



2022

**Environmental, Social and
Governance Report**

Tsingtao Brewery Co., Ltd.

About This Report



Scope of reporting

This is the 15th annual sustainable development report published by Tsingtao Brewery Co., Ltd. The data and information contained herein cover the operations and sustainable development practices of 57 wholly-owned or holding subsidiaries in China, 2 jointly owned and operated breweries under Tsingtao Brewery Co., Ltd. from January 1 to December 31, 2022. To ensure continuity and for the convenience of comparison, some of the data and information provided are not limited to the year 2022.



Content selection

In the selection process of the report content, Tsingtao Brewery followed the principles of importance, quantification, consistency, balance, accuracy, validity, and comparability. This report presents the environmental, social and corporate governance aspects of Tsingtao Brewery's sustainability responsibilities in terms of products, the environment, employees, communities and business partners.



Editorial policy

This report is drafted in compliance with the *Self-regulatory Guidelines for Listed Companies No.1: Standard Operations* of the Shanghai Stock Exchange, and the *Appendix 27 Environmental, Social and Governance Reporting Guide of the Listing Rules and Guidance* (hereinafter referred to as "ESG Reporting Guide") issued by the HKEX, with reference to the *Global Reporting Initiative (GRI)*, the *Corporate Environmental Reporting Guidelines of Shandong Province* and relevant requirements on sustainable development reporting and publishing by the State-owned Assets Supervision and Administration Commission.



Refers to the description

Tsingtao Brewery Co Ltd. is hereinafter referred to as "Tsingtao Brewery", "the company" or "we" in the report. Tsingtao Brewery owns the copyright on this report.



The way we publish this report

The report is available in print and online. For the online edition, please visit <http://www.tsingtao.com.cn>.



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Message from our Chairman

Leaping Forward to a New Era of Quality Development

For 120 years, Tsingtao Brewery has been dedicated to our core business and charted a path of sustainable quality development. In 2023, the company will celebrate its 120th anniversary. With generations of Tsingtao Brewery people's endeavours and innovation, Tsingtao Brewery has grown from a small factory into a global company present in over 100 countries, creating a new era of quality development with remarkable performance. We understand that the pursuit of "enduring success" requires continuous efforts to lead innovation and make positive contributions to society through our own development.

Focused on our core business to strengthen the foundation for sustainable development

Enterprises are the main driver of quality development and the main pillar of the real economy. Looking back on our 120-year development, an important lesson we learn is to focus on the real economy. With the brewing business as our priority, we have always been working hard to make high-quality beer over the past 120 years and moving forward with determination to serve as the engine of prosperity, employment and innovation. Sticking to the core business not only enables our own growth but also boosts high-quality development and sustainable development of more industrial clusters and upstream and downstream value chains.

In recent years, Tsingtao Brewery has revitalised the century-old brand and achieved record-high performance with steadfast strategy execution, innovative operations management, and flexible response to changes. In 2022, built on its record-breaking performance for three consecutive years, the company generated all-time high sales revenue and net profits, laying a solid foundation for quality development. Looking ahead, we will strive to "strengthen the core business, lead the industry, and empower the whole value chain" to enable the real economy to grow in a stronger, better, and more efficient way.

Relying on innovation to unlock the momentum of sustainable development

At the beginning of 2022, the company launched Life Legend, a state-of-the-art combination of the advantages of beer, whiskey, wine, and champagne. To satisfy consumers' high-end, diversified, and personalised demand, we innovated products to enrich our product portfolio and created an attractive quality management mode to create joy for consumers' life based on innovations and digital technologies, leading the quality development of the beer industry.

In June 2022, Tsingtao Brewery's West Coast Craft Beer Garden was opened and became a new landmark of the "City of Beer", featuring six modes of businesses — craft brewing workshop, resort hotels, whiskey clubs, beer spa, creative baking, and marriage services. To meet the scenario-based and social demands of consumers, we rapidly innovated products and enhanced services and consumer experience. The company is a pioneer in opening 200 pubs nationwide, which sets an example of manufacturing and services integration.

In 2022, we played the leading role as the world's first "light-house factory" powered by industrial internet and built smart beer production bases in Pingdu, Zaozhuang, and Xi'an with wide application of smart manufacturing and enhanced digital operation; we pushed forward whole-supply chain digitalisation, which would improve operational efficiency, reduce costs, and enhance marketing capacity.

Tsingtao Brewery has remained at the forefront of industry trends in every era. We have sustained our vitality for 120 years by staying true to traditional standards while promoting innovations. Looking ahead, we will be committed to high-end, smart, and green-quality development and promoting the transformation of growth drivers. We will continue to play a leading role in technological innovation, digital transformation, industry upgrading, integration of manufacturing and service sectors, and green development to facilitate sustainable and high-quality development.

Be responsible to create a shared future of sustainable development

With a sense of responsibility, Tsingtao Brewery continued to create value for all stakeholders. In terms of economic responsibility, we continued to generate value for investors. In terms of green development, we promoted the world-class brewing wastewater value-sharing programme in 2022. In terms of rural revitalisation, we aided the "Shandong-Tibet Happy Homeland Construction Project" and provided employment assistance to help poverty alleviation in Anshun of Guizhou province, Longnan of Gansu province, Heze and Pingdu of Shandong province, charting a unique path of rural revitalisation powered by "targeted assistance, industrial development, and cultural support". We made considerable donations in response to disasters. We have established Tsingtao Brewery Scholarship and Employee Care Fund for years. In 2022, the company was selected as a case in the *Research Report on Corporate Social Responsibility of State-owned Enterprises (2022)* and an *Outstanding ESG Practice Case in social responsibility*; the company was also awarded "Model State-owned Enterprise in Corporate Governance".

With a bottle of beer, we aim to interact with the times, empower life, create joy, integrate industries and connect the world. In 2023, standing at the new starting point of our 120th anniversary, we will continue to innovate to help achieve the national goal of making China a giant of quality manufacturing and embark on a new journey of quality development. We are committed to leaping forward for a better, greener, and more harmonious future!

Chairman, Tsingtao Brewery Co., Ltd.
Huang Kexing



Message from our President

Starting a New Journey and Scaling New Heights



In 2022, amid multiple pressures such as sustained downward strain on the industry, consumption transformation and upgrading, and rising costs, we maintained our product quality and at the same time expanded the market, adjusted our structure, boosted innovation, enhanced our brand, and took on more responsibility to support quality development and create more shared value for all value chain partners with substantial benefits. "Inheritance and innovation" of craftsmanship is the driving force of the century-old brand. Standing at the new starting point of our 120th anniversary, we will be committed to promoting sustainable quality development and creating new innovation engines to sustain our success. We will also move forward with our value chain partners and keep up with the times.

Pushing forward quality development

The development of enterprises is critical to secure market supply and stabilise industrial chains. In 2022, Tsingtao Brewery continued to take practical steps to stimulate consumer demand and stabilise production and supply chains, further improving the quality of our development. With steadfast strategy, high product quality, vitalised brand, technological innovations, smart production, and synergy between manufacturing and services, we forged a new path of development and achieved record-breaking performance in successive years. In 2022, Tsingtao Brewery reached new heights with 8,072,400 kL in sales volume which was worth 32.172 billion yuan and generated 3.711 billion yuan as net profit attributable to shareholders of the parent company. The company has been on top of the Chinese beer brand ranking for 19 consecutive years with a brand value of 218.225 billion yuan in 2022.

Improving innovation management

Over the years, Tsingtao Brewery has fostered comprehensive and systemic innovations based on its century-old craftsmanship and culture. We fully tapped into our Key National Lab on Beer Fermentation Engineering, a one-of-a-kind R&D platform within China's brewery industry, and relied on massive consumer big data to constantly launch new products, enhance our product mix, rapidly expand to and lead premium and super-premium segments. In 2022, we debuted Life Legend, a ground-breaking product that combined the craftsmanship of various brewmasters, breaking through the ceiling of China's beer industry.

We fostered the integration of manufacturing and services and led cross-sectoral cooperation to create new business types and scenarios for quality development. In recent years, we utilised digital technologies to drive business transformation. We also pushed forward integrated data governance of the whole business chain and accelerated the establishment of "smart Tsingtao Brewery" that covers all quality assessment, supply chains, scenarios and data. In 2022, Tsingtao Brewery's West Coast Craft Beer Garden

was opened, offering six trendy business modes including craft brewing workshops and resort hotels. The Craft Beer Garden became a new meeting place of the city of beer, providing a new way of life for consumers. To satisfy scenario-based consumer demand, Tsingtao Brewery continued to brew a taste of joy, create immersive experience scenarios, and put Winter Olympic sports onto the products to promote the 2022 Winter Olympics.

Fostering digital transformation

We promoted digital and smart transformation to modernise industrial chains and create new engines of sustainable development. As a trailblazer in the industry who drove to provide customised production and build a smart supply chain, we shouldered our responsibility and led the whole industrial chain to move towards smart and green transformation, accelerated overall breakthroughs in critical fields, consolidated the foundation of a modern industrial system, and met specialised and customised consumer demands. In 2022, our "lighthouse factory" was utilised as a model to lead the transformation and upgrading of manufacturing production. The Tsingtao Brewery Smart Industrial Park (1.2 million kL production capacity), Zaozhuang beer production base (600,000 kL production capacity), and the relocated and reconstructed new project of Xi'an Hans (600,000 kL production capacity) were put into production, forging an advanced manufacturing cluster and deepening the integration of industrial chains. Based on digital transformation, we created the "attractive quality management mode based on digitalised end-to-end decoding", taking our quality management to a new level.

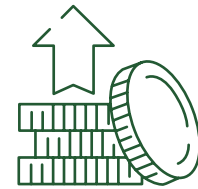
The year 2023 will mark the 120th anniversary of Tsingtao Brewery. Looking ahead, we will move forward with more strategic confidence, hardworking spirits, and concrete actions. We will be committed to promoting quality development, innovation, digital transformation, enhancement of product mix, and green development. We aspire to become a world-class brand with global influence and continue to create value for society and joy for life!

President, Tsingtao Brewery Co., Ltd.
Jiang Zongxiang

Indicators of Sustainable Development



Economic responsibility



The company always attaches great importance to creating returns for investors. Since the company was listed in 1993, the total cash dividend has reached

10.393 billion yuan

by the end of 2022.

Sales volume

807.24 10,000 kL

Net profit attributable to shareholders of the parent company

37.11 100 million yuan

Sales revenue

321.72 100 million yuan

Earnings per share (EPS)

2.736 yuan

Social Contribution Value Per Share (SCVPS)

10.823 yuan



Environmental responsibility



6 factories were newly recognised as National-level Green Factories of 2022, taking the total number to

14



Share of utilised electricity generated from renewables grew by reached 62%, up by

45 percentage points YoY



Water consumption per unit product of beer dropped by

6% YoY



Direct and indirect GHG emissions (Scope 1+2) dropped by

8% YoY



Comprehensive energy consumption per unit product of beer dropped by

9% YoY



SO₂ emissions dropped by

55% YoY



NO_x emissions dropped by

36% YoY



Social responsibility



Employee training

100%

of our employees received training

1,623,604.70
(person hour)

training hours in total 51.2 average training hours per employee, up by 30.6% YoY

Employee care fund

838,900 yuan

of donations to our Employee Care Fund

24 employees were helped with major diseases through the Fund

109 million yuan

spent to aid employees

Programme to support education

1,888

students in total received the Qingdao University-Tsingtao Brewery Scholarship

Programme to support the disabled

2,260,000 yuan

donations in total to programmes for the disabled

Charity donations

3,740,000 yuan

and

2,520,000 yuan

of money and goods respectively donated to charity

About Us

Our company

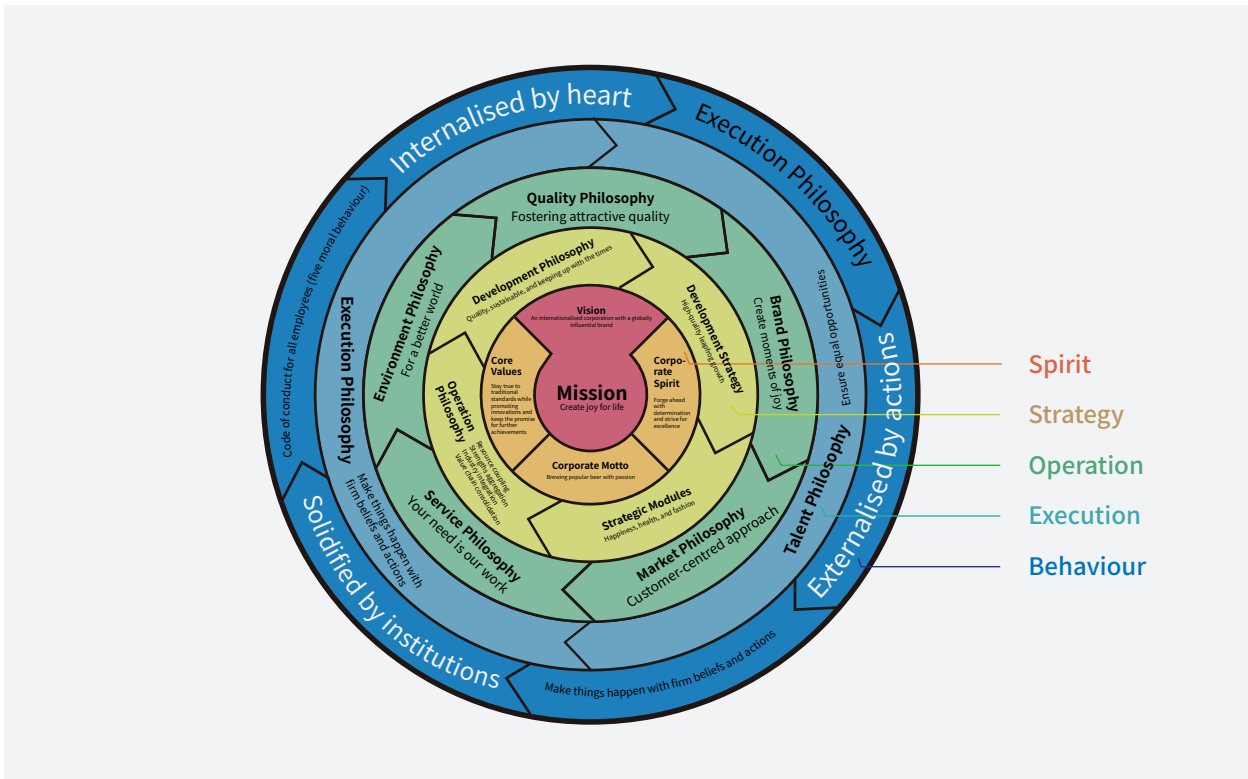
The predecessor of Tsingtao Brewery Co., Ltd. (hereinafter referred to as "Tsingtao Brewery") is the Anglo-German Brewery Co., Ltd. which was founded by German and British settlers in the city of Qingdao in August 1903. Tsingtao Brewery is the earliest brewery in China. In 1993, it was listed on the Hong Kong Stock Exchange and the Shanghai Stock Exchange Market, becoming the first Chinese company to be listed on both markets. Tsingtao Brewery has been on top of the Chinese beer industry for the 19th consecutive year with a brand value of 218.225 billion yuan and was selected into the World's 500 Most Influential Brands.

By the end of 2022, the company has 57 wholly-owned or holding subsidiaries and two jointly owned and operated breweries across 20 provinces, municipalities and autonomous regions in China, boasting the leading position in China's beer industry in terms of company scale and market share. Tsingtao Brewery is also selling its products to over 100 countries. In 2021 when the 100th anniversary of the founding of the Communist Party of China was celebrated, the company's Party committee was recognised as one of the

national advanced primary-level Party organisations. After officially sponsoring the Beijing 2008 Summer Olympics, Tsingtao Brewery once again became an official sponsor of the Beijing 2022 Winter Olympics. In March 2021, Tsingtao Brewery was honoured as the world's first "lighthouse factory" powered by industrial internet in the beer and beverage industry.

In 2022, Tsingtao Brewery was selected as a case in the *Research Report on Corporate Social Responsibility of State-owned Enterprises* released by the State-owned Assets Supervision and Administration Commission of the State Council (SASAC) and as an Outstanding ESG Practice Case in social responsibility; the company was honoured to receive the "Model State-owned Enterprise in Corporate Governance", first prize for Achievements of China Enterprise Reform and Development (2022) and the Craftsmanship Brand Award at the 19th People's Choice Craftsmanship Award ceremony; the company was also on the list of China's Most Admired Companies 2022 for the 17th time and China's Most Respected Companies for the 19th time.

