsidies for renewable energy projects. Green Financing: Availability of international funds and loans for green projects.
	Market	• Changing Consumer Preferences: Shift in consumer demand towards more sustainable products. • Competitor Advancements: Competitors adopting sustainability practices faster, potentially gaining market share.	• Consumer Education: Educate consumers on the benefits of sustainable products to drive demand. • Sustainable Product Development: Continuously innovate to create sustainable products that meet consumer expectations. • Market Diversification: Enter new markets with a strong emphasis on sustainability.	Sustainable Product Demand: Increased demand for eco-friendly and sustainable products. New Market Segments: Opportunities to enter new markets with sustainable product lines.
	Technology	• Technological Obsolescence: Rapid technological advancements making current technologies obsolete. • High R&D Costs: Significant investments	• Investment in R&D: Invest in research and development to stay at the forefront of sustainable technologies. • Technology Partnerships: Collaborate with technology providers and research	Innovation Leadership: Leading the market in sustainability innovations and technologies. Operational Efficiency: Improved operational efficiency through advanced technologies and processes.

		required for developing and adopting new technologies.	institutions for advanced sustainable solutions. • Adopt Renewable Energy: Invest in renewable energy projects such as solar and wind to reduce dependency on fossil fuels.	
	Reputational	• Brand Image: Failing to meet sustainability targets can harm the brand image. • Investor Relations: Loss of investor confidence due to inadequate sustainability practices.	• Transparent Reporting: Maintain transparency in sustainability practices and regularly report progress to stakeholders. • Stakeholder Engagement: Engage with stakeholders, including investors, customers, and communities, to build trust and support. • Sustainability Branding: Strengthen brand identity through consistent sustainability messaging and initiatives.	Brand Differentiation: Enhancing brand image and differentiating from competitors through strong sustainability practices. Investor Attraction: Attracting ESG-focused investors by demonstrating commitment to sustainability.
	Operational	• Resource Scarcity: Increased operational costs due to scarcity of raw materials caused by climate change. • Energy Supply Disruptions: Dependence on fossil fuels leading to supply chain disruptions.	• Efficiency Improvements: Implement energy and water efficiency measures across operations. • Supply Chain Management: Work with suppliers to ensure sustainable sourcing and reduce resource scarcity risks. • Disaster Preparedness: Develop contingency plans to mitigate the impact of climate-related disruptions.	Resource Efficiency: Reducing resource usage and operational costs through efficient practices. Renewable Energy Adoption: Long-term cost savings and energy security through renewable energy adoption.

4 METRICS AND TARGETS

4.1 GHG Emissions

Varun Beverages Limited's carbon footprint in CY 2023 is **2,903,030 MTCO2e**. Scope 1 accounts for 3% (74,260 MTCO2e), Scope 2 accounts for 10% (305,164 MTCO2e) and Scope 3 accounts for 87% (2,523,605 MTCO2e) of the total emissions.

Table 3 GHG Inventory for CY 2023

	GHG Inventory breakdown	Minimum boundary emissions (tCO2e)	Gross Biogenic CO2 emissions (tCO2e)	Outside of Scope (tCO2e)
Scopes 1&2	Scope 1	74,217.98	42.31	73,237.58
	Scope 2 location-based	305,163.80	-	-
	Scope 2 market-based	-	-	-
Scope 3	1. Purchased goods and services	1,540,589.16	71578.80	-
	2. Capital goods	126,290.80	-	-
	3. Fuel- and energy-related activities	161,280.33	-	-
	4. Upstream transportation & distribution	31,585.65	-	-
	5. Waste generated in operations	1,786.53	-	-
	6. Business travel	5,838.88	-	-
	7. Employee commuting	20,106.21	-	-
	8. Upstream leased assets	1,286.80	-	-
	9. Downstream transportation & distribution	95,904.66	-	-
	10. Processing of sold products	-	-	-
	11. Use of sold products	493,580.09	-	-
	12. End-of-life treatment of sold products	45,356.38	-	-
	13. Downstream leased assets	-	-	-
	14. Franchises	-	-	-
	15. Investments	-	-	-

