

CSV Management

Message from Senior Executive

Officer of CSV Strategy

Securing a “Global Leadership
in CSV” through enhancing
Environmental Management
and Human Capital



Disclosure Based on TCFD
and TNFD Frameworks



Message from the Senior Executive Officer of CSV Strategy



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Reinforcing human rights measures while demonstrating our commitment as a global leader in environment

—Please give us a look back on 2022 in terms of the 2022-2024 Medium-Term Business Plan. In 2022, we made solid progress toward becoming a “global leader in CSV” set out in the Kirin Group Vision 2027 (KV2027) long-term management vision. This is a result of material achievements in environmental management.

In July 2022, the Kirin Group acquired a certification of SBTi Net Zero Standard by the Science Based Targets initiative – a world’s first in the food and beverage sector. This is in recognition of our long-term targets set out in the Kirin Group Environmental Vision 2050 being based on science matching the Paris Agreement standard. Currently, the Kirin Group is reducing GHG emissions in the value chain to achieve its mid-term targets by 2030*1.

In January 2023, Mercian Corporation’s Mariko Vineyard was selected as an approved socio-ecological production landscapes and seascapes (SEPLS) site by

the Japanese Ministry of the Environment. The ministry is certifying areas with high biodiversity as SEPLS sites in order to achieve the 30by30 target*2 based on the G7 2030 Nature Compact. Beginning in 2023, SEPLS are scheduled to be certified as OECMs (Other Effective area-based Conservation Measures) if they are deemed to be worthy of certification through the demonstration project.

While many of the SEPLS sites approved this time are covered in forests, mountains, and spring water ponds, Mariko Vineyard is the only farmland among them being used for business. In addition, Mariko Vineyard is highly praised as a winery, and it is the only Japanese winery to be recognized as one of the “World’s Best Vineyards” three consecutive years. In other words, Mariko Vineyard provides not only social value through its protection of biodiversity but also economic value as a winery, making it a perfect example of CSV in action.

In light of these achievements, the Kirin Group participated in the 15th Conference of the Parties (COP15) to the United Nations Convention on Biological Diversity (CBD) held in Montreal, Canada, and had the opportunity to present to the world the nature positive initiatives of Mariko Vineyard. European countries and the United States were both pleasantly surprised and appreciated Japan’s and Asia’s unique perspective on nature, in which humans and nature co-exist, and its efficiency. In the field of natural capital, Japan has the potential to be a global leader. The Kirin Group will make best use of the knowledge it has gained over the years and participate in global initiatives as a leader in the field.

Lion Pty Ltd. in Australia participated in a pilot test for the Scope 3 reduction. The GHG emissions in Scope 3 are disclosed as an estimated value determined by multiplying item-specific usage by the standard emissions amount. Tracking actual performance values



Mariko Vineyard

would be ideal, but is not common yet as exchanging large amounts of data with a large number of business partners is heavy lifting. An additional disincentive to disclose accurate Scope 3 performance values is even if the supplier reduces GHG emissions through the reduction of raw materials and rationalization of production, buyers could use the reduction in resources as a reason to start negotiating lower prices.

Therefore, Lion worked with four key value chain partners to pool actual GHG emissions numbers in an independent third party on a confidential basis to other companies in order to accurately measure GHG emissions throughout the value chain. As a result, it turned out that the measured value was about 11% lower than the estimated value. In addition, by reflecting each company’s reduction plans, Lion was able to lower the 2030 reduction prospect by 35% more than the original plan. This initiative was presented as an advanced case study by Lion’s CEO at the United Nations Framework Convention on Climate Change’s 27th Conference of the Parties (COP27) held in Sharm El Sheikh, Egypt in November 2022. I believe these contributions allowed the Kirin Group to become one of the world’s leading

environmentally-advanced companies.

On the other hand, we are aware that our human rights measures are still in progress. In January 2023, we completed our withdrawal from the Myanmar business. We conducted human rights due diligence when starting business in Myanmar, but we never could have predicted the military’s coup d’état. We want to utilize our experiences and lessons learned in Myanmar to improve our human rights initiatives. We joined the Japan Center for Engagement and Remedy on Business and Human Rights (JaCER) late last year and implemented a human rights grievance (report) system. This year, we plan to revise Kirin Group’s human rights policy and to reinforce our human rights governance system.