Corporate culture and strategy





Corporate Governance

Since the company went public, Tsingtao Brewery has been developing a sound corporate governance system that aligns with international standards. Information such as the performance and material events of the company has been timely and accurately disclosed. As of December 31, 2022, there were nine members of the tenth board of directors with Tsingtao Brewery, of which four were executive directors and five were independent directors; there were five members of the tenth board of supervisors with Tsingtao Brewery, of which two were shareholding supervisors and three were employee supervisors. The company is the first listed domestic company with a board in which external directors and supervisors account for the majority of the board of directors and the board of supervisors respectively. The incumbent independent directors come from different professional backgrounds and are experienced in legal affairs, accounting, financial investment, marketing, etc.

The board of directors revised the rules of the strategic and investment committee in June 2021, delegating the duty of comprehensive monitoring and governing of ESG-related matters to the latter.

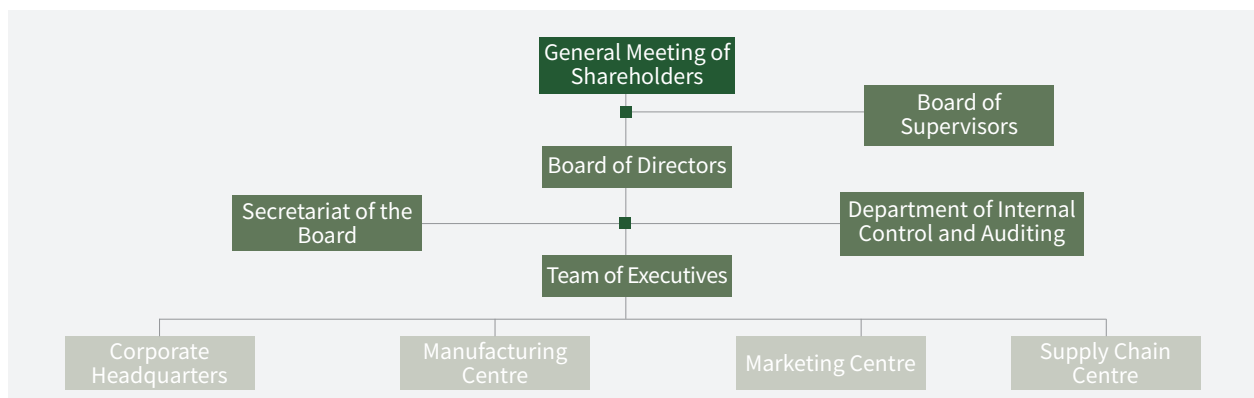
The company highly values and actively promotes investor relationship management. As a company listed in both Hong Kong and Shanghai., we have made concrete steps to improve communications with investors at home and abroad by combining international practices and regulatory requirements from both markets. We built and maintained smooth channels to facilitate communications between the company's management and shareholders and potential investors at home and abroad, reinforcing the company's image of integrity, openness, and transparency in the capital market.

The company stepped up its efforts on investor relations to keep investors informed. In 2022, the company continued to hold performance briefings, organised investor communication events with the participation of high-ranking executives including the chairman, CFO, and board secretary, and improved investor relationship management via digital methods. Meanwhile, we continued to interact with investors at home and abroad through conference calls and engaged in group activities for training and protecting investors of locally listed companies.

Honours won in the capital market



- On January 27, 2022, the company was included in the list of "Model State-owned Enterprises in Corporate Governance" released by the State-owned Assets Supervision and Administration Commission of the State Council (SASAC).
- In June 2022, the company was included in the list of "Public Companies with Strong Returns" released by the China Association for Public Companies.
- On August 19, 2022, the company was awarded Class A Evaluation of Information Disclosure by the Shanghai Stock Exchange for nine consecutive years.
- On October 31, 2022, the company was included in the list of "Board of Supervises of Public Companies with Remarkable Achievements" released by the China Association for Public Companies and selected into Best Practice and Excellent Case of the Board of Supervisors of Public Companies for the second time since 2016.
- On December 16, 2022, the company was recognised with the "2022 Best Practice for Board of Directors of Public Companies" for the second consecutive year among over 5,000 candidate companies listed in the A-share market.





Sound Compliance Operations

Risk control and management

A sound risk management system is fundamental to secure a company's long-term operations. With that in mind, Tsingtao Brewery incorporates risk management into core management and business operations, establishing a holistic risk management system from three aspects¹. This approach, therefore, enhances the company's risk management at all levels.

In 2022, we augmented our existing risk management system by implementing a standardised risk assessment mechanism. We conducted risk assessments at the company level, focusing on key business areas to identify and mitigate significant risks.

These efforts are essential to the company's high-quality, leap-frog development.

Tsingtao Brewery also improves its internal control system, organises evaluations of the internal control system, and establishes a three-tier evaluation system. The evaluation system involves independent evaluation of the company, evaluation of the internal control of headquarters' functions, and evaluation of the internal control of each division to safeguard the effectiveness of the company's internal control system.

Business ethics and compliance

Tsingtao Brewery adheres to business ethics and places a high priority on compliance management. The company strictly complies with laws and regulations mandated by the *Law of the People's Republic of China on Anti-money Laundering*, the *Anti-unfair Competition Law of the People's Republic of China*, and the *Interim Provisions on Banning Commercial Bribery* to develop our clean governance responsibility system and ensure efficiency and effectiveness while rooting out corruption. In 2022, no cases of violation of rules or laws were found related to bribery, extortion, fraud and money laundering. The company also conducts regular anti-corruption surveillance and establishes a regulatory mechanism with clear structures and responsibilities to ensure effective anti-corruption and anti-fraud actions. By means of regulatory reviews, compliance reviews, spe-

cial audits, and accountability investigations, the company has managed to prevent and mitigate compliance risks. Additionally, channels for whistleblowing are facilitated through public phone lines and emails, with personnel designated to receive and handle these reports. The company educates employees on clean governance through the internal knowledge management platform. This effort is to raise employees' awareness of clean governance, self-discipline, and law-abiding behaviour, so that they can fulfil their job responsibilities in a proper manner. For the last year, the company has educated 1,496 key personnel for their caution, carried out 6,899 discussions on clean risk management, and conducted integrity and compliance training for 536 mid-level managers.

Intellectual property protection

Tsingtao Brewery abides by the *Trademark Law of the People's Republic of China*, the *Patent Law of the People's Republic of China* and the *Copyright Law of the People's Republic of China* and other IPR-related rules and regulations. To safeguard high-quality innovation and to prevent IPR infringement, Tsingtao Brewery has introduced internal regulations, such as the

Intellectual Property Management Regulations, to standardise the identification, maintenance, and application of intellectual property covering trademarks, patents, copyrights and more. In 2022, Tsingtao Brewery was recognised as a national exemplary company for intellectual property protection.

¹ The risk management system honours consistent management cultures and languages, standardised management systems and processes, and an integrated risk management team.



Environmental, Social and Governance (ESG) Management

ESG statement from the Board

Tsingtao Brewery recognises the pivotal role environmental, social, and governance (ESG) management plays in the company's sustainable development. To comply with guidelines in the China Securities Regulatory Commission's *Code of Corporate Governance for Listed Companies* and the Hong Kong Stock Exchange's *Corporate Governance Code* and *ESG Reporting Guide*, the company and the Board have established a three-tier ESG governance structure with clear decision-making, supervisory, and execution responsibilities. In this case, the Board has strengthened its surveillance and involvement in the company's ESG management, driven the process of integrating ESG into the company's development strategy, major decision-making, and business operations, and established effective ESG management and governance mechanisms.

Decision-making: The Board has established the Strategy and Investment Committee to review the company's ESG policies and strategies, ensuring their compliance with laws, regulations, and standards; to assess and identify ESG risks and opportunities; to scrutinise the company's ESG and internal monitoring systems and advise the Board on their appropriateness and effectiveness; to review and monitor the implementation of the company's ESG goals and evaluate the outcomes, to review the company's disclosure of ESG reports; and to navigate the company through ESG management vision, goals, and strategies.

Supervising: Tsingtao Brewery has established a leading group for ESG management, which is designed to formulate the company's overarching ESG plans, regulations, policies, strategies, and goals; to look into specific tasks based on ESG

strategies; to identify ESG risks, and to conduct internal and external assessments to rate the materiality; to roll out ESG roadmaps and goals, coordinating and guiding ESG-related functions to set key performance indicators and optimise them from time to time; to identify ESG data sources, and to formulate management policies for future data collection; to engage with ESG-related functions on implementation; and to take responsibility for the report compilation and other tasks.

Executing: Covering the three dimensions of ESG management, three special working groups are formed under the ESG leading group. They are responsible for setting up the company's general environmental, social, and governance goals and key performance indicators; to determine measures based on these goals and key performance indicators, take actions, and optimise measures while moving forward; to organise regular review sessions and look for feedback; to collect and collate ESG-related information to improve on practices in reality.

Stakeholder engagements

Tsingtao Brewery has engaged in various forms of communication with internal and external stakeholders to grasp their take on ESG issues. The key stakeholders of the company range from consumers, the environment, shareholders, employees, business partners, communities, NGOs, to the government. By diving into their expectations and feedback on Tsingtao Brewery's sustainable development, the company has been able to level up its capabilities and facilitate high-quality development.

Stakeholders	Our responsibilities	How we engage
 Consumers	Providing safe and high-quality products Multiple product choices Quality and thorough customer service	Product brands Publicity Interactions Customer service phone lines Company website E-commerce platform Immersive experience
 Environment	Eco-environment protection Green and low-carbon development Boost for recycling economy	Transparency Exchange of environmental information on the platform Promotion of environmental protection for public welfare
 Shareholders	Sound compliance operations Maintenance and appreciation of asset value Rational and sustainable returns Timely disclosure of important messages	Annual reports and announcements General or special meetings of shareholders Roadshows Company website and information platform of exchanges
 Employees	Safe and healthy workplaces Guaranteed compensation and benefits Career development Work and life balance	Safety and health management Employee representatives' meetings Training, exchanges, and skill competitions Email correspondence, visits, consolations, and reasonable suggestions
 Business partners	Mutual benefits and win-win Growing together	Conferences for suppliers and franchisers Assistance and training Instant information sharing and exchange
 Communities and NGOs	Engagement in social welfare and philanthropic activities Investment in community development	Events for communication Social media Site visits Company website Social welfare activities
 Government	Compliance operations Tax compliance Contributions to the local economy Addressing employment issues	Policy consultation Special reports Information disclosure



Identification of material issues

Materiality:

In line with the materiality our stakeholders attach to ESG issues, Tsingtao Brewery has identified material ESG issues through various ways of communication with stakeholders and concluded with a list of these issues.

At the same time, these material issues are under regular review based on market trends and the company's business development. We make sure that the material issues are up-to-date and propped up by the rationale according to information disclosure and boundaries.

How we identify major ESG issues

Sources of issues	Criteria of material issues
<ul style="list-style-type: none"> Proposals from the leadership Analysis and suggestions from internal and external experts Analysis of multi-media information Benchmarking with peers in the industry ESG-related standards and guidelines 	<ul style="list-style-type: none"> Contribution to sustainable development Concerns from most stakeholders Material issues manifested in ESG-related guidelines Aligned with the company's strategies



Quantification:

Tsingtao Brewery has established standardised ESG indicator management tools covering the headquarters and all production plants, which regularly collect all environment- and society-wise key disclosed quantitative indicators as identified in the ESG reporting guidelines. The data is then summarised within the year and ultimately signified in this report for public disclosure, which will be further explained in each section of this report.

Consistency:

This report adopts the same disclosure and statistical methods as previous sustainable development reports and refines certain disclosure categories in alignment with the *ESG Reporting Guide* by the Stock Exchange of Hong Kong. Statistics collected throughout the past years will also be compared in each section of this report.

01 119 Years Just for Brewing Good Beer

Tsingtao Brewery holds the mission of “creating joy for life” and embraces the philosophy of “creating an attractive mode” of quality management. As a customer-centric company, Tsingtao Brewery closely follows consumer trends, encourages innovation and optimises its service system to meet consumers’ personalised and diversified needs with quality and differentiated products.

- Attractive quality management mode
- Food safety and quality control
- Process management



Attractive quality management mode based on digitalised end-to-end decoding



6 precision decoding and transmitting procedures

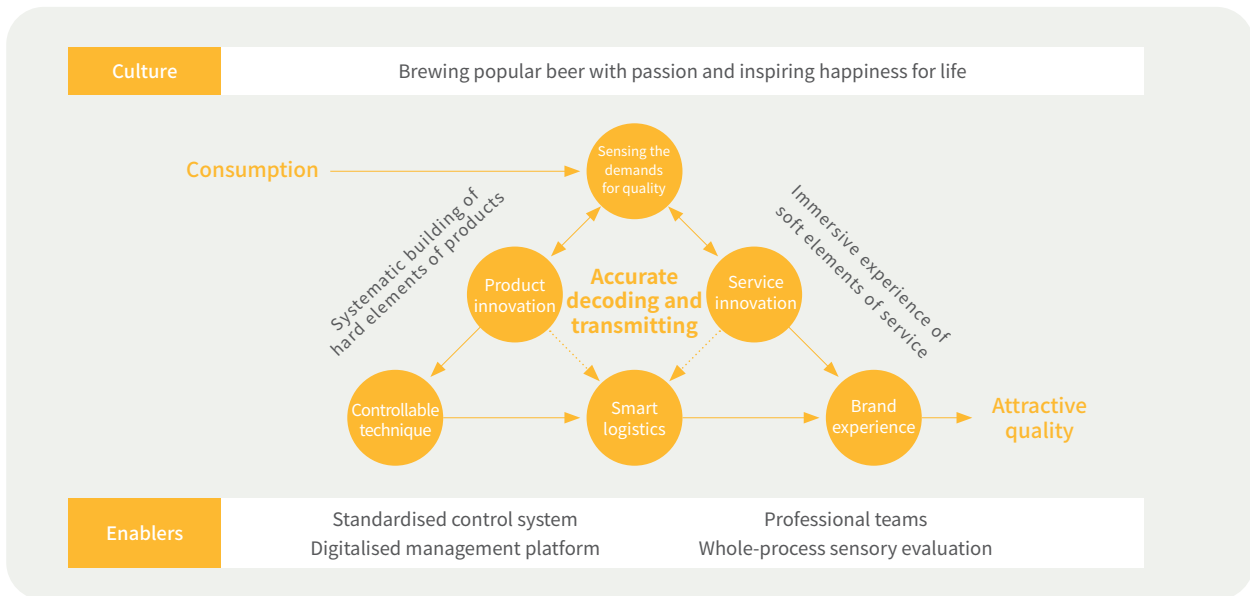


Over **1,800** quality testing points



Attractive quality management mode

Century-old craftsmanship guarantees premium quality. In response to the growing importance attached to consumer sovereignty, Tsingtao Brewery develops the "attractive quality management mode based on digitalised end-to-end decoding" by focusing on the "basic needs" and "shifting needs" of consumers and exploring their "potential needs" continuously.



Attractive quality management mode based on digitalised end-to-end decoding

The mode is based on "systematic making of the physical product elements" and "serving immersive experience of soft elements", building on rich and in-depth quality knowledge, undertaking six major precision end-to-end decoding and transmitting actions, covering "attractive quality demands, product innovation, controllable techniques, service innovation, smart logistics and brand experience" to provide quality products and service to consumers.

Accurate decoding of demands

The company created the five-channel survey on consumer demands that generates not just "sketches" but "accurate profiles" of consumers using a large consumer database.

Accurate decoding of techniques

The company created the decoding matrix from "product index" to "technical standard" with multiple key technologies and designed the recipe and technical parameters.

Accurate decoding of logistics

The company launched "smart logistics" to connect the product to the tip of your tongue, intact, timely and fresh.

Accurate decoding of products

The company created 79 kinds of products in nine series to meet consumers' diversified demands from "one-size-fits-all" to "a series of products", breaking the ceiling of high-end beer products time and time again.

Accurate decoding of service

The company introduced tailored services to meet consumers' needs.

Accurate decoding of experience

We created a new mode of immersive brand experience to meet the scenario-based consumer demands with over 200 TSINGTAO1903 pubs across China and over 50 Qingdao Beer Festivals.