Scope	GHG Emissions (tCO_2e)	Biogenic Emissions (tCO2e)	Total Emissions (tCO2e)	% of total Emissions
Scope 1	74,218	42	74,260	2.5%
Scope 2	305,164	0	305,164	10.3%
Scope 3	2,523,605	71,579	2,595,184	87.2%
Total Emissions	**2,902,987**	**71,621**	**2,974,608**	**100%**
Outside of scopes (Neutralized emissions)	-	73,238	73,238	NA

Table 4 Emissions of CY 2022 & 2023

Scope	CY 2022	CY 2023
Scope 1	80,810	74,260
Scope 2	310,241	305,164
Scope 3	2,491,240	2,595,184
Total	**2,882,291**	**2,974,608**
Outside of scopes (Neutralized emissions)	99,522	73,238

Table 5 Scope 1 Emission Distribution for CY 2023

Sub-category	Activity Source	Fuel/ Gas used	CO2 Emissions (tCO2e)	CH4 emissions (tCO2e)	N2O emissions (tCO2e)	HFC emissions (tCO2e)	Total Emissions (tCO2e)
Stationary Combustion	Boilers	Coal (kg)	8,941.81	28.80	63.83	-	9,034.44
		FO (kg)	2,352.08	3.94	5.21	-	2,361.23
		CNG (kg)	4,365.28	6.58	2.03	-	4,373.89
	DG Set	HSD (L)	16,302.45	1.81	205.37	-	16,509.62
Mobile Combustion	MHE						
		LPG (kg)	2,123.72	1.85	1.18	-	2,126.75
	Primary transportation	Downstream Transportation (kms)	23,375.67	5.47	255.10	-	23,636.23
		Company owned vehicles (kms)	735.74	0.02	5.30	-	741.06
	Aviation fuel		461.17	5.83	3.91	-	470.91
Fugitive combustion		CO2 Leakage (kg)	12,283.89	-	-	-	12,283.89
		CO2 refilled in fire extinguisher (kg)	1.12	-	-	-	1.12
	Refrigerants (kg)	R 22				1,697.75	1,697.75
		R 134				315.00	315.00
		R 134A				104.04	104.04
		R 404A				154.61	154.61
		R 32				-	-
		R 407A				72.38	72.38

		R 407C				-	-
		R 410A				356.22	356.22
		R 410C				-	-
Biofuels	Boiler	Cashew cakes (kg)	Outside scope	1.47	0.20	-	1.67
	Boiler	Briquette (kg)	Outside scope	16.51	2.19	-	18.70
		Fire wood (kg)	Outside scope	0.52	0.26	-	0.79
			70,942.92	**72.79**	**544.57**	**2,700.00**	**74,260.28**

Table 6 Scope 3 Emission Distribution for CY 2022 & 2023

GHG Inventory breakdown	**2022**			**2023**		
	Minimum boundary emissions (tCO2e)	**Gross Biogenic CO2 emissions (tCO2e)**	**Total Emissions (tCO2e)**	**Minimum boundary emissions (tCO2e)**	**Gross Biogenic CO2 emissions (tCO2e)**	**Total Emissions (tCO2e)**
1. Purchased goods and services	1,485,144.51	68,352.34	1,553,496.85	1,540,589.16	71578.80	1,612,167.96
2. Capital goods	79,006.14		79,006.14	126,290.80	-	126,290.80
3. Fuel- and energy-related activities	152,538.46		152,538.46	161,280.33	-	161,280.33
4. Upstream transportation & distribution	37,659.82		37,659.82	31,585.65	-	31,585.65
5. Waste generated in operations	1,722.67		1,722.67	1,786.53	-	1,786.53
6. Business travel	2,608.16		2,608.16	5,838.88	-	5,838.88
7. Employee commuting	13,450.59		13,450.59	20,106.21	-	20,106.21
8. Upstream leased assets	1,494.58		1,494.58	1,286.80	-	1,286.80
9. Downstream transportation & distribution	86,542.87		86,542.87	95,904.66	-	95,904.66
10. Processing of sold products	-		-	-	-	-
11. Use of sold products	539,758.46		539,758.46	493,580.09	-	493,580.09
12. End-of-life treatment of sold products	22,961.55		22,961.55	45,356.38	-	45,356.38