As a part of our value chain human rights initiatives, the Kirin Group joined Sedex*³ (Supplier Ethical Data Exchange) on a global level. In Australia, 97% of Lion’s primary procurement consists of Sedex-member suppliers. In Japan, there are not so many Sedex members yet, but more and more food and beverage companies are joining the system. We hope to collaborate with them in human rights-conscious procurement and create a positive impact.



Transforming business through growing immunity-related products and advancing non-financial disclosure

—Please tell us about your long-term outlook toward achievement of KV2027.

In 2022, the World Health Organization (WHO) strengthened regulations, including lifting the goal of its GAAP (Global Alcohol Action Plan) to reduce harmful drinking from 10% to 20% by 2030. It is expected that regulations will be further strengthened at the 4th High-level Meeting of the United Nations General Assembly on the Prevention and Control of on NCDs set for 2025, so expanding the volume of alcoholic beverages will become more difficult.

Meanwhile, the pandemic has made the world more conscious about immunity. The application of *Lactococcus lactis* strain Plasma (LC-Plasma), a core ingredient of our Health Science domain, is steadily expanding, not only within the Kirin Group, but being licensed to Coca-Cola (Japan) Company, Limited as well as being researched in order to develop a pharmaceutical.

The Kirin Group has worked on immunity for many years. It was involved in the foundation of the La Jolla Institute for Immunology, the world’s top-class immunology research institute in the United States, which will welcome its 35th anniversary this year. We continue to support the Institute. The Institute contributed to the discovery of the lead antibody of KHK4083, a medicine for atopic dermatitis, which Kyowa Kirin is currently developing and of which Kyowa Kirin has made a co-development and co-marketing

agreement with Amgen.

These research achievements in immunology over the years have led to results in both the Pharmaceuticals and Health Science domains of today. We will continue growing steadily by cultivating LC-Plasma and other specialty ingredients such as HMOs as well as citicoline, expanding our business portfolio beyond alcoholic beverages while playing our role as a responsible alcohol producer.

In recent years, the disclosure of non-financial information has been attracting a lot of attention. In 2022 and 2023, the Government Pension Investment Fund (GPIF) published the results of “Excellent TCFD Disclosure” survey in which the asset managers for GPIF for Japanese domestic stocks voted for companies with excellent TCFD disclosures, and Kirin received the highest number of nominations for two consecutive years. We published a trial disclosure based on the LEAP approach in our *2022 Kirin Group Environmental Report* in July, 2022, conforming to the beta version of TNFD’s⁴ framework, and became the world’s first to apply the approach in corporate disclosures. As the world’s first case study, the disclosure was featured in the *Financial Times*.

In anticipation of the spread of disclosures adopting the TCFD framework, with the sustainability disclosure standards of the International Financial Reporting Standard (IFRS) Foundation’s International Sustainability Standards Board (ISSB) leading the way, we aim to establish a de facto standard by continuing to disclose information ahead of other companies. We believe this will lead to the Kirin Group’s structural advantage in ESG and non-financial information disclosure.

LEAP approach focusing on “Location”

The LEAP approach involves analytical activities in the following order: Discovering the nature interface (Locate), diagnosing dependencies and impacts (Evaluate), assessing risks and opportunities (Assess), and preparing to address nature-related risks and opportunities and reporting back to investors (Prepare). This is a new approach to assessing and prioritizing natural capital dependence and impacts, with a focus on “Location”.

The Kirin Group intends to use the LEAP framework to organize and deepen the initiatives it has been pursuing as a company dependent on natural capital, and to make appropriate disclosures.



The Japanese wine where “Location” determines the characteristics of the product. Mariko Vineyard (A)

Locate An important factor that determines the taste of wine is “terroir” or the character of the land. The vineyard is an area that remains natural and inhabited by rare species of plant and wildlife.

Evaluate Expansion of vineyards is necessary for the expansion of the Japanese wine, and the target is derelict land.

Assess Joint research with the National Agriculture and Food Research Organization (NARO) revealed that converting derelict land into vineyards creates high-quality grasslands and contributes to a rich ecosystem.