The 44th "Quality Improvement Day" theme-based events

In April 2022, Tsingtao Brewery held the 44th "Quality Improvement Day" and relevant events. This year's Quality Improvement Day centred around the theme of "building attractive quality management mode and creating a better life with craftsmanship and smart production". It also launched the "Century-old Tsingtao Brewery Craftsmanship Culture Festival" and the 2022 themed events of "craftsmanship and skills make talents". At the event, the "Ten Key Initiatives" for building Tsingtao's attractive quality management mode in 2022 were also announced. The company believes that it is the producer of attractive quality, while consumers are experiencers and evaluators of attractive quality. Tsingtao Brewery is transforming its quality concept from "product-cantered quality" to "consumers-cantered quality", achieving attractive quality across the chain of R&D, procurement, production, logistics, branding, sales, service, and scenarios.

During the event, a group of highly-skilled talents who won the titles of Qilu Craftsman, Tsingtao Grand Craftsman, and Tsingtao Craftsman, well-recognised skilled talents by the public and the winners of the 8th

Skills Competition, which stood out from 25,000 people from 11 types of jobs, were honoured. The goal of the event is to guide the employees towards sharpening their skills along the slogan of "craftsmanship and skills make talents" so that a solid foundation can be laid for the quality development of Tsingtao Brewery.



Opening ceremony of the 44th "Quality Improvement Day" of Tsingtao Brewery



Two employees of Tsingtao Brewery won the title of "Chinese Brewmaster"

On March 1st, 2023, the 3rd Award Ceremony of the highest honour in the Chinese brewing industry — "Chinese Brewery Master" — was held at the Beijing Museum of International Brewmaster Art. Tsingtao Brewery takes two seats among Chinese Brewmasters in the beer industry. Xu Nan, Vice President, Manufacturing President and Chief Brewer of the company, and Yin Hua, Director of the Research and Development Centre, won the title of Chinese Brewmaster, making the company the only Chinese beer enterprise with two beer masters.

The Chinese Brewmaster Award is the highest honour for industry talents and its selection is sponsored by the China National Light Industry Council and the China Alcoholic Drinks Association with the goal of promoting the development of the brewing industry and talents. Laureates of the Chinese Brewmaster are the representatives of the top brewing techniques and also the owners, inheritors, and leaders of craftsmanship. For a long time, these Chinese brewmasters have been

working at the frontline, driving industrial transformation and upgrading and promoting the high-quality development of the brewing industry.



Chinese Brewmaster Award



Food safety and quality control

Tsingtao Brewery strictly abides by the national and local laws and regulations such as the *Food Safety Law of the People's Republic of China*, the *Regulation on the Implementation of the Food Safety Law of the People's Republic of China*, the *Product Quality Law of the People's Republic of China*, the *Administrative Measures for Food Production Licensing*, the *Administrative Measures for Food Operation Licensing*, and the *Measures for the Administration of Food Safety Sampling and Inspection and the Measures of Food Recall Management*. The company strictly follows national standards and regulations of food safety including the *General Hygienic Regulation for Food Production of the National Food Safety Standard (GB14881)*, the *Standards for Drinking Water Quality (GB5749)*, and the *Beer (GB4927)*. Tsingtao Brewery tracks the changes in laws, regulations and standards through the food safety information monitoring platform to continuously improve more than 30 product management processes, including GMP, production process hazard analysis and food safety management.

Taking the "six-uniform management" as the core principle, we established a quality control process that covers the entire product cycle and a complete quality control system, pursuing excellence across all links of production including sourcing, manufacturing and sales to provide consumers with ingeniously brewed products.

In 2022, we implemented 3 food safety policies and regulations, improved 144 food safety indicators, and addressed 3 food safety issues.



Six-uniform Management for Quality Control of Tsingtao Brewery

Tsingtao Brewery's quality performance of products in 2022:

- ◆ The company monitored the food safety of 2,406 batches of products and materials, and inspected the quality and safety of 7,025 batches of products and materials. All inspected products passed tests.
- ◆ Among a total of 54 external regulatory inspections and 301 batches of sampled products, no food safety accidents or substandard products have been found, signifying a 100% pass rate for food safety and quality.
- ◆ The company developed internal management systems such as the *Emergency Plan for Food Safety Accidents of Tsingtao Brewery* and the *Product Recall Management Process*, to withdraw products with potential safety hazards in a timely and effective manner. No recall happened with Tsingtao Brewery in 2022.

Tsingtao Brewery strictly controls product quality. Learning from advanced food safety management systems such as HACCP, TACCP, and VACCP, the company has built a food safety management system of its own covering the whole life circle of products from sourcing, production to logistics and sales. Food safety is our first priority in strategic management and quality control. The company has bench-

marked its standards of control against international ones and built a closed-loop control process for food safety. Meanwhile, we have established and improved our food safety accountability system, enhanced the food quality and safety responsibility system, underlined the importance of prevention, prevented food safety hazards and ensured product quality.



Process management

Tsingtao Brewery has established a standardised quality management model and a sound quality control system across raw materials, production, logistics and end-use to implement end-to-end quality control and ensure product quality and food safety.

Choosing each quality ingredient

The first step in quality control for Tsingtao Brewery is to choose quality raw materials. Therefore, we apply strict rules for the screening of raw material suppliers, and veto the problematic provider whenever there is a problem with their qualification management, product monitoring

and on-site auditing, ensuring the quality safety from the beginning. In addition, we set strict assessment standards and processing procedures for raw materials such as water, yeast, barley and rice, to guarantee the safety and quality of raw materials.

Water:

The water for brewing has to pass seven phases of processing and over 100 rigorous tests to make sure it meets the criteria.

Century-old yeast:

We use pure German beer yeast and transport optimum yeast strains to each of our breweries regularly.

Barley:

We choose fully matured and quality barley from specific regions across the globe. Rigorous testing procedures are followed at every level of operation from choosing origin, selecting of variety, planting and harvesting to transport and storage.

Rice:

We build special production bases and warehouses for rice, and entrust designated third parties to conduct all-factor testing. The soil, water, air and the whole term of planting in production bases are monitored, while on-site full coverage inspections of rice suppliers are conducted, to ensure food safety.

Over 1,800 quality testing procedures

We have standardised internal control standards and quality inspection processes for semi-finished and finished products based on quality management documents including the *Minimum Inspection Frequency of Auxiliary Ingredients and Processing Agents for Brewing*, and have established 377 SOPs by the end of 2022. To ensure that all products meet quality standards, we have built a food safety monitoring platform with more than 1,800 quality testing procedures, applied the ERP quality data system for hazard analysis and risk assessment of products, strictly checked key control points, and conducted batch-by-batch inspections of raw and auxiliary materials, semi-finished and finished products, and outbound products.

In addition, we set up a smart management system to visualise the data across the production chain, so as to facilitate the unified management of the production process in each factory. We also set up specialists to monitor the key issues on-site to ensure that all products that leave the factory meet the quality standards.

On top of the strict internal quality inspection, Tsingtao Brewery is the first in the industry to implement a third-party independent sampling and testing system for its products. This helps Tsingtao Brewery monitor more of its products on the market and conduct an in-depth study of key issues and risk items to prevent quality risks.

Implementing end-to-end product quality monitoring

Tsingtao Brewery is committed to providing consumers with products of excellent taste and flavour. After years of accumulation and development, we have established a three-tiered tasting system along the beer brewing process,

built a first-class tasting team in the industry and improved the tasting standards to include all materials in direct contact with the liquid (e.g., beer bottle gaskets and bottle cleaning water) in the scope of tasting.

To further understand how consumers view the quality of Tsingtao Brewery, we have established the attractive sensory quality tasting standard system. In 2022, we organised offline tasting sessions, online classes, and

live-streaming to understand consumers' preferences and perceptions of our products, raise products' market awareness, and gather feedback for future areas of improvement of Tsingtao's attractive quality.

Tsingtao Brewery's tasting team development:

We adopted digital levers to develop an internal tasting training and assessment system for identifying tasting talents and building a first-class tasting team. To further improve the skills of our tasters, we provided professional training to more than 3,000 factory-level and front-line judges in 2022.



Tsingtao Brewery wins first place in China's top beer-tasting competition for a second time

In 2022, the Tsingtao Brewery tasting team participated in the 4th National Beer Tasting Competition, the top event of its kind in China, and won the first and third place.

- ◆ Several members were awarded the titles of "National Technical Expert", "National Technical Expert in Light Industry" and "National Technical Expert in Brewing Industry".
- ◆ Nine were promoted as members of the National Judging Committee. Up to now, the company has 51 national beer-tasting committee members, occupying the leading position in the industry.



Tsingtao Brewery participated in the 4th National Beer Tasting Competition

Standard and strict packaging

Tsingtao Brewery strictly follows national laws and regulations including the *Advertising Law of the People's Republic of China*, the *Trademark Law of the People's Republic of China*, the *Regulation for the Implementation of the Trademark Law of the People's Republic of China* and ensure that the labelling of product information is in line with national standards including the *General standard for the labelling of pre-packaged foods* and the *GB4927 Beer* and that the

branding and marketing execution abide by the *Advertising Law of the People's Republic of China* and the *Anti-unfair Competition Law of the People's Republic of China*. Meanwhile, we improve our packaging evaluation system by setting corresponding performance indicators for process assessment to control the quality of packaging. The company has formulated a set of internal rules for new products packaging, e.g., the *New Product Development and Market*



Entry Management Process, to ensure the legal compliance of the design of product packaging and marketing materials; for segment-specific secondary packaging, the company has formulated the *Secondary Packaging Product Management Regulations* to supervise material trademarks, logos,

advertising slogans, packaging design, forms and quality. The company also examines distributors' qualifications, checks the quality of product packaging in the distributors' warehouses, and manages the products with unqualified packaging, to guarantee the service level of product sales.

Smart and green logistics

The company improves the level of modernisation across the industrial chain and supply chain from procurement to end-user distribution to predict consumer demands and build a warehousing and distribution system with wide consumer coverage: set up a supply chain information mid-office and a mobile ordering platform for data integration, order visualisation and information sharing so that the regional integrated management of production, supply and sales can be achieved; integrate resources using the distribution network to improve the efficiency of logistics and the service level of intra-city distribution, reduce trucking emissions and mitigate traffic congestion. In 2022,

we further improved the *Demand Plan Submission Process* and strengthen the data analysis of plans and inventory; we also implemented the practice of product coding to better track the end-to-end trajectory from production to shelf.

In 2022, the company used more clean energy vehicles including LNG NEVs, and EV trucks for transport; adjusted the mode of transport by using pallet transport and automating loading/unloading and standardised warehouse management and reduced downstream transport costs, improved efficiency. In 2022, 92% of Tsingtao Brewery's transport across China was done through pallets.

All-round service system

Tsingtao Brewery values consumer needs and has been studying and analysing the development of consumer trends. With a belief in providing an "immersive experience through service", the company is committed to creating a supreme experience for consumers using diverse models.

The company has continued to improve its service level alongside providing diverse service offerings. Adopting the philosophy of "your needs are our priorities", Tsingtao Brewery has formulated the *Customer Service Management Process* and established a three-tier customer service model consisting of a customer service centre, front-line business units and key distributors to understand customers' needs in a timely and comprehensive manner, address complaints and improve customer service level.

The company is keen on listening to the voice of consumers. We have set up convenient channels of communication including 400 and 800 service phone lines and a series of mini-apps underpinned by an information management system (e.g., "smart services", "service feedback", and "satisfaction survey").

To respond to consumers' demands in a timely manner, service staff are required to contact customers within 20 minutes of receiving a complaint ticket and follow up on the resolution. Besides, we organise and analyse customer service data regularly and give timely feedback to production and sales departments on the issues found, to prevent relevant incidents in advance. In September 2022,

the company updated the *Customer Service Management Process* to facilitate the integrated management of customer service, address various market complaints timely and effectively, and improve the complaint resolution rate. In 2022, Tsingtao Brewery received 3,974 complaints about products and services, with a complaint resolution rate of over 99%.

To further understand the voice of consumers, Tsingtao Brewery regularly conducts customer satisfaction surveys on product and service quality and proposes corresponding solutions based on the results to enhance its customer service capabilities. In 2022, the company conducted a customer satisfaction survey through questionnaires and it turned out that the satisfaction rate was as high as 100%.

In an era where information technology evolves rapidly, Tsingtao Brewery attaches great importance to the management and protection of customer privacy. We strictly abide by the *Data Security Law of the People's Republic of China*, formulate and continuously iterate the *Secrets Code of the Tsingtao Brewery*, to regulate the storage, transmission and use of market information data. To raise awareness and clarify the responsibility of privacy-related staff, we have added confidentiality clauses, particularly in our labour contracts to avoid market information leakage and losses. Over the past year, there were no incidents of customer privacy infringement and theft, leakage or loss of customer information by Tsingtao Brewery.

Research and Development

The R&D centre of Tsingtao Brewery benchmarks itself against the frontier of global techniques, conducts research on consumer pain points and industry challenges, and continues to solve the key technical bottlenecks that restrict

the development of the beer industry. Through its original flavour mapping technology, the centre has transformed consumer "decoding" profoundly by offering not just "sketches" but "accurate profiles" of consumers.

Strong R&D capabilities of Tsingtao Brewery

- Owned the only "National Key Laboratory of Beer Biofermentation Engineering" in the brewing industry, and is one of the first batches of key laboratories in China's light industry
- Possessed 6 core technologies and more than 100 peripheral technologies with independent intellectual property rights
- Won the second prize of the State Scientific and Technological Progress Award for three times
- In recent years, Tsingtao Brewery has actively participated in the development and revision of the national, industry and group standards. Specifically, the company has participated in the development of 1 international standard, 11 national standards, 3 industry standards and 18 group standards
- In 2022, the company applied for 22 national invention patents and 6 national utility models; and was granted 1 international invention patent, 21 national invention patents, 3 national utility models, and 3 key technologies were evaluated as international leaders
- Won the first prize in Scientific and Technological Progress of China Alcoholic Drinks Association in 2021, the second prize in Scientific and Technological Progress of Shandong in 2022, and the first prize in Scientific and Technological Progress of Qingdao and others
- In 2022, 31 new products were launched and 19 potential products were in the pipeline





Smart manufacturing

Tsingtao Brewery has been driving digital and smart transformation and transitioning towards new growth momentum. In 2022, the company started the production of its 1.2 million kL project of Tsingtao Brewery Intelligent Industrial Park, its 600,000 kL beer production base in Zaozhuang, and its 600,000 kL beer production base relocation in Xi'an. It also accelerated the implementation of a series of digital and green transformations, including building the highest smart stereoscopic warehouses in China, several smart packaging material warehouses, and a smart visual identification system. At the moment, these new projects are enhancing Tsingtao's production equipment level and increasing the supply capacity for high-end products as well as improving production efficiency systematically.

Combining digital technology and manufacturing, the 120-year-old Tsingtao Brewery has improved its efficiency of sending final products by 50% and increased production efficiency by 20%-30% year-on-year. As a "chain leader", Tsingtao Brewery Pingdu Smart Industrial Park is driving the transformation and upgrading of the glass bottles, cans and cartons industrial chains from upstream to downstream

and enhancing the industrial density. It has become the largest and most comprehensive beer industry cluster in the world and helped Pingdu City attract 11 supporting enterprises. This has pushed the local industry chain supporting rate to 80%, forming a more flexible and resilient industrial ecosystem.



Tsingtao Brewery Smart Industrial Park



Tsingtao Brewery establishes its first smart stereoscopic warehouse

In 2022, Tsingtao Brewery established the highest smart unmanned stereoscopic warehouse in the Chinese alcoholic drink industry and has put it into operation. The smart stereoscopic warehouse has a total of 3,480 spaces and a storage capacity of more than 500,000 boxes. Using the smart management system, the storage data can be timely and accurately tracked. This improves the efficiency of product operation and management by large and takes the management of product freshness to a new level, and also sets a model for the digital transformation and upgrading of the company.



Tsingtao Brewery smart stereoscopic warehouse



Zaozhuang production base achieved 100% digitised process control

The smart manufacturing and digitisation of Tsingtao Brewery Zaozhuang production base adopts advanced IOT, intelligent sensing, 5G communication and other technologies, leverages the industrial Internet platform to construct the big data system, and uses automatic data collection and integration, various analysis models and optimisation technologies to automate, digitise management and control with the Internet. By this mean, the planning, production, quality, efficiency, energy and other KPIs of the factory are automatically collected, stored and analysed, guaranteeing end-to-end digital control from raw materials to finished goods.