13. Downstream leased assets	-	-	-	-	-	-
14. Franchises	-	-	-	-	-	-
15. Investments	-	-	-	-	-	-
Total	**2,422,887.79**	**68,352.34**	**2,491,240.13**	**2,523,605**	**71,578.80**	**2,595,184**

4.2 Water-related Metrics

At VBL, water stewardship is a critical component of our sustainability strategy. As a beverage company, water is central to our operations, and we are committed to its responsible management. In line with the TCFD recommendations, we track and report key water-related metrics, focusing on water consumption, conservation, and efficiency across our facilities. The quantities withdrawn and discharged are given in the below tables.

Table 7 Water Withdrawal Quantities (million Litres)

Sources	**International**		**India**		**Total**	
WD	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**
Ground	510	491	4393.39	4570.66	4903.77	5061.33
Surface	841	893	1927.62	1825.59	2769.06	2718.59
Municipal	580	621	0	0	579.94	621.28

Table 8 Water Discharged Quantities (million Litres)

Sources	**International**		**India**		**Total**	
DS	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**
River	81.68	84.71	13.5	12.503	95.18	97.21
Municipal	595.74	547.91	287.02	194.99	882.76	742.89
Ground	-	-	33.717	33.5	33.72	33.50
Total Water Discharged*	**677.42**	**632.62**	**334.24**	**240.99**	**1011.66**	**873.61**

**Discharged water undergoes secondary treatment*

4.3 Climate-Related Targets

Through the 2015 Paris Agreement, world governments committed to limiting global temperature rise to well-below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C. In 2018, the Intergovernmental Panel on Climate Change (IPCC) warned that global warming must not exceed 1.5°C above pre-industrial temperatures to avoid the catastrophic impacts of climate change. To achieve this, GHG emissions must halve by 2030 – and drop to net zero by 2050.

Varun Beverages Limited have taken up SBTi to reduce their emissions and below are the absolute emissions to be reduced, short & long-term.

Scope 1 & 2 absolute emissions reductions from the base year of 2023 of:

- 60% by 2033
- 90% by 2050 (Net Zero)

Scope 3 absolute emissions reductions from the base year of 2023 of:

- 60% by 2033
- 90% by 2050 (Net Zero)

We plan to achieve 60% reductions in emissions from base year by 2033 in each of the 3 scopes. We also plan to start using carbon offsetting from 2043 to reach net zero by 2050. We are currently focusing on investing into PPA based renewable power in the near term to target scope 2. We are also targeting increased share of recycled content in packaging to significantly reduce scope 3 category 1 emissions which are the largest in our GHG inventory.

Actions to Mitigate Emissions

1. Investment in renewable energy companies to help them scale up rapidly.
2. Developing ecosystems such as wetlands, mangroves etc to become permanent sinks for the future.
3. Funding clean tech such as Carbon Capture, Utilization and Storage; and bioenergy firms.
4. Supporting regenerative agriculture and agroforestry, influencing farmers to dissuade them from crop burning.
5. Helping communities adopt clean technologies at home like efficient cookstoves and lighting.
6. Climate policy advocacy and educational campaigns on climate in communities.

Process of Reviewing Targets

We review the target annually and monitor progress with lead from our Board and top management. The quantification is done by the ESG team while the reviews happen in two stages both at the ESG executive committee and the Board level ESG committee.

Table 9 SBTi Target Setting

Scopes	2023	2033	2050
Scope 1 & 2 absolute emissions (tCO2e)	379,424	151,770	37,942
Scope 3 absolute emissions (tCO2e)	2,595,184	1,038,074	259,518

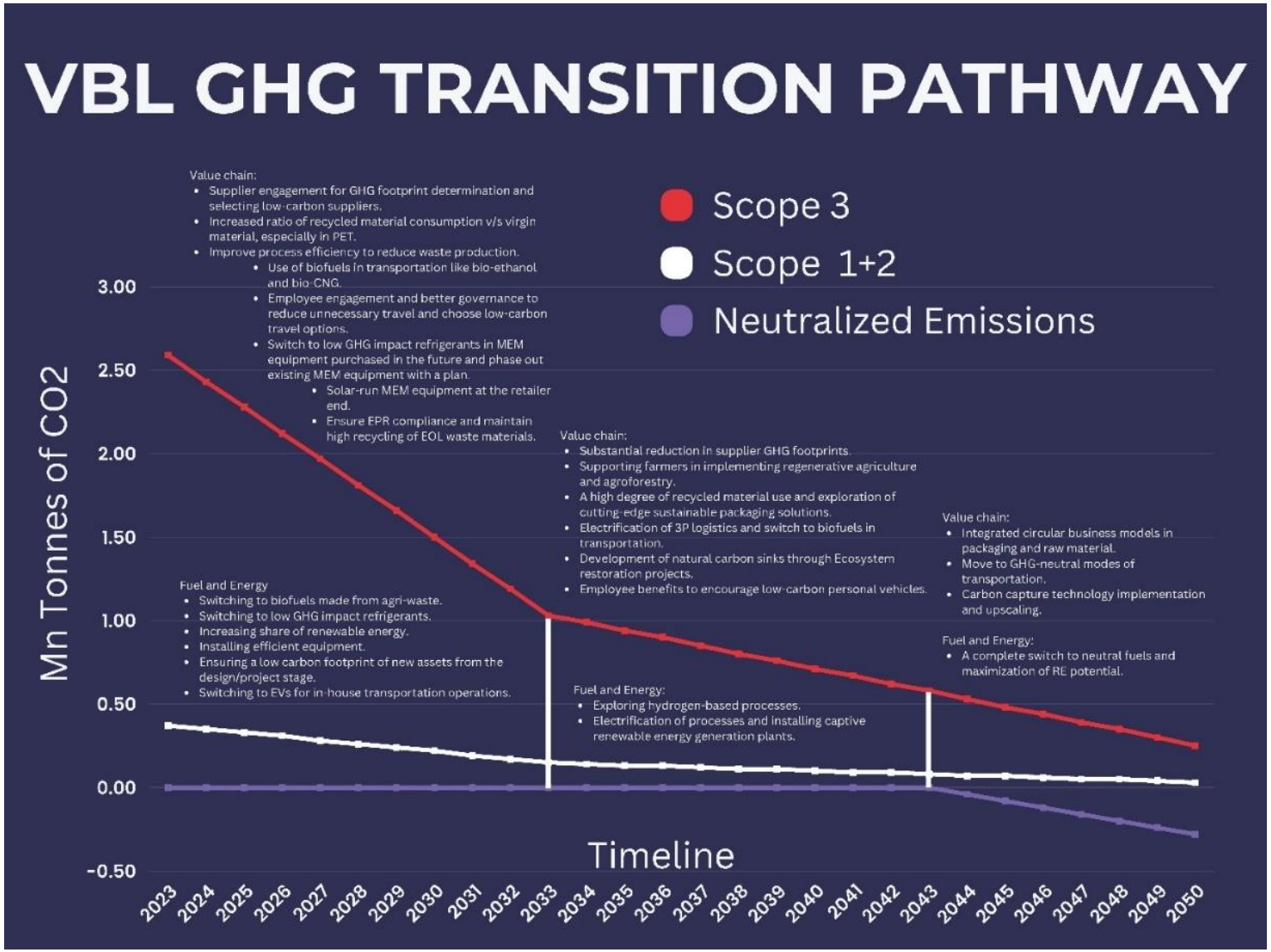

Figure 4 VBL GHG Transition Pathway

4.4 Water-Related Targets

Target setting plays a vital role in water management and assists the successful execution of corporate strategies. Setting and making progress against targets helps decouple growth from dependence on water.

Table 10 Water-Related Targets

S.No	Category of Target	Base		Reporting		Target	
		Figure	Year	Figure	Year	Figure	Year
1	Reduction in withdrawals per unit of production	1.92	2020	1.54	2024	1.4	2050
2	Reduction in water discharges per unit of production	271.95	2022	208.8	2024	135.98	2030
3	WASH targets	1.75	2019	2.02	2024	2	2025

4.5 Reduction Strategies

4.5.1 Scope 1 & 2 emission reduction strategy

Scope 1 and 2 reductions will be carried out by:

1. Using more green energy in operations.
2. Process electrification- switching from fuel to electricity;
3. Environmentally friendly fuels such as bio fuels and ultimately new gen fuels like green hydrogen, and;
4. Shifting to low GHG impact refrigerants;

4.5.2 Scope 3 emission reduction strategy

Scope 3 reductions will be achieved through:

1. Supplier engagement and selecting low carbon suppliers.
2. Increased ratio of recycled material consumption with respect to virgin material, especially in plastics.
3. Implementing scope 1 and 2 strategy for scope 3 cat 3. Make constant efforts to implement these strategies at leased locations as well.
4. Improving process efficiency to reduce waste production.
5. Electrification of logistics and switch to biofuels in transportation.
6. Employee engagement and better governance to reduce un-necessary travel and choosing low carbon travel options.
7. Using low GHG impact refrigerants in MEM equipment purchased in the future and phase out existing MEM equipment with a plan.
8. Engagement with retailers to make their energy mix greener with options like solar run MEM equipment.
9. Ensuring EPR compliance and maintaining high recycling of EOL waste materials.

4.5.3 Residual emission neutralisation strategy