Outside view of Tsingtao Brewery Zaozhuang production base

Product Innovation

Life Legend

Life Legend, Tsingtao Brewery's super high-end classic new product, surpasses traditional beer in alcohol content, flavour and storage time, and combines the advantages of beer, whiskey, wine and champagne. Featuring the brewing technique of the century-old Tsingtao Brewery as well as the cask finishing technique of North American classic whiskeys and the cellaring technique of European classic wines, it has a smooth and thick flavour, a mysterious amber colour and a multi-dimensional rich taste. When it is opened, the beer will be mantled with fizzling firework-like foam, which adds a sense of ritual like champagne does.

Life Legend



Old Tsingtao

Old Tsingtao was launched days before the Spring Festival of 2022, the Year of the Tiger. Using nostalgic font and other elements which epitomise the late 20th century, it reminds people of the good old times. Its packaging is modelled after the old design of Tsingtao Beer, including the picture of Huilan Pavilion, the landmark building of Tsingtao, the words "TSINGTAO BEER" in the same font on the bottle, and even the same volume of the bottle. Its taste retains the 12° P wort of the old Tsingtao Beer, and is loved by consumers of all ages.

Old Tsingtao



Draft

As the slogan goes, "Tsingtao Draft, giving you a fresh life." We select high-quality barley from specific regions across the globe and adopt the leading clean brewing technique of sterile membrane filtration. Tsingtao Draft has an elegant malt fragrance, a crystal-clear golden colour, a soft and delicate body and a smooth taste. It is also rich in active enzymes and nutrition. All of these fully demonstrate why it is called "fresh, dynamic and clean". In 2022, we upgraded the packaging of Tsingtao Draft by adding new elements into the classic leaf-shaped logo, introducing a younger brand image.

Draft





Tsingtao Cherry Blossom-Themed White Beer

As a traditional top-fermented ale beer, Tsingtao White Beer chooses quality barley malt and wheat malt as its only raw material. As an unfiltered beer, it has an opulent body and contains yeast, and thus appears to be slightly white and hazy. It will bring you a unique experience from the first sip as you enjoy its smooth, rich and delicate taste and strong malt fragrance with outstanding floral and fruity aroma. Tsingtao Cheery Blossom-Themed White Beer made its debut in 2022 with the aim of exploring the aesthetics of everyday life and enjoying the spring with all consumers.

Tsingtao Cherry Blossom-Themed White Beer



Tsingtao Original Beer

We launched Tsingtao Original Beer in order to let more beer lovers enjoy the beer that only winemakers could drink in the past. We adhere to the traditional brewing techniques and the principle of "three nos", which means no filtration to keep the beer natural and hazy, no dilution to strengthen the malt fragrance, and no sterilisation to keep yeasts active and taste refreshing, and thus ensure high-quality original beer. On the packaging, we use the aluminium bottle which obtained an international patent to emphasise its uniqueness.

Tsingtao Original Beer



Laoshan Buff

In June 2022, Laoshan Beer, a sub-brand of Tsingtao Beer, launched its new product Laoshan Buff. To meet young consumers' needs, we innovated in brewing techniques and packaging design. On brewing techniques, we integrated lilac, orange and tangerine fragrances with the coriander fragrance to produce a fresh taste. On the packaging design, we chose blue as the main tone and added "bandages", a symbol of the street culture. In addition, we used convenient and flexible pull rings. These changes are welcomed by the young people.

Laoshan Buff



Many products of Tsingtao Brewery won the World Beer Championships



Tsingtao Beer won the Gold Medal at the World Beer Championships again

In the 2022 World Beer Championships, Alcohol-Free Lager, Poseidon-Themed IPA and Amber Lager of Tsingtao Brewery impressed the judges and won the Gold Medal; Centennial Journey, 11° P White Beer and Rose Flavoured White Beer won the Silver Medal.

Constructing an immersive consumption experience

Tsingtao Brewery combines products with various scenes in life and focuses on immersive consumption experiences and digital marketing. Through efforts like constructing trendy beer consumption spaces and holding beer festivals, we provide our consumers with all kinds of immersive brand experience spaces to fulfil their demands of scenario-based shopping.



Outside view of Tsingtao Brewery · Time Coast Craft Beer Garden

Tsingtao Brewery · Time Coast Craft Beer Garden Opened

In 2022, Tsingtao Brewery · Time Coast Craft Beer Garden, the first and largest immersive beer and consumption lifestyle experience centre with the most diverse businesses and richest experiences, opened in the West Coast Craft Beer Garden in Qingdao. Consumers can not only witness the world-class manufacturing facilities, brewing process and the whole life circle of craft beer, but also taste 24 kinds of craft beers from 8 series including the full-bodied Weizenbock with rich fragrance of malt, the unique amber-coloured Rattan Pepper-Flavoured Saison and the smooth and full-bodied Milk Stout. In addition, there are businesses such as resort hotels, whiskey clubs, beer SPA, creative baking and marriage services. It brings consumers a deeper immersive shopping experience by combing craft beer production and tasting, fine foods, recreation, performances, interaction, experience, NPC, self-service drinking, tourism, marriage services and fashion IP.

To the joyful rendezvous on pure ice and snow — Tsingtao Brewery in Beijing Winter Olympic Games

In 2022, in the spectacular global event Beijing Winter Olympic Games, 5 Tsingtao Brewery products with unique Chinese characteristics were selected as preferred drinks between plays or for celebrations, showing the appeal of Chinese brands. As a world-renowned Chinese brand, Tsingtao Brewery leveraged its unique advantages in products, marketing and branding as a brewery company and produced a perfect blend of the passion for both beer and sports. It attracted the general public to participate in winter sports and helped to realise the Beijing Winter Olympic Games' vision of "a joyful rendezvous on pure ice and snow".



Beijing Winter Olympic Games series of Tsingtao Beer



Drink with passion — Tsingtao Brewery in over 50 cities

In the summer of 2022, Qingdao Beer Festival was held in 53 cities across China. Various beer-themed activities in Qingdao brought different kinds of beer carnivals to consumers, including the "Dynamic Laoshan" Beer Carnival, the first session of the Shangjieli Beer Festival in Shinan district, Laixi Qingdao Beer Festival, the opening of Tsingtao Brewery Street in Shibei district, Jimo Castle Hotel Vintage Carnival. A slew of activities was also held in other cities, such as the Macao-Qingdao Beer Cultural Festival, the first session High-Speed Railway Qingdao Beer Festival, branch venues of the Qingdao Beer Festival in Dingxi, Langfang, Suizhou, Dalian, Yingkou, Anshan, Zhangqiu, Heze, Jining, Yantai, Yuncheng, Linfen and Datong and TSINGTAO1903 pubs. The passion and joy brought by Tsingtao Brewery connected the cities. It was indeed an all-round experience which spread joyfulness to people everywhere.



Consumers enjoying Qingdao Beer Festival



The opening ceremony of the Third Tsingtao Brewery Football Fans Carnival



Consumers participating in "Tsingtao White Beer Slow Life Campsite" Roadshows

Release yourself in sports and music: experience a different kind of life in Tsingtao White Beer RV campsites

In 2022, Tsingtao Brewery continued to hold activities for sports and music fans. In the carnivals for football fans, we provided a different experience of watching football games by igniting football fans' passion with the rich foam of the beer. We combined beer with music and built immersive consumption experience scenarios themed "live for music" in music events such as ISY Music Festival, Strawberry Music Festival and Screaming Night, passing on the freshness, youth and happiness to consumers. We held the "Tsingtao Brewery Life Legend Night of Arts Symphony Concert" and gave the audience a grand music feast that combined features of both Chinese and Western music.

In 2022, Tsingtao Brewery held "Tsingtao White Beer Slow Life Campsite" recreational vehicle (RV) roadshows in over 10 cities in China, including Qingdao, Xi'an, Harbin, Changsha, Nanjing and Xiamen. The "Tsingtao White Beer Slow Life Campsite" consisting of assorted immersive experience scenarios including tailored RVs, a self-service lounge area, a travel stories corner, slow drink fair provided a chance for many consumers to fully enjoy the romantic and quality leisure time away from the bustling city life.



02 For a Better World

Tsingtao Brewery remains steadfast in its commitment to environmental protection, low-carbon management, and circular economy as the company's development strategies. Based on the environmental outlook of "being the pace-setter in green development in beer industry", we bear in mind the environmental protection targets of "with environmental protection, low-carbon management and circular economy measures to promote the sustainable development of the company and realise the harmonious co-existence with the nature". We continue to improve the environmental management system, highly prioritise the proper use of resources, build leading factories with lean management and actively address climate change to realise the balanced combination of both production efficiency and ecological protection.

- Sustainable water use
- Climate action
- Packaging and waste
- Green operation



In 2022, the company added 6 national-level green factories, bringing the total to

14



Met the standard by reducing its comprehensive energy consumption per unit product in 2022 by about

29%

compared with 2019



The company's use of renewable energy reached

62%

of the total electricity consumption



20%

reduction in total GHG emissions (scope 1 + 2) compared with 2019

Tsingtao Brewery strictly observes the laws and regulations including the *Environmental Protection Law of the People's Republic of China*, the *Law of the People's Republic of China on Prevention and Control of Water Pollution*, the *Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution*, the *Law of the People's Republic of China on Prevention and Control of Pollution from Environmental Noise*, and the *Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Waste*. We continue to strengthen environmental management, keep all the internal environmental management systems to date and provide thorough guidance to all our factories to operate in compliance with the laws and regulations. Moreover, we continue to revise our annual environmental goals and improve our policies on environmental protection based on industry development planning and our own operational strategies. We actively screen management risks within the whole system and promote the target-oriented responsibility system and appraisal mechanism to effectively secure a more comprehensive and consistent management system of the company.

We take the ISO 14001 certification as a key indicator to keep improving our environmental management system and ensure its validity through annual surveillance audits. By the end of 2022, 55 factories, 96% of the total, have passed the ISO 14001 certification.

In 2022, to promote its green and sustainable development, Tsingtao Brewery invested 93.47 million yuan in the technological upgrading of green development, a year-on-year growth of 42%, with emphasis on renewable utilisation projects such as photovoltaic power generation, energy efficiency improvement projects such as heat centres and combined cooling and heating heat pump system, and environmental protection projects such as wastewater treatment.

During the reporting period, Tsingtao Brewery has had no major environmental pollution accidents and has not received any punishment for violating environmental laws and regulations.



Sustainable water use

Water is the essential element of brewery, and is the important guarantee of national development and people's well-being. As global water shortage remains a growing problem, Tsingtao Brewery makes water management and wastewater treatment a top priority in its business operation. It actively sets scientific and realistic short-term goals and carries out in-depth exploration in effective water conservation and wastewater discharge control to promote sustainable water consumption in an all-round way.

Water resource management

Tsingtao Brewery always upholds the water conservation concept of source reduction, process control, deep treatment and cascade utilisation. It continuously pushes forward the all-round management and control of water resources by strictly following the requirements of laws and regulations such as the *Water Law of the People's Republic of China*, actively responding to the *Action Plan for Water Pollution Control* issued by the State Council and revising and improving the internal regulations such as the *Regulations on Energy Management* and the *Economic Operation Criteria for Deoxidised Water Preparation*. The brewing water used by the factories mainly comes from municipal water and underground water. We have reviewed the organisational structure of energy management to improve water resource management.

We set realistic water conservation goals and adopt several effective water conservation measures before the construction of a new factory and during the beer production to minimise local water consumption caused by business operations and raise awareness of water conservation of the whole upstream and downstream industry chain.

Tsingtao Brewery's completion of water conservation goal in 2022²



The goal was reached as water consumption per unit product in 2022 dropped by 13% compared with that in 2019.

Tsingtao Brewery's short-term water conservation goals

In 2023, the company will optimise operational control, improve the water production rate of water treatment equipment, reduce wastewater discharge and increase reuse and cascade utilisation by systematically reviewing the production process to reach the goal of reducing water consumption per unit product by 15% compared with that in 2019.

² The water conservation goal of 2022 is to reduce water consumption per unit product by 10% compared with 3.74 m³/kL in 2019. [Please find more details in 2021 Environmental, Social and Governance Report of Tsingtao Brewery \(www.tsingtao.com.cn\)](http://www.tsingtao.com.cn).



Major measures of water management

Before the construction of a new factory	During the beer production and operation
<ul style="list-style-type: none"> Evaluate the local water source and water quality and use advanced water conservation equipment and technologies to avoid negative influence on local water source. 	<ul style="list-style-type: none"> Actively develop recycling technologies and realise the recycling and reuse of overflow water, condensate water, cooling water and reclaimed water generated in the production process by redesigning the water system of the factories to increase water use efficiency. Continue to promote water consumption benchmark management during the whole production process and adopt major water conservation measures, such as water saving measures for bottle washers, reverse osmosis optimisation and pump cooling water interlocking control, to reduce the overall water consumption.

Tsingtao Brewery's water consumption

Indicators	Unit	2020	2021	2022	YoY variance (2021-2022)
Water consumption	1,000 m ³	28,309	27,185	26,339	-3%
Water consumption per unit product of beer	m ³ /kL	3.69	3.44	3.24	-6%



New factory in Zaozhuang uses ultrafiltration devices

In 2022, to better remove particles, colloids, proteins and high molecular weight organic compounds from the brewing water and effectively reduce its turbidity and SDI to purify the water, the new factory in Zaozhuang started to use ultrafiltration devices to recycle backwashing water from sand filter tanks and carbon filter tanks and wash water recycled by sodium ion exchange resin, which could save 22,500 m³ of water annually.



Ultrafiltration devices in Zaozhuang company

Wastewater management

Tsingtao Brewery strictly observes laws and regulations such as the *Law of the People's Republic of China on Prevention and Control of Water Pollution* and the *Discharge Standard of Pollutants for Beer Industry*, revises and improves 2 management standards including the *Management Regulations for Water Pollution Prevention* and the *Control and Management Regulations for Online Pollutants Monitoring Equipment*, and 23 technical standards such as the *Internal Standards for Wastewater Treatment* and the *Operation and Maintenance Standards for Limited Wastewater Discharge Based on Negotiation*. By strengthening wastewater control at its source and monitoring wastewater treatment during the process, it realises the monitoring during the whole process of all kinds of polluted water and wastewater and ensures the wastewater after treatment reaches the discharge standard.

We mainly use the anaerobic-aerobic biological method to keep wastewater discharge during the beer production process up to standard. We have developed and introduced advanced wastewater prevention and control equipment, invited equipment manufacturers to design an overall solution for online wastewater treatment equipment and ensured the normal, effective and compliant operation of the environmental protection equipment. Meanwhile, we have set up online monitoring devices at the main outfall and entrusted qualified third-party companies to conduct regular external monitoring to keep wastewater discharge in a stable and up-to-standard manner. In 2022, all wastewater discharge was stable and up to standard.

Tsingtao Brewery's "brewing wastewater value sharing programme" is a resource utilisation project to reduce pollution and cut carbon emissions in the beer industry. Since its launch in 2021, it has proven stable and effective and was selected as a model case of green and low-carbon development by the Shandong Provincial Department of Ecology and Environment. Based on the *Discharge Standard of Pollutants for Beer Industry*, the project formulated and issued the *Operation and Maintenance Standards for Limited Wastewater Discharge Based on Negotiation* to regulate the limited wastewater discharge based on negotiation between breweries and downstream sewage plants. By using the method of "wastewater discharge within prescribed limits plus integrated utilisation of trub", the project also made brewery wastewater a supplement to the carbon source of urban sewage plants, cutting cost and boosting efficiency in an all-round way. The project has yielded fruitful results, saving 17.43 million yuan per year for wastewater treatment and reducing 20,223 tonnes of sewage sludge, 6.72 million kWh of electricity and 5,192 tonnes of CO₂e. The report *The Key Resource Utilisation Technology of Realising the Combined Treatment of High Concentration Brewery Wastewater and Municipal Wastewater to Reduce Pollution and Cut Carbon Emission* based on the project won the second prize of the *Scientific and Technological Progress Award of Qingdao* and the third prize of the *Scientific and Technological Award of the China Alcoholic Drinks Industry Association*.