VBL seeks to address this through rehabilitation of wastelands into lush plantations in the earlier phases. In long term, we would like to utilise technologies like deep sea storage or underground storage of carbon dioxide as that technology matures.

4.5.4 Beyond value-chain mitigation strategy

1. Investment in renewable energy companies to help them scale up rapidly.
2. Developing ecosystems such as wetlands, mangroves etc to become permanent sinks for the future.
3. Funding clean tech such as Carbon Capture, Utilization and Storage; and bioenergy firms.
4. Supporting regenerative agriculture and agroforestry, influencing farmers to dissuade them from crop burning.
5. Helping communities adopt clean technologies at home like efficient cookstoves and lighting.
6. Climate policy advocacy and educational campaigns on climate in communities.

4.6 Environmental Commitment of the Company

Varun Beverages Limited (VBL) is committed to environmental sustainability and recognizes the urgent need to address climate change, protect biodiversity, and ensure clean water and sanitation. This policy outlines our commitments and actions across our entire value chain to align with international frameworks such as the Paris Agreement, the Kunming-Montreal Global Biodiversity Framework, and Sustainable Development Goals. We are committed to conduct our external/public engagements in line with these frameworks.

4.6.1 Climate Commitment

1. **Net-Zero Emissions**
   - We commit to achieving net-zero greenhouse gas emissions by 2050, in line with the Paris Agreement. This includes reducing emissions across our operations, supply chain, and product lifecycle.
   - As a medium-term milestone, we commit to achieve 60% reduction in GHG emissions across all scopes by 2033 from a base year of 2023.
2. **Renewable Electricity Procurement**
   - We will source 25% of our electricity from renewable sources by 2030, through direct procurement and renewable energy certificates.
3. **Energy Efficiency**
   - We commit to improve the energy efficiency of our operations continuously through investment in new and efficient technologies and operational opportunities.
4. **No Climate-Denial Funding**
   - We commit not to fund or support any climate-denial activities or lobbying against climate regulations.