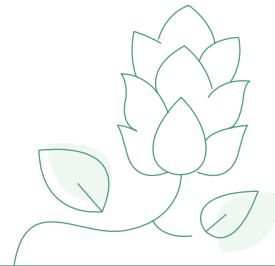
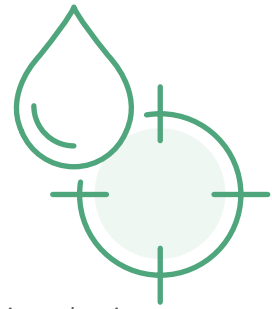
During the reporting period, 9 more factories contracted with the company to involve in this project, adding the total number of contracted factories to 30. Among them, the 4 factories in construction, expansion or reconstruction projects signed contracts with downstream sewage plants to carry out the brewing wastewater value sharing programme and sharply cut the construction cost of wastewater treatment equipment.

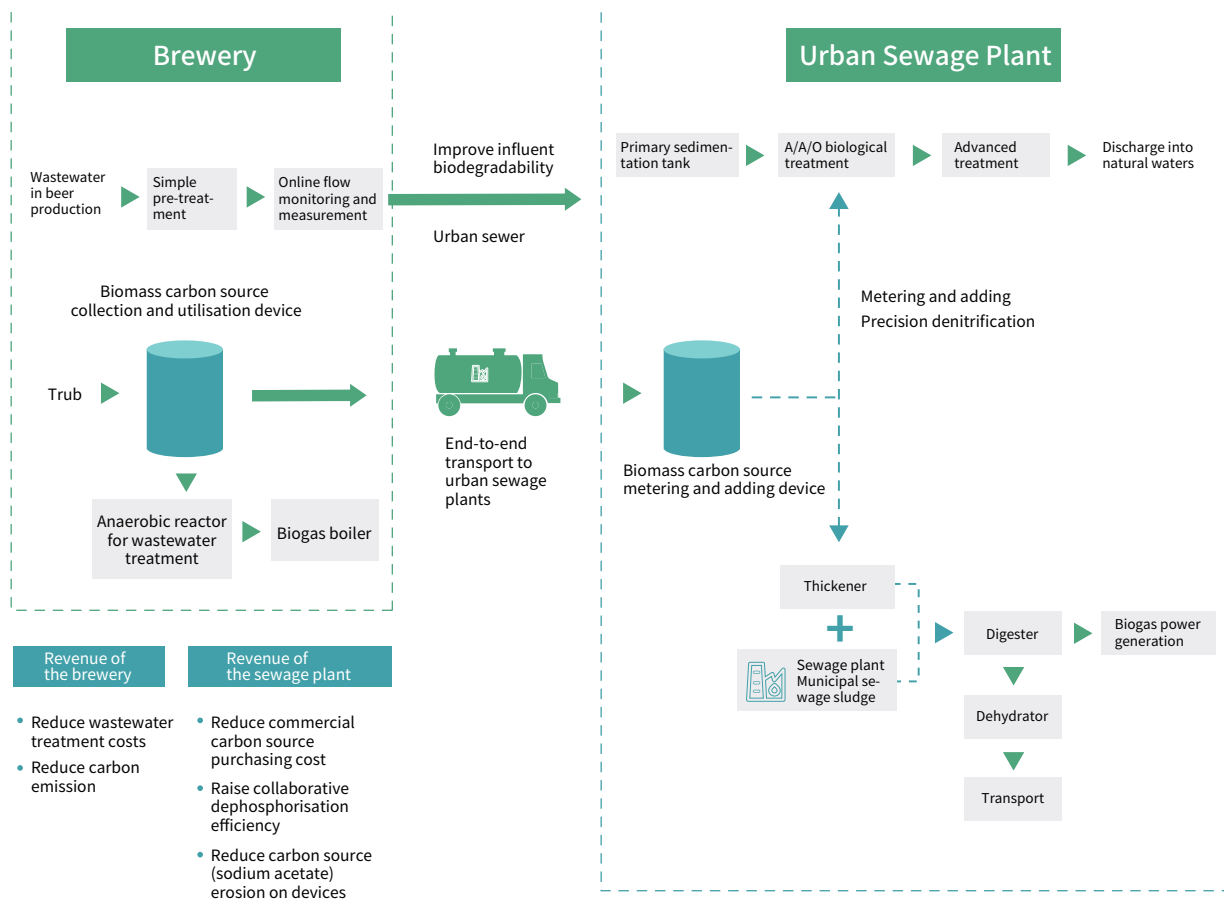
Tsingtao Brewery's wastewater discharge reduction goals

Wastewater discharge per unit product in 2023 compared with that in 2019:

A 10% drop in COD discharge **10%**

A 18% drop in ammonia nitrogen discharge **18%**





Operation process of the "brewing wastewater value sharing programme"

Tsingtao Brewery's wastewater discharge

Indicators	Unit	2020	2021	2022	YoY variance (2021-2022)
Total wastewater discharge	1,000 m ³	21,701	21,172	20,189	-5%
Chemical oxygen demand (COD) discharge	Tonne	937	900	848	-6%
The proportion of COD discharge into natural waters	Tonne	64	55	46	-16%
Ammonia nitrogen discharge	Tonne	91	88.6	78.2	-12%
The proportion of Ammonia nitrogen discharge into natural waters	Tonne	2	1.7	0.8	-53%



Climate action

Climate change has become a great concern to the world and may influence the future of the beer industry. Tsingtao Brewery pursues the national goals of "dual carbon", improves climate risk management and actively makes plans, such as the strict management of energy resources utilisation, the recycling of carbon dioxide and the development of new energy resources. We shoulder the responsibility of addressing climate change in the process of production, operation and upstream and downstream activities of products to minimise environmental risks and promote green and low-carbon development.

Climate change

With the full consideration of the influence of climate change on the beer industry, Tsingtao Brewery continues to advance the company's various climate actions with reference to the structure and advice given by the Task Force on Climate-Related Financial Disclosure (TCFD). Based on our business features and operational characteristics, we actively identify the risks and opportunities of climate change, enhance our ability to adapt to climate change and minimise the negative influence of climate change on our business operation.

Involving around the issues of green and low-carbon development and climate change to formulate the company's strategy, Tsingtao Brewery sets the green and low-carbon development plan for the 14th Five-Year Plan

(2021-2025) period, including a greenhouse gas inventory of its whole value chain, continuous reduction of energy consumption, optimisation of energy utilisation structure, increasing the use of green power and building green factories and waste-free factories, so as to effectively reduce the negative effects of climate change on raw materials, production and sales. Based on various factors such as national policies, industrial characteristics, company business layout and the needs of stakeholders, we promote the climate risk identification and response in an all-round way, conduct the primary identification of climate risks from the perspectives of physical risks and transition risks, set special responses and strategies and continue to improve business development strategies and resource allocation to strengthen our ability to cope with climate change.





Tsingtao Brewery's identification and response to climate risks

Risk type	Risk category	Risk description	Risk response
Transition risk	Policy and legal risk	<ul style="list-style-type: none"> • Stricter policies on greenhouse gas emission limitation in all industries and relevant regulations on carbon emission reduction issued by all industries under the context of national "dual carbon" goals • A more mature carbon trading market system and higher carbon prices 	<ul style="list-style-type: none"> • Follow up the existing carbon trading and carbon disclosure policies and make timely adjustments to the company's management mode of greenhouse gas reduction • Monitor the carbon emission of the whole value chain of beer production, adjust energy utilisation structure, explore integrated energy solutions and cut carbon emission
	Technology risk	<ul style="list-style-type: none"> • A need for more special investment in energy conservation and emission reduction and more energy-saving and environmentally friendly technologies in the beer industry 	<ul style="list-style-type: none"> • Develop and introduce advanced energy conservation technologies and equipment and carry out the feasibility analysis of technology replacement
	Market risk	<ul style="list-style-type: none"> • A need for a bigger role of green development and environmental protection in consumers' purchasing choice 	<ul style="list-style-type: none"> • Develop low-carbon products, calculate the carbon footprint of products, and establish a "low-carbon operation mode" that covers the whole value chain including research and development, product design, production and sales channels
Physical risk	Reputation risk	<ul style="list-style-type: none"> • Possible negative effects caused by the company's poor performance on environment protection and carbon reduction that fails to meet investors' expectations 	<ul style="list-style-type: none"> • Timely disclose relevant information and adjust and explore low-carbon development path based on the current trend
	Chronic risk	<ul style="list-style-type: none"> • Frequent extreme climates and disasters around the world make a great negative effect on the planting and harvesting of agricultural products. Global warming results in the reduction in global grain production. All of these pose a threat to grain supply and quality and lead to supply shortages and rising prices of raw materials of beer such as barley 	<ul style="list-style-type: none"> • Evaluate the influence of climate change on local agricultural production, establish a resilient supply chain and constantly improve the global multiple production base strategy to ensure the supply of raw materials

Indicators and goals

Tsingtao Brewery attaches great importance to greenhouse gas management and releases greenhouse gas emission data annually in the ESG reports. We are committed to constantly reducing the emission of greenhouse gases such as carbon dioxide. We invite qualified third-party companies to conduct greenhouse gas inventory every year, establish quantitative models for greenhouse gas inventory, calculate carbon emission in an all-round way, insist on exploring carbon reduction measures and strive to minimise the negative effects of climate change on company business.

Tsingtao Brewery's greenhouse gas emission

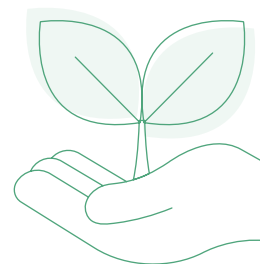
Indicators	Unit	2020	2021	2022	YoY variance (2021-2022)
Greenhouse gas emission (scope 1)	Tonne of CO ₂ equivalent	264,024	235,455	188,948	-20%
Greenhouse gas emission density (scope 1)	kg of CO ₂ equivalent/ kL production	35.84	31.07	24.2	-22%
Greenhouse gas emission (scope 2)	Tonne of CO ₂ equivalent	587,383	543,191	555,148	2%
Greenhouse gas emission density (scope 2)	kg of CO ₂ equivalent/ kL production	79.73	71.70	71.0	-1%
Greenhouse gas emission (scope 3)	Tonne of CO ₂ equivalent	/	/	5,289,280	/
Greenhouse gas emission density (scope 3)	kg of CO ₂ equivalent/ kL production	/	/	676.6	/
Total emission (scope 1, 2, 3)	Tonne of CO ₂ equivalent	/	/	6,033,376	/
Total emission density (scope 1, 2, 3)	kg of CO ₂ equivalent/ kL production	/	/	771.7	/

To better promote low-carbon development, Tsingtao Brewery sets realistic short-term goals based on its development strategies and past environmental data.

Tsingtao Brewery's carbon emission reduction goals

In 2023, the company will launch a carbon inventory of its whole value chain, calculate upstream and downstream carbon emissions, promote emission reduction of the whole value chain and realise a 22% drop in scope 1 and scope 2 carbon emission per unit product compared with that in 2019.

22%





Reducing energy consumption

Tsingtao Brewery pays attention to the carbon emission of its products and sets long-term goals to "build a green, energy-saving enterprise by systematic planning, processual monitoring, and improving the efficiency of energy use". It strictly observes the *Energy Conservation Law of the People's Republic of China* among others, and has developed the *Regulations on Energy Management* and the *Regulations on Production Statistics Management System* to manage energy consumption in a regulated and systematic manner. In 2022, the company inspected its No. 2 Brewery in terms of the whole value chain that encompasses scopes 1, 2, and 3, and identified major carbon emissions in the process of growing raw materials, manufacturing packaging materials, transportation and product distribution. Therefore, the company strived to cut energy consumption and emissions through multiple channels including setting energy conservation goals, refining process management, optimising energy use structure, and exploring new methods and technologies.

Tsingtao Brewery's completion of energy-saving goals in 2022³

Met the standard by reducing its comprehensive energy consumption per unit product in 2022 by about 29% compared with 2019.

Tsingtao Brewery's short-term energy-saving goals

In 2023, Tsingtao Brewery will advance its efforts to reduce the comprehensive energy consumption per unit product by 31% compared with 2019. To achieve this goal, it will unleash more potentials for energy-saving by optimising production process control and expediting the application and promotion of new technologies for energy-saving.

Tsingtao Brewery's energy consumption⁴

Energy	Unit	2020	2021	2022	YoY variance (2021-2022)
Coal	10 kt standard coal	2.75	1.59	0.00	-100%
Electricity	10,000,000 kilowatt-hours	49.41	48.37	47.34	-2%
Natural gas	10,000,000 standard cubic meters	8.92	9.22	8.74	-5%
Heat	A billion kJs	3,082	2,311	2,500	8%
Comprehensive energy consumption per unit of beer production	Standard coal per kL	0.039	0.033	0.030	-9%

³ The energy-saving goals 2022 is to reduce the comprehensive energy consumption per unit product by 25% compared with 2019. [Please find more details in the 2021 Environmental, Social and Governance Report of Tsingtao Brewery \(www.tsingtao.com.cn\)](http://www.tsingtao.com.cn).

⁴ Up to now, Tsingtao Brewery has eliminated all coal-fired techniques for energy generation, so there is no coal consumption in 2022.

● Refine the management on operational process

In 2022, we compiled and issued three sets of power operation criteria including the *Economic Operation Criteria for Sterilizers*, the *Economic Operation Criteria for Compressed Air System*, and the *Economic Operation Criteria for Deoxidised Water Preparation*, standardising the energy usage and recycling of key energy-consuming equipment and energy-consuming processes.

● Optimise the structure of energy consumption

We have increased the proportion of renewable energy in electricity consumption. In 2022, 16 new factories purchased and introduced renewable energies to generate electricity, and 7 factories implemented 8 MW distributed photovoltaic power generation. The company's use of renewable energy reached 62% of the total electricity consumption, cutting carbon emissions by 210,000 tons. All factories in Shandong region have achieved the use of renewable energy.

● Explore new ways to conserve energy and reduce emissions

We have sped up research on new methods to reduce energy consumption and required all factories to develop key measures for energy-saving and emission reduction based on their own circumstances, especially the characteristics of the techniques, processes, and equipment of beer production. Since 2020, our company has implemented 52 core measures and achieved significant effects in energy-saving.

Our company has been focused on reducing carbon emissions in production and carrying out projects and applying new technologies for energy saving. In 2022, we implemented some projects for energy conservation and carbon reduction.



Electrification of heat pumps

In 2022, Tsingtao Brewery's No.5 Brewery continued to advance the electrification of heat pumps, improving the workplace of factory workers and achieving the combined heating and cooling manufacture. The heat pumps driven by the electricity generated by 100% of renewable energy realise "zero-carbon heat" generation.

The electrified system has a COP of more than 3.5, and thus costs much lower than natural gas boilers that use steam. It can reduce more than 440 tons of carbon dioxide emission, thus realising the unity of economic and environmental benefits and providing a new way to reduce the carbon emissions generated by beer production that requires heat supply.



The heat pumps of Tsingtao Brewery's No. 5 Brewery

In addition, we collected and purified the carbon dioxide generated during the fermentation process for reuse in production, achieving both circular utilisation and a pronounced reduction in greenhouse gas emissions. The carbon dioxide recovered by Tsingtao Brewery from 2020 to 2022, calculated as 111 kilograms of carbon dioxide absorbed per year by a 30-year-old spruce tree, is equivalent to planting 3.79 million 30-year-old fir trees.



Packaging and waste

Tsingtao Brewery has always adhered to the 3R principles of "reduction, reuse and recycling" by strengthening the proper management of waste and packaging materials, advancing emission reduction measures, exploring new methods for recycling, and promoting the green and sustainable development.

Packaging in recycling

In order to reduce the environmental impacts of packaging, Tsingtao Brewery is committed to creating sustainable packaging, e.g., by improving the mix of materials for packaging and promoting waste recycling. To promote green packaging, we also actively carry out plastic reduction activities, strictly regulate the production process involving plastic, and explore alternative materials and products. In 2022, we reduced the annual consumption of plastic by about 3,000 tons through measures such as thinning, standardisation of size and removing in-box packaging. Besides, we also re-designed the container to make full use of the carton box to improve the rate and quality of recycling and developed cartons of larger capacity to recycle bottle caps, i.e., from the original 10,000 pieces/box to 250,000 pieces/box, thus reducing the consumption of packaging materials.

Tsingtao Brewery's consumption of packaging materials

Packaging materials	Unit	2020	2021	2022	YoY variance (2021-2022)
New beer bottle	kt	1,140	1,212	1,171	-3%
Old beer bottle	kt	3,109	3,183	3,139	-1%
Tin can	kt	70	75	83	11%
Carton box	kt	215	235	254	8%
Plastic film	kt	12.6	12.7	10.2	-20%
Total packing material	kt	4,579	4,750	4,690	-1%
Quantity of packing material per unit of beer production	kt/kL	0.0006175	0.0006266	0.0005999	-4%

Waste management

Strictly adhering to the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes*, the *Technology Policy on the Prevention and Control of Pollution by Hazardous Waste* and the *Regulations on the Management of Urban Construction Waste*, Tsingtao Brewery has formulated and revised the *Regulations on the Prevention and Control of Solid Wastes* and the *Regulations on the Management of Waste Bidding* to standardise the collection, storage and disposal of solid wastes in daily production, ensuring a 100% compliant disposal rate of wastes and a 100% compliant transfer rate of hazardous wastes. The company also values the principle that "there are no wastes, only misplaced resources in Tsingtao Brewery" and strives to ensure that lees, waste yeast, broken glass and other general industrial solid waste can be 100% reutilised.

Tsingtao Brewery's waste discharge reduction goals

- Reduce non-hazardous waste discharge

per unit product by
in 2023 compared with 2019

28%

- Reduce hazardous waste discharge

per unit product by
in 2023 compared with 2019

20%

Major measures for solid waste management



General industrial solid waste

- Continue efforts to reduce damage caused by product packaging, such as damage of bottles and carton boxes;
- Advance projects on wastewater value-sharing and moisture content control to reduce sludge;
- Further explore means to realize high value-added utilization of waste diatomite, reduce the generation of waste diatomite, and realize its comprehensive utilization;
- Optimise the operational process and techniques to improve the utilisation rate of non-hazardous waste and promote resource recycling.



Hazardous waste

- Further clarify the scope of hazardous waste based on the latest *National Hazardous Waste List*;
- Entrust a third party with professional qualifications to carry out waste disposal that complies with laws and regulations;
- Adopt advanced technology to reduce the harms of hazardous waste and transform it into a resource;
- Replace mercury-containing light sources with LED ones;
- Phase out old equipment to reduce waste oil.



Tsingtao Brewery's waste discharge in 2022

Wastes	Unit	2020	2021	2022	YoY variance (2021-2022)
Non-hazardous wastes					
Wine lees (dry basis)	ton	125,751	132,139	137,689	4%
Spent yeast (dry basis)	ton	11,008	11,380	11,726	3%
Glass bottles and tin cans	ton	102,612	71,472	53,529	-25%
Workplace and household garbage	ton	10,389	8,270	6,917	-16%
Others (e.g., plastics, cartons, scrap steel)	ton	34,106	44,002	42,126	-4%
Waste from sewage treatment	ton	75,987	64,766	55,103	-15%
Slag	ton	2,302	4,534	0	-100%
Total	ton	362,155	336,563	300,173	-11%
Density	ton/kL	0.0493	0.0444	0.0384	-14%
Hazardous wastes					
Discarded light bulb/tube	kg	5,162	553	381	-31%
Batteries, toner cartridges, ink cartridges and other wastes	kg	1,749	9,653	11,706	21%
Others	kg	115,809	95,403	98,977	4%
Total	kg	122,720	105,609	111,064	5%
Density	g/kL	16.72	13.92	13.71	-2%



Green development

To comply with the requirements of environmental protection policies at national and local levels, Tsingtao Brewery takes its own responsibility to promote green development by implementing green action plans to optimise its performance in environmental protection.

Green factories

Adhering to the philosophy of green development, Tsingtao Brewery spares no efforts to build a national-level "green factory", promote the concept of green manufacturing and achieve the "carbon peak and neutrality" goals in industrial fields. In 2022, six factories, i.e., Tsingtao Brewery's affiliate brewery and companies in Minhang, Pengcheng, Xiamen, Xi'an and Shijiazhuang, won the title of "national-level green factory", and 12 factories including No. 2 Brewery won honours for their excellence in environmental management.

Additionally, Tsingtao Brewery continuously advances the construction of industrial internet where we strive to empower the transformation and upgrading of manufacturing industry and, in particular, provides intelligent solutions for beer industry. Tsingtao Brewery has been awarded as the world's first "lighthouse factory" in the internet of beer and beverage industry, and is one of the members of the "global lighthouse network".

Waste gas management

In compliance with the *Law of the People's Republic of China on Prevention and Control of Atmospheric Pollution* and the *Emission Standards of Air Pollutants for Boiler* and relevant laws and regulations, Internally, Tsingtao Brewery has issued the *Regulations on the Prevention and Control of Atmospheric Pollution* and set targets for emission reduction. The company strives to strengthen the efforts of source pollution control by installing and maintaining online monitoring equipment for waste gas emissions in compliance and entrusting qualified third parties to monitor gas emissions to ensure timely treatment that meets relevant standards.

We continuously advance our measures to prevent and control waste gas pollution through application of advanced equipment and techniques for green manufacturing and waste treatment. Up to now, we have eliminated all coal-fired boilers and continues to optimise the operational parameters of gas-fired boilers to achieve low-nitrogen, green and efficient operation.

Tsingtao Brewery's waste gas emission reduction goal

Reduced nitrogen oxide emissions per unit product by

66%

in 2023 compared with 2019



Tsingtao Brewery's waste gas emission

Waste gas	Unit	2020	2021	2022	YoY variance (2021-2022)
Sulfur dioxide (SO ₂)	ton	18	9.6	4.36	-55%
Nitrogen oxide (NO _x)	ton	128	109	70	-36%
Smoke	ton	18	13	9.31	-28%



Environmental protection actions

Strictly adhering to the *Regulations on the Administration of Construction Project Environmental Protection*, Tsingtao Brewery closely monitors and manages the impact of the production process on the environment, and carefully considers the impacts of factories in their whole life cycle on biodiversity and ecological protection in any factory construction plans.

- When selecting the site for a new factory, we strictly abide by the clause in the *General Hygienic Regulation for Food Production of the National Food Safety Standard*, and fully evaluate the water quality, environment and community around the factory, and treat the evaluation results as important indicators for selecting the sites of new factories.
- As for subordinate infrastructure of the new factory, we implement measures for environmental protection, pollution prevention and control and biodiversity protection to minimise the impact on the surrounding environment.
- In our day-to-day work, we call on our staff both in the headquarter and affiliated factories to voluntarily participate in environmental protection activities, including

walking, tree planting, plastic reduction, quiz on environmental protection, garbage classification, food saving, and fish release (and other activities for biodiversity protection). In these activities, we also select and award excellent volunteers and organisations to raise all staff's awareness of environmental protection.



Kunshan company organised eco-friendly volunteer activities



Sanshui company undertook eco-friendly initiatives along the Beijing River



Baoji company organised eco-friendly volunteer activities



Weifang company conducted sustainable initiatives to protect water and the Yellow River



Volunteers of Yangzhou company on their green travel – planting trees and promoting their company's concept for low-carbon life and environmental protection

03 Ensure Equal Opportunities

Tsingtao Brewery underpins the talent philosophy of “ensuring equal opportunities” which is designed to empower every employee to grow in an equal, respectful and diversified environment. We attach great importance to the physical and mental health of employees, fully protect their basic rights and interests, and fully implement relevant policies for employees' well-being. By creating a harmonious working environment, we create happiness and care for employees and also for global consumers by providing high-quality beer.

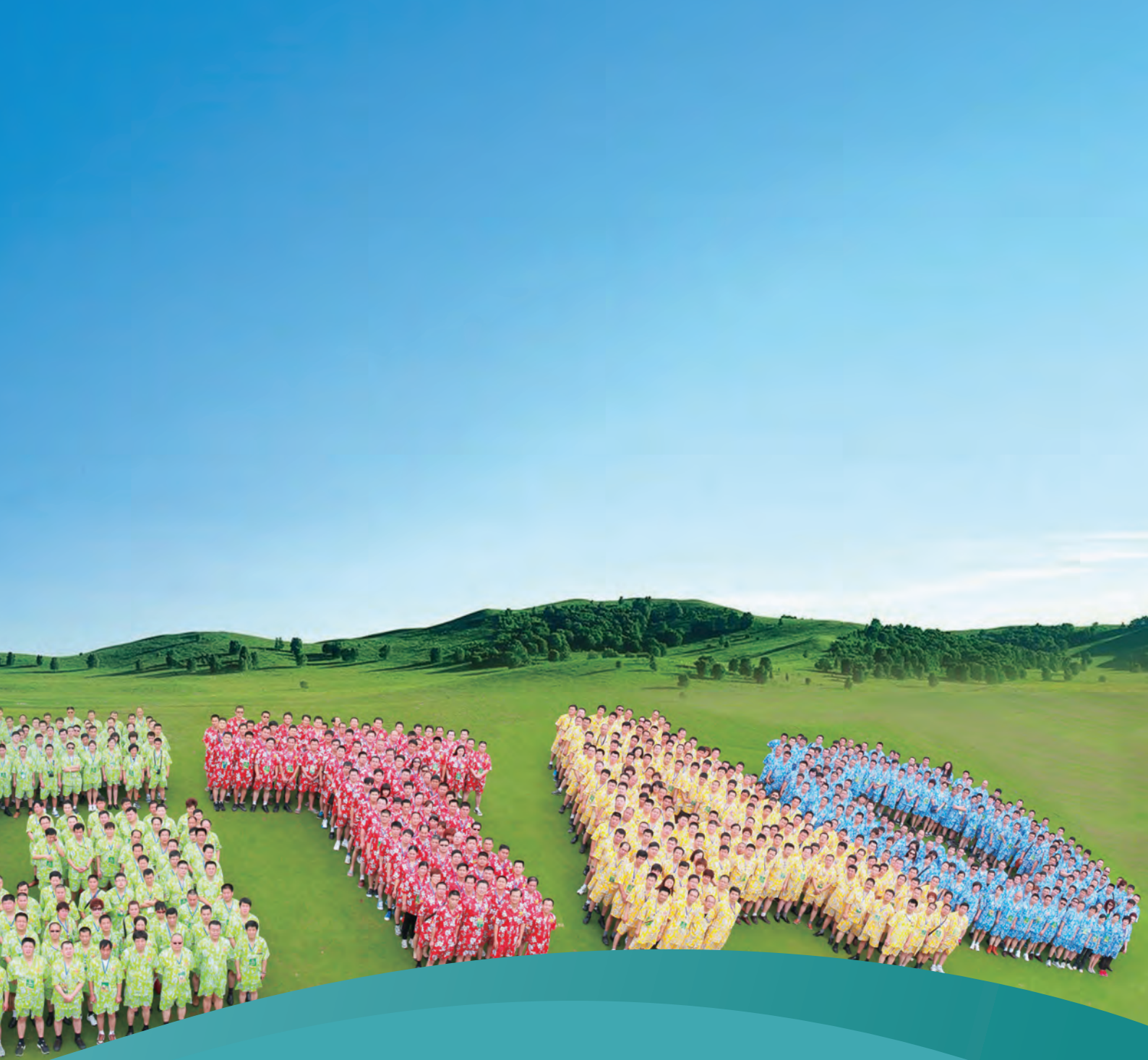
- Occupational health and safety at work
- Protection of rights and interests
- Empower the growth of employees
- Employee wellness



In 2022, the company invested nearly

30 million yuan

in maintaining occupational safety



100%

of our employees received training

An average of

51.2

training hours sessions per person



Occupational health and safety at work

Strictly abiding by the *Law of the People's Republic of China on Work Safety*, the *Fire Protection Law of the People's Republic of China*, the *Law of the People's Republic of China on Prevention and Control of Occupational Diseases* and the *Special Equipment Safety Law of the People's Republic of China* among others, Tsingtao Brewery has passed the ISO 45001 certification and has formulated its own regulations, such as the *Procedures of Behaviour Safety Management*, the *Regulations on Management of Limited Space Operation Safety*, the *Regulations of Management on Assessment of Safety Risk Identification and Risk Control by Rating*, the *Procedures of Production Safety Management*. We attach great importance to the safety and health of our employees and continuously strive to refine the safety management system to reduce safety risks in daily operations and create a healthy and safe working environment.

Safety at work

Tsingtao Brewery fully takes its responsibility to set up safety management departments and occupational safety committees to achieve full coverage of safety management in every company. We also builds and promotes the dual risk prevention system featuring thorough investigation and grade management of risks to improve our distinctive safety management system and ensure safe development of every business.

Work safety policy

Risk identification

Risks in all dimensions shall be identified



Safety check

Full coverage of safety check shall be maintained



Risk mitigation

All risks shall be eliminated without exception



In 2022, the company invested nearly

30 million yuan

in maintaining occupational safety



In 2022, the total number of lost workdays for injury accidents dropped to 36 from 274 in 2020 and 162 in 2021, and our affiliated breweries have become models of safety management in the local region.

Tsingtao Brewery upholds our commitment to two duties, one implementing our principal responsibilities and the other proactively controlling risks and eliminating potential hazards. Through various strong measures, we strive to maintain the constant production safety and create an enabling environment for safe production.



Tsingtao Brewery's safety management measures in 2022:

- Held four safety committees and meetings to formulate annual safety goals and assign relevant responsibilities.
- Revised 78 safety management documents to meet the standards.
- A total of 5,374 the *Production safety responsibility commitment letter* were signed by general managers and responsibilities for safety management were assigned at all levels; close supervision was exercised by all the staff in the companies.
- Determined four key management areas of the year and formulated risk lists based on which each company conducted risk screening and elimination.
- Intensified the headquarters' standardised and comprehensive safety inspection on all of its affiliated companies to upgrade their safety management.
- Applied JSA (job safety analysis) and approval procedures to high-risk operations such as those in limited space or those involving fire; more than 20,000 high-risk operations were conducted without accidents throughout the year, and all of them were applied with JSA.

Occupational health

Tsingtao Brewery strictly implements the requirements of the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases* and other relevant national laws and regulations, standardising and managing occupational health management. It continuously improves the occupational health management system and regularly conducts operating environment testing on 27 occupational-disease-inductive factors identified. In 2022, the company effectively guaranteed the occupational health of employees, organised occupational health check-ups for nearly 10,000 employees, and invested about 25 million yuan in labour protection fees for the year.

The company has established a standardised three-level safety education system, taking laws and regulations, safety management process and system learning as an opportunity to organise and carry out safety education training and safety-themed activities in various forms.

Organised

1,082

teams to participate in the standardisation of safety management construction activities



Safety education training conducted in 2022

- Combining online and offline, safety training reached all employees, with the per capita training time for all staff up to 44 class hours (including safety meetings)
- Carried out special training for related positions, further implemented the responsibilities of the post, and deepened the application of tools and methods
- Organised 1,082 teams to participate in the standardisation of safety management construction activities and improved team members' safety skills and employees' safety awareness. A total of 11,000 people took part in online learning and answering, and 60 teams were shortlisted for the selection of excellent safety teams.

On June 6, 2022, Sanshui Company invited local well-known production safety experts in the chemical industry to conduct basic knowledge training on chemical safety for the company's middle-level personnel, management backbone, team leaders and members from other positions.



On the morning of May 30, 2022, Sichuan Sales organised a production safety activity with the theme of "Controlling Risks and Eliminating Hidden Dangers, My Safety is My Own Business."

On October 20, 2022, Heilongjiang Marketing Branch carried out safety and fire protection publicity activities to strengthen the safety awareness of all employees, nip the trouble in the bud and gradually reduce risks.





Protection of rights and interests

Employees are the core driving force in the process of enterprise operation and the core pillar to create enterprise value. Tsingtao Brewery focuses on building an equal, respectful and diverse cultural environment and working atmosphere. It ensures that every applicant enjoys equal employment and development opportunities through a standardised recruitment management system, post-competition management system and talent management system. There will be no discrimination or differentiation in employment, promotion, learning and growth, and salary treatment with regard to gender, age, region, ethnicity, race, religious belief, disability and other factors.

Equal employment

Tsingtao Brewery strictly abides by the *Labour Law of the People's Republic of China*, the *Labour Contract Law of the People's Republic of China*, the *Employment Promotion Law of the People's Republic of China*, the *Social Insurance Law of the People's Republic of China*, the *Social Insurance Law of the People's Republic of China*, the *Trade Union Law of the People's Republic of China*, the *Work-related Injury Insurance Regulations* and other national laws and regulations and local labour policies. Various management regulations such as the *Labour Contract Management System of Tsingtao Brewery*, the *Performance Management System for All Staff*, the *Internal Control Management Regulations on Employees' Paid Annual Leave*, and the *Post Competition Management Regulations* have been established to protect employees' legitimate rights and interests.