4.6.2 Biodiversity Commitment

1. **Protection of Biodiversity**
   - We commit to protecting biodiversity and respecting legally designated protected areas. We will not trade in species listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
2. **Conservation of Freshwater Ecosystems**
   - We commit to the conservation of freshwater ecosystems by supporting and implementing sustainable practices that protect aquatic habitats and biodiversity.

4.6.3 Water Commitment

1. **Water Stewardship and Collective Action**
   - We recognize water as a shared resource and commit to collective action and stewardship to ensure sustainable water use and management across our value chain.

We aim to sustain a water recharge ratio (Ratio of water recharged to water consumed) of 2.00.

2. **Reduction of Water Consumption**
    - We will reduce our freshwater consumption per litre to 1.4 by 2025, through efficiency improvements, recycling, and reuse initiatives.
3. **Water Pollution Control**
    - We commit to controlling, reducing, and eliminating water pollution from our operations, ensuring that our effluents meet or exceed regulatory standards.
4. **Safe WASH in Local Communities**
    - We will support and ensure safely managed water, sanitation, and hygiene (WASH) services in the sites and local communities where we operate.

4.6.4 Commitment to Circular Economy

1. **Circular Economy Strategy**
    - We commit to a circular economy strategy by minimizing waste, promoting recycling and reuse, and designing products and packaging for sustainability. We target towards achieving 100% recycling of plastic waste per kg of PET sold in the market by 2025.
    - We will reduce the consumption of virgin plastic in our packaging and commit to 30% utilization of recycled PET in our PET packaging by 2025.

4.6.5 Compliance and Beyond

1. **Regulatory Compliance**
    - We commit to complying with all relevant environmental regulations and mandatory standards in the regions where we operate.
2. **Beyond Compliance**
    - We will take proactive environmental actions beyond regulatory compliance to enhance sustainability and reduce our environmental footprint.

4.6.6 Stakeholder Engagement and Capacity Building

1. **Stakeholder Engagement**
    - We will actively engage with stakeholders, including employees, suppliers, customers, and local communities, to build capacity and raise awareness on environmental issues.

4.6.7 Governance and Accountability

1. **Grievance and Whistleblower Mechanism**
    - We have established a grievance and whistleblower mechanism to monitor compliance with this environmental policy. Stakeholders can raise concerns and report non-compliance or greenwashing through this mechanism which is available in the policies section of our website.
2. **Timebound Milestones and Targets**
    - We commit to setting and achieving timebound environmental milestones and targets. Progress will be monitored and reported annually.

REFERENCES

1. World Meteorological Organization
2. NASA ESODIS
3. NOAA climate data
4. WRI aqueduct
5. Google Earth Engine
6. ESA CCI
7. India Meteorological Department
8. USGS climate data
9. Peer-Reviewed Research and Publications
10. Greenhouse Gas Protocol on Corporate Accounting and Reporting by World Resource Institute (WRI) / World Business Council for Sustainable Development (WBCSD) https://ghgprotocol.org/corporate-standard
11. Defra Greenhouse Gas Protocol Greenhouse gas reporting: conversion factors 2023 - GOV.UK (www.gov.uk)
12. Central Electricity Authority, Version 19 https://cea.nic.in/wp-content/uploads/baseline/2024/01/User_Guide__Version_19.0.pdf https://cea.nic.in/wp-content/uploads/executive/2023/11/final_Executive_Summary_October_2023.pdf
13. IPCC AR6 https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Chapter_07_Supplementary_Material.pdf