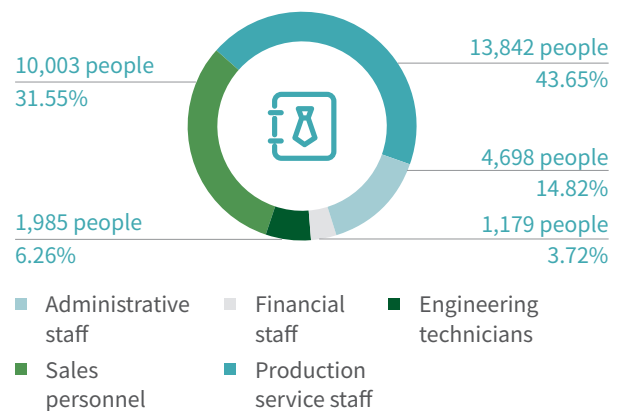
The Company adheres to its labour code, which prohibits the employment of child labour and forced or compulsory labour. In 2022, there is no significant risk of forced labour or child labour in any operations. The company and the partner voluntarily sign a social responsibility commitment letter. And in the recruitment process, there will be no child labour, no compulsory labour, no discrimination or differential treatment with respect to gender, age, region, ethnicity, race, religious belief or disability.

Turnover rate in 2022

Types	Rate
Voluntary turnover rate	7.31%
Male	6.01%
Female	1.30%
Below 30 years old	3.52%
31-40 years old	3.16%
41-50 years old	0.52%
Above 51 years old	0.11%

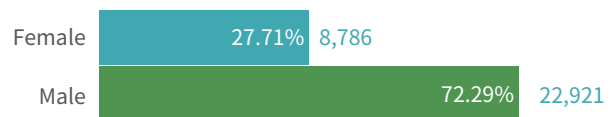
At the end of 2022, 31,707 employees were composed as follows:

Number of employees by position

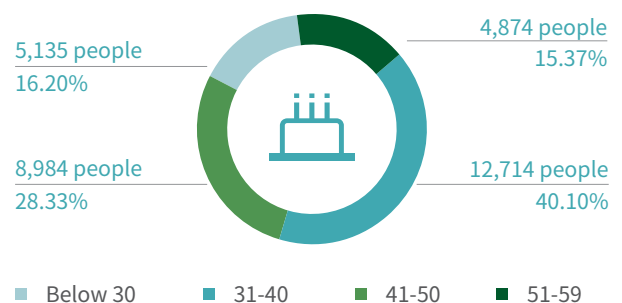


Women represent 43.68% of the administrative staff

Sex ratio of workforce



Age groups of workforce



In 2022, Tsingtao Brewery won a number of awards in many professional and leading employer evaluation activities in China by virtue of its outstanding employer image, distinguished talent philosophy and excellent innovation and practice performance.

Award showcase



Employee benefits

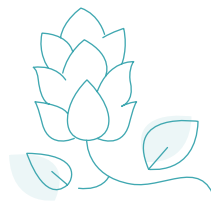
Tsingtao Brewery strictly abides by the relevant national and regional regulations, such as the *Regulations on Paid Annual Leave of Employees*, the *Implementation Measures for Paid Annual Leave for Employees of Enterprises*, and the *Opinions of The State Council on Reforming the Wage Determination Mechanism of State-owned Enterprises*. It performs the labour contract signed with employees according to law and compliance and pays social insurance and housing provident fund for employees on time. In 2022, the labour contract signing rate of employees and the social insurance participation rate of employees were 100%.

Tsingtao Brewery always cares about employees and puts people first. It provides employees with paid leave, maternity leave, sick leave, regular physical examination, health training and other benefits. In 2022, the company added "paid leave for accompanying exams" for its employees whose children were going to take senior high school entrance examination or college entrance examination, so as to ensure that employees have sufficient time to prepare for their children and accompany them before and during the exam. This year, employees' corporate happiness continued to increase, with the employee happiness index hitting a record high for two consecutive years.



In 2022, the labour contract signing rate of employees was

100%



the social insurance participation rate of employees was

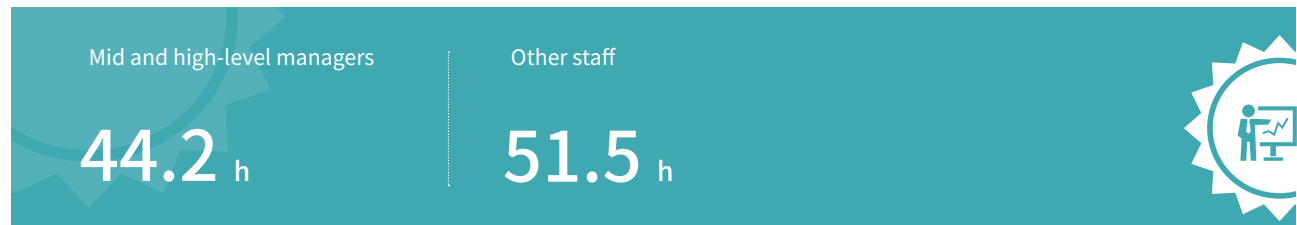
100%



Empower the growth of employees

With goal-oriented resource allocation, merit-based talent recruitment, and performance-based assessment and guidance, Tsingtao Brewery keeps optimising the employee incentive system to pursue quality growth. We mobilise our abundant resources advantages to build a positive environment where employees are empowered to find their stage, grow under reasonable mechanisms, and ultimately showcase their expertise and realise their own value. Employee training has always been considered the building block for sustainable development. In 2022, 100% of our employees received in-house training. The total training hours amount to 1,623,604.70 (person hour) with an average of 51.2 training hours per person, up 30.6% year-on-year.

Training hours per person



Aiming to stay ahead in the industry with field research, digital transformation, and highly-skilled talents, we accelerated the upgrade of our employee training in 2022 by shifting the focus towards field research on business needs, which has brought us great outcomes.



Tsingtao Brewery accelerated the landing and promotion of the field research workshop model 1.0

● Manufacturing

In 2022, Tsingtao Brewery conducted field research on key business indicators, resulting in 414 case studies. Our silver-level field research workshop for management trainees has initiated studies on 50 topics. The workshop model has been applied to many new programmes, such as Lulansa, Rongcheng, malt factory, and Jimo R&D Center.

● Marketing

We opened a practical training course for employees on market base research in 2022. Based on our pain points, the training was designed to include three main modules: strategy development for different markets, integrated marketing, and team establishment. With a creative learning model that combines training camps, on-site investigation, retrospectives, and online Q&A sessions, participants looked deeply into our business problems to find solutions.

Data from silver-level field research workshop		Learning outcomes	
23 online courses	100% complete	ORID learning takeaways	500
2 live sessions	100% complete	review posters	77
Three 8+1 professional courses	100% complete	training hours attended in total	1,378
SAIL practical coursework	100 review assignments	training hours attended per person	27.6
	100 practical projects		

Silver-level field research workshop



Market base research course



Accelerating the training of skilled technical workers

With a century-old culture of craftsmanship and a long-standing belief in skill training as a critical driver of talent and business growth, Tsingtao Brewery continues to advocate the glory of labour, the value of skills, and the significance of creation. We strongly support the growth of model workers, artisans, and highly-skilled talents through values education, creation empowerment, institutional improvement, and compensation raise. In 2022, based on the new national standards of vocational skill levels, we revised the *Manual on Independent Evaluation of Skilled Talents* and released the *Management Plan for Marketing Skilled Talents*. With the goal of building an industry-leading, top-skilled, and high-performing talent group, we accelerated the training of an intelligent workforce with versatile skills, in line with the requirements for cultivating skilled workers in the new era.

To help skilled talents grow together, Tsingtao Brewery held the ninth skills competition in 2022. 15,188 employees from 11 job types, including smart equipment maintenance electricians, beer brewers, sales represent-

atives, and sommeliers participated in the contest. 29 artisans and talents were awarded for their exemplary skills.



Photos from the ninth skills competition



29 artisans and highly-skilled talents were awarded



Launching the gold-level digital leadership training

Tsingtao Brewery trains managers to become digitally savvy by helping them grasp the trends and characteristics of the digital economy as well as the models and strategies of digital transformation. Managers have learned to apply digital thinking and working methods to management reforms and technological innovations.



Objectives of the gold-level digital leadership training

Train digitally savvy managers

Cultivate mid-level managers to lead digital transformation



50 participants per session
Sessions open on a rolling basis

Foster digital literacy

- Develop digital leadership
- Nurture digital thinking and management

Digital field research

- Digital pilot programmes
- The research base for digital programmes



Offering diverse learning platforms for employees

● The revamped and upgraded e-learning

Partnering with five top learning platforms in China, our e-learning platform provides rich internal and external resources to enhance the employees' learning experience. 4,027 external courses and 4,949 internal courses are now online, with a total of 1.106 million learning hours spent on the platform.

● The Sharp Cut mini-lecture platform

The Sharp Cut has been successfully branded as a platform that shares quick marketing tips for real-life scenarios. 12 live lectures were held on the platform in 2022, with 19,079 participants. Stemming from our corporate strategies, the lectures help conclude the secrets of our successful experiences and apply them to future projects, building the professional skills of our front-line marketing staff.



Management trainees had an immersive experience in Tsingtao Brewery's culture through the role-playing game *The awakened brewers*



Employee wellness

In order to identify the common needs of employees, Tsingtao Brewery did a "portrait of needs" based on the employees' happiness index. We captured the most urgent difficulties, anxieties, and hopes of employees from individual feedback, and strive to meet their needs by helping them tackle the problems and providing care for their health, work, and daily life.

Employee assistance

To help employees in need, Tsingtao Brewery set up the Employee Care Fund. We revised the management methods and implementation rules of the fund in 2022, including lowering the assistance threshold, expanding the coverage, increasing the maximum amount, and opening up communication channels to meet the urgent needs of employees. Many subordinate companies also joined our efforts. In 2022, the Employee Care Fund received a total donation of 838,900 yuan from 59 companies. The fund assisted 24 employees suffering from severe illnesses in 2022, with a total expenditure of 1.09 million yuan. Six of the assisted employees enjoyed an increase in the maximum assistance amount due to the enhanced medical assistance percentage, and five enjoyed benefits brought by the lowered assistance threshold.



Employee Care Fund donation ceremony held by the fourth factory of Tsingtao Brewery

All-round employee care

Tsingtao Brewery values employees' work-life balance. We organize activities regularly and protect the employees' rights and interests from all aspects to bring happiness and create an atmosphere of love and care. The "Touch of Cool in Summer" activity we held in 2022 has achieved great outcomes. After collecting the temperature data from 771 posts in 30 regions and nearly 100 factories, we created a "heat map" that marked out the high-temperature sites of the company and the types of jobs most affected by heat waves. The map helped our production and sales teams deliver care to the staff in need creatively from multiple aspects.



Summer Breeze activity organised by the Rizhao company



Organising break-time fitness activities

In 2022, the company's labour union led employees to work out during breaks to promote a healthy work style. The union carefully selected a range of fitness activities and invited professional coaches to train the employees. Special personnel were assigned to organise 10-minute fitness sessions at different times daily.



Break-time fitness activities



Helping employees with childcare

In 2022, we organised childcare summer camps to relieve the care burden of employees during summer vacations. Based on results from surveys and home visits, the labour union planned the camps carefully, ensuring the quality of childcare by strictly reviewing the qualifications of external service providers, including their teaching resources, sanitary conditions, food and water safety, and security measures.



Childcare summer camps

04 Create Social Value Together

Tsingtao Brewery looks forward to growing together with all walks of life and benefiting the public with its own development results. We join hands with the upstream and downstream of the value chain, devote ourselves to industry cooperation in innovative ways, actively participate in public welfare, pay attention to people's livelihood, practice corporate responsibility, and build a harmonious and beautiful society with practical actions.

- Monitor the entire supply chain
- Help suppliers grow
- Achieve a win-win with distributors
- Social responsibility



In 2022, public welfare donationst

6,260,000 yuan



Cumulative donations to support people with disabilities

2,260,000 yuan



"Tsingtao Brewery - Qingdao University" scholarship has donated

6,680,000 yuan



Monitor the entire supply chain

Tsingtao Brewery strictly abides by the *Food Safety Law of the People's Republic of China*, the *Standard for Uses of Food Additives of National Food Safety Standard*, the *Hygiene Safety Assessment Provisions for Disinfection Products*, and other relevant laws and regulations. Based on the needs for business growth, we keep improving our supplier management system and building channels to enable efficient mutual communications. Meanwhile, we have been sharing our experience with suppliers to empower their growth and ensure the security and stability of our supply chain.

To further standardise supplier management, Tsingtao Brewery has revised internal guidelines such as the *Procurement Management Handbook*, the *Management Procedures of Material Procurement Bidding*, the *Tsingtao Brewery's Management Procedures of Supplier Access, Cooperation, and Exit* and the *Code of Procurement Operations*. The guidelines cover the whole management cycle from supplier classification, inspection, access, relationship management, performance assessment to exit. As we continue to improve our supplier management system, we are building a supplier classification system with digital and information technologies to ensure procurement compliance.

By the end of 2022, we included over 1,600 qualified suppliers on the list. More than 99% of them are local suppliers in China. 612 of them supply production materials (including raw and auxiliary materials, packaging, additives, etc.), and 998 supply non-production materials.



Supplier Classification

We classified the qualified suppliers horizontally by equipment, technologies, and construction companies, and vertically by qualifications, products, and previous cooperations. Based on the classification, we designed targeted strategies for different suppliers to achieve comprehensive management.



Supplier Access

We examine suppliers according to their qualifications, technologies, management systems, equipment levels, sustainable management capacities, and other dimensions. Only those who pass the examination will enter our supplier pool.

We pay attention to the suppliers' performance on quality, safety, environmental protection, and social responsibility, assessing their ESG risks in each process. When sourcing new suppliers, we include evaluations based on third-party standards, such as ISO 9001 for quality management, ISO 14001 for environmental management, and ISO 22000 for food safety management. Suppliers are required to sign the Letter of Integrity Pledge to ensure compliance with agreed business ethics. In 2022, almost 100% of our partner suppliers passed third-party certification, and all have signed the letter.

We also established a supplier record management system linked to contract signing. In line with relevant laws and regulations, we created the *Document Request List for Suppliers* that updates regularly, and request documents and third-party test reports according to the list.



Supplier Performance Review and Evaluation

We evaluated our partner suppliers annually on various dimensions such as food safety, quality, services, and actual supply completion rates, with emphasis on food safety, quality control, and environmental performance improvement. In 2022, all of our partner suppliers have met the requirements, which ensures the quality production of Tsingtao Brewery.

In daily work, we focus on analysing the objectives of the supply and demand sides, conducting supplier evaluation through dynamic data tracking and regular assessment. We encourage suppliers to use energy-efficient equipment and strengthen cooperation to improve their performance.

We also adopt dynamic management of qualified suppliers for wine-treating materials, sending samples regularly to third-party testing institutions. Suppliers who fail to meet the requirements will be removed from the list. By the time of this report, we had added 13 new suppliers to the list and removed 16.



Help suppliers grow

Tsingtao Brewery strives to grow together with suppliers. We communicate our development plan and management philosophies with suppliers through annual product-specific meetings, visits, and audits. In 2022, we organised various activities to strengthen our cooperation and enhance the suppliers' social awareness and sustainable development abilities, building an efficient supply chain for mutual benefits.



Continuously supporting the development of domestic raw materials

We work with suppliers to build the planting base of the Tsingtao Flower and the aroma flower. We researched variety optimisation together and signed long-term contracts to encourage hop planting. By offering a reasonable price for quality products, we raised the profits of partners and flower growers. Almost half of the total domestic hops procured in 2022 came from our plant base.



Providing financial support to achieve a win-win

In 2022, we provided 171 million yuan for upstream beer bottle suppliers to support their procurement of raw materials and ensure stable production.



Growing together with multi-dimensional cooperation

We work with suppliers to study the application and promotion of new materials, technologies, and processes, such as removing the cardboard inside carton products, reducing the thickness of the plastic film and cans/can caps, and padding bottle caps with domestic pellets. These will help reduce the cost and the use of raw materials to achieve sustainable development.



Achieve a win-win with distributors

Tsingtao Brewery has a vast distribution network. We respect and recognise the efforts of every distributor and hope to achieve a win-win together.

Reform the channel model with the TM project

In December 2022, after 2 years of evolution (from target model, reform model, step-by-step implementation model to continuous improvement model), the channel model change has paid off. 7 subordinate companies that completed the reformation concluded 7 reform models for different market types.

- Starting out to boost efficiency: Efficiency went up 71% in prominent regions and 162% for distributors from 2021. Regional sales per capita are up 12% year-on-year.
- Fast forward to increase sales: Sales are up 1% year-on-year for distributors, 5% for classic and higher product lines, with a 100% budget completion rate.
- Determined to forge ahead: direct supply rate increased 4% year-on-year; AB class direct supply rate increased 5% year-on-year; pallet transport rate is 5% higher than the average.

Social responsibility

Tsingtao Brewery is committed to giving back to society with charitable efforts. We set up volunteer teams among employees and encourage them to do social good for the well-being of the people. In 2022, we donated about 3.74 million yuan for charitable purposes and materials worth around 2.52 million yuan.

Rural revitalisation

Tsingtao Brewery regards rural revitalisation and development as an essential corporate social responsibility. Making use of our advantages, we carry out research based on local conditions to explore new paths for rural revitalisation, powering the growth of rural industry, culture, and economy to achieve prosperity.



2022 Qingdao Beer Festival in Dingxi

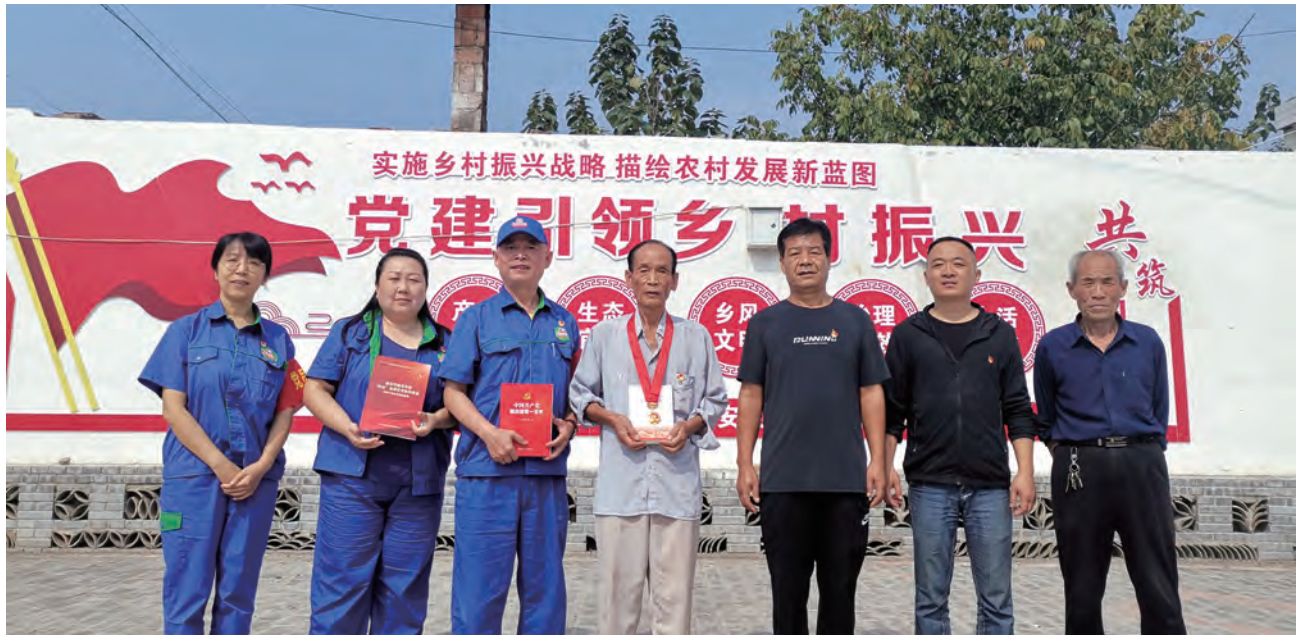
From June 19 to 25, 2022, the third Qingdao Beer Festival of Dingxi City was held with the theme of "Cheers to Qingdao and happy gathering in Dingxi". The festival took place in 2 sub-venues of the city: Longxi County and Min County. The event marks the first beer festival in Longxi, with the theme of "Light up the Longxi stage and meet in the capital of wellness". It was also the first time for Min County to host a beer festival, with the theme of "Across the mountains from coast to coast, Min County is where I love the most". Throughout the Oktoberfest, theme activities such as beer drinking, food feast, themed performances, entertainment gatherings, intangible cultural heritage and creative displays, and game interaction will be held to help Dingxi's local culture, tourism, agricultural and sideline products, The development of night economy and other aspects has continuously expanded the city's characteristics and influence, effectively promoting economic, trade, cultural and tourism cooperation in Dingxi.



Tsingtao Brewery held the "Qingdao Beer Festival" in Dingxi



Our Xi'an company has carried out targeted assistance programmes for 5 consecutive years. In 2022, the company provided funds to Beiyuan Village to help promote local culture, send assistance materials, improve the village outlook, create banners, and bring benefits to local residents during holidays.



Xi'an company carried out rural revitalisation activities

In January 2022, to support the growth of local enterprises in Longnan City, Tsingtao Brewery bought olive oil worth 425,600 yuan from Xiangyu Olive Oil Development Company, Ltd.

Charitable giving

Committed to bringing benefits for all, Tsingtao Brewery cares about the well-being of vulnerable groups and dedicates to supporting education and charity work.

- In November 2022, we took on our social responsibility and donated 1 million yuan to the Qingdao Foundation for Justice and Courage to support acts of bravery in the new era.
- We have offered the "Tsingtao Brewery - Qingdao University" scholarship 27 years in a row to reward outstanding students of Qingdao University, help students in need, and fund employment training and practicums. By 2022, we helped 1,888 students with our donation of 3.7 million yuan. Another 2.98 million yuan has been rewarded to teachers, totalling 6.68 million yuan.
- In 2022, Tsingtao Brewery continued to practice our social responsibility. We donated 100,000 yuan to the Qingdao Foundation for Disabled Persons. Since 2004, we have donated 2.26 million yuan to help people with disabilities.



Donation certificate received from the Qingdao Foundation for Disabled Persons



The Qingdao Red Cross Society awarded Tsingtao Brewery the title of *Outstanding Contributor*. The title is often given to collectives or individuals who made significant contributions, as a way to commend good acts and promote kindness



Sanshui Company representatives participated in community volunteer services



Suizhou Company selected the first group of 15 young employees to participate in the first session of emergency medic training held by the Suizhou Red Cross Society



Party members and league members of Heze company volunteered to visit older people at a nursing home in Heze high-tech zone in Lyuling town







Advocate responsible drinking

Tsingtao Brewery always advocates responsible drinking among consumers, encouraging them to keep a healthy and quality lifestyle.

We label our products with "Excessive drinking harms your health" and promote the slogan "Don't drink and drive". We develop and produced low-alcohol and low-calorie products, organising activities to spread knowledge about responsible drinking. We also show age requirements for users who enter our website. All of these are done to promote responsible drinking among consumers and prevent minors from drinking.

Groups of people who need special attention

 Minors	We prohibit the sale of our products to minors and educate them not to drink.
 Pregnant and lying-in women	We suggest that pregnant and lying-in women avoid alcohol during pregnancy and breastfeeding.
 Drivers	We are against drunk driving or riding in a car with a drunk driver. We also launched the "Don't drink and drive" activity.
 Patients	We recommend that patients refrain from drinking during medical treatment.



Tsingtao Brewery launched responsible drinking campaigns in many places

Tsingtao Brewery took an active part in the Nationwide Responsible Drinking Week in 2022. Focusing on the problem of minor drinking, we organised all kinds of activities with the theme of caring for the healthy growth of minors.

- Distribute responsible drinking leaflets

Our staff distributed responsible drinking leaflets on the streets and restaurants in Wuhan, Xi'an, and other cities. We attached posters about minor drinking in dining places to educate the public about healthy drinking styles and remind the consumers and staff to pay attention to minor drinking.

- Share knowledge about responsible drinking in bars

In Qingdao, we encouraged the staff of the bars owned by Tsingtao Brewery to pay attention to the physical and mental health of consumers, reminding consumers to drink responsibly in a caring way and telling them the need to prevent minor drinking.

- Participate in the "Together we pledge: No alcohol selling to minors" activity

Tsingtao Brewery participated in the "Together we pledge: No alcohol selling to minors" activity in online and offline formats to advocate responsible drinking. We took a leading role in calling for society to care for minor growth.



Staff shared knowledge about responsible drinking with consumers

Tsingtao Brewery's Wall of Honour (2022)

- Outstanding Case of National Trademark and Brand Building
 - Most Respected Company in China (19th time winning)
 - Most Admired Company in China (17th time winning)
 - Outstanding ESG Corporate Social Responsibility Practice Case in 2022
 - Star of the ESG Green Company in 2022
 - Best Practice Case of the Chairman's Office of Listed Company in 2022
 - CSR Corporate of Shandong Province in 2022
 - Gold Medal of 2022 World Beer Championships
 - Seven awards in the 2022 China International Beer Challenge
 - Champion of the 4th National Profession Competition on Beer Tasting
 - Excellence Employers in Greater China in 2022
 - Best Employers of China
 - Model Employers of China
 - Top Graduate Employers China Award
 - Outstanding Contributors to Tsingtao Red Cross Work in the New Era
- Model State-owned Enterprise in Corporate Governance
- Craftsmanship Brand Award of the 19th People's Choice Craftsmanship Award
- Special Prize for Outstanding Theoretical Achievements in the Party School of the CPC Central Committee
- First prize for Achievements of China Enterprise Reform and Development (2022)
- Case in the *Research Report on Corporate Social Responsibility of State-owned Enterprises (2022)*





Comment from the third-party

Report evaluation

2022 marks a pivotal year for the high-quality development of the brewery industry. In the wake of profound adjustments in the domestic and international economic environment and a reshaped consumption market, the brewery industry has leveraged the resilience and charm of the industry and implemented an innovation-driven development strategy. The company has facilitated the potential driving force for high-quality development through supply-side structural reform, optimised the distribution of mid- to high-end products, strengthened the innovation support of product channels, and reinforced its sustainable development objectives. With all these efforts, the company ultimately upgraded itself in industrial management, profitability, competitiveness, customer service, and sustainable development, demonstrating the sustained momentum of the Chinese brewery industry.

As illustrated in the *2022 Environmental, Social, and Governance Report of Tsingtao Brewery Co., Ltd.*, Tsingtao Brewery holds the mission of "creating joy for life" and embraces the philosophy of "creating an attractive mode" of quality management. Regarding technological innovation, Tsingtao Brewery boasts the only "National Key Laboratory of Beer Biofermentation Engineering" in the brewing industry, holding the strongest and most powerful position for beer technology innovation. With the support of the platform, Tsingtao Brewery finds a direct-to-consumer basis, advances the industry's research on shared basic technology, cutting-edge technology, social welfare technology, and key core technology, and promotes the integration of basic research and applied research, along with the application of technological advances. Further research is conducted in the areas of reducing packaging materials, reducing plastic use, recycling, biodegradation, and green and low-carbon brewing technology, to make the industry a high-end, intelligent, and green one. In terms of cultural innovation, as a national brand with a history of 120 years, Tsingtao Brewery prioritises the inheritance, promotion, and brand empowerment of the traditional culture. The company actively seeks the integration of traditional culture, traditional craftsmanship, and modern innovation. Through transformation and innovation, Tsingtao Brewery carries forward the tradition and breathes life into the consumption and cultural significance of a national brand in a new era. When it comes to digitalisation, Tsingtao Brewery spearheads its digital transformation as a trailblazer in the brewery industry. The company adopts comprehensive and multi-faceted approaches to revamp every brewery link with digital technology. To rejuvenate national brands and stimulate consumption, Tsingtao Brewery goes all out to improve its productivity, establish a world-class enterprise, and ultimately build a competitive manufacturing enterprise and a well-known brand.

At the same time, Tsingtao Brewery remains steadfast in its commitment to environmental protection, low-carbon management, and circular economy as the company's development strategies. Tsingtao Brewery bears in mind the environmental protection targets of "with environmental protection, low-carbon management and circular economy measures to promote the sustainable development of the company and realise the harmonious co-existence with the nature". The company values the rational use of resources, actively responds to climate change, and strives to achieve a balance between production efficiency and ecological development.

The year 2022 witnessed the implementation of the 20th National Congress of the Communist Party of China and a crucial year of carrying forward the 14th Five-Year Plan (2021-2025). This calls for industries to seek innovation steadfastly and fulfil their missions of industrial transformation and high-quality development. As a century-old business with a 120-year history, Tsingtao Brewery should attain the high-quality development and drive the force of building China as a manufacturer with high-quality products. As a leading country worldwide, Tsingtao Brewery should advance its high-quality development with a focus on high-end, intelligent, and green growth, thus creating more shared value in the global market as a Chinese contributor.



Environmental, Social and Governance Indices

Main categories, aspects, general disclosure, and key performance indicators		Page
A statement from the Board containing: 1.a disclosure of the board's supervision of ESG management; 2.the Board's ESG management policies and strategies, including the process used to evaluate, prioritise and manage material ESG-related issues (including risks to the issuer's business); and 3.how the Board reviews progress made against ESG goals and explains how they relate to the issuer's business.		P11
Describe or explain how reporting principles (i.e., materiality, quantification, and consistency) are applied in preparing the ESG report.		P13
Explain the reporting scope of the ESG report and describe how the entities or businesses are selected to be part of the report. If any changes emerge in the reporting scope, the issuer should explain the differences and reasons for the changes.		P2
General disclosure	Information on the policies and compliance with relevant laws and regulations that have a significant impact on the issuer.	P30
A1.1	The types of emissions and respective emissions data.	P33、 P41-P42
A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g., per unit of production volume, per facility).	P36
A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g., per unit of production volume, per facility).	P41
A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g., per unit of production volume, per facility).	P41
A1.5	Description of emission target(s) set and steps taken to achieve them.	P32、 P40、 P42
A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	P40
General disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	P30、 P37
A2.1	Direct and/or indirect energy consumption by type (e.g., electricity, gas or oil) in total (kWh in '000s) and intensity (e.g., per unit of production volume, per facility).	P37
A2.2	Water consumption in total and intensity (e.g., per unit of production volume, per facility).	P31
A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	P37
A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	P30
A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	P39



Main categories, aspects, general disclosure, and key performance indicators		Page
General disclosure	Policies on minimising the issuer's significant impacts on the environment and natural resources.	P42-P43
A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	P42-P43
General disclosure	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact the issuer.	P34
A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	P35
General disclosure	Information on the policies and compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	P49
B1.1	Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region.	P49
B1.2	Employee turnover rate by gender, age group and geographical region.	P49
General disclosure	Information on the policies and compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	P46-P47
B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	/
B2.2	Lost days due to work injury.	P46
B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	P46-P48
General disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	P51-P53
B3.1	The percentage of employees trained by gender and employee category (e.g., senior management, middle management).	P51
B3.2	The average training hours completed per employee by gender and employee category.	P51
General disclosure	Information on the policies and compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.	P49
B4.1	Description of measures to review employment practices to avoid child and forced labour.	P49

Main categories, aspects, general disclosure, and key performance indicators		Page
B4.2	Description of steps taken to eliminate such practices when discovered.	P49
General disclosure	Policies on managing environmental and social risks of the supply chain.	P58
B5.1	Number of suppliers by geographical region.	P58
B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	P58
B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	P58
B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	P58
General disclosure	Information on the policies and compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	P63
B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	P18
B6.2	Number of products and service-related complaints received and how they are dealt with.	P21
B6.3	Description of practices relating to observing and protecting intellectual property rights.	P10
B6.4	Description of quality assurance process and recall procedures.	P18-P19
B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	P21
General disclosure	Information on the policies and compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	P10
B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	P10
B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	P10
B7.3	Description of anti-corruption training provided to directors and staff.	P10
General disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	P60-P62
B8.1	Focus areas of contribution (e.g., education, environmental concerns, labour needs, health, culture, sport).	P60-P62
B8.2	Resources contributed (e.g., money or time) to the focus area.	P60-P62