Prepare Contributing to Nature Positive and 30 by 30.

“Locations” where water risks are high and water resource management is particularly important. Production plants in Australia (B)

Locate All Kirin Group Australian brewery locations are in water-stressed watersheds.

Evaluate Water stress in Australia is very high both empirically and when measured with such tools as Aqeduct. Once every few decades, when flooding occurs due to torrential rains, the damage is significant.

Assess Water-saving technology is the best in the Group, but there remains a possibility that production could be disrupted in the event of a severe drought.

Prepare Contribute to the development of the SBTs for Nature methodology and set new goals in line with this. Widely publish joint research results in environmental reports, and on the Web..

“Locations” that have a significant impact on our businesses and are important in terms of the natural and social environment. Sri Lankan tea farms (C)

Locate The delicious taste of *Kirin Gogo-no-Kocha* is supported by tea farms in Sri Lanka.

Water sources of large coastal cities exist on the farms.

Evaluate Approximately 25% of the Sri Lankan tea leaves imported by Japan are used by *Kirin Gogo-no-Kocha*.

Tea production areas face increased water risk and stress due to climate change, while heavy rains run off fertile soils.

Assess If Sri Lankan tea leave on which Kirin is highly dependent, cannot be used sustainably, the product concept will fail.

Prepare Supporting Sri Lankan tea farms in obtaining The Rainforest Alliance certifications since 2013. Widely publish the number of farms obtained the certificate and the number of farms trained in environmental reports, and on the Web.



Strengthen the competitiveness of the Kirin Group and contribute to society by enhancing human capital

— Please tell us about the Kirin Group's initiatives from 2023 onward.

Focusing on the achievement of KV2027, we will continue to grow our Food and Beverages, Pharmaceuticals, and Health Science domains as outlined in the CSV Purpose.

In 2022, we were able to produce material results that could be communicated to the world in the areas of biodiversity and climate change. This is the result of our continued proactive response to a wide range of social issues. We will continue to proactively respond to changing circumstances and will work harder than ever to produce results and communicate them globally.

Regarding reinforcing human capital development, Kirin Holdings President & CEO Isozaki is working as promoter at the Human Capital Management Consortium, established in Japan in 2022. We are

steadily advancing our efforts, including forwarding the disclosure of human capital in our annual securities reports.

Expanding investment in human capital also means increasing the value of employees, which are assets entrusted to us by society. This is the basis of CSV, as it leads to the enhancement of a company's competitiveness as well as the society's assets. Through the betterment of human capital as well, we will achieve our goal of becoming a global leader in CSV.

- *1 Reducing the total Group's Scope 1 and Scope 2 emissions by a total of 50%, and Scope 3 emissions by 30% by 2030, compared to numbers in 2019.
- *2 A declaration to preserve 30% of the earth's land and marine areas by 2030 to contribute to the preservation of biodiversity.
- *3 A nonprofit organization based in the United Kingdom that provides an online platform for businesses to manage and improve working conditions of the global supply chain. It is the world's largest supplier ethical information sharing platform for universal suppliers to conduct self-assessment questionnaires in the four fields of labor, health and safety, environment, and business ethics so that businesses and organizations can improve responsible and sustainable business practices and procurement activities. The platform is being used by more than 65,000 businesses, foundations, factories, and the self-employed, etc. in 180 countries and regions around the world.
- *4 Abbreviation for Taskforce on Nature-related Financial Disclosures. An international organization that develops and provides frameworks for businesses to disclose information on nature-related risks, and so that the flow of funds can be redirected to bring about Nature Positive - a concept that aims to halt the decline of nature and set a course for recovery by 2030

Disclosure Based on TCFD and TNFD Frameworks

Disclosure of Information on Climate Change

Disclosure Based on TCFD Recommendations

For a detailed scenario analysis, including responses to the new TCFD guidance for 2021, please see “Disclosure Based on TCFD Recommendations” in the 2022 Environmental Report.

* New TCFD guidance

Guidance on Metrics, Targets, and Transition Plans (October 2021) Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures (October 2021)
<https://www.fsb-tcf.org/publications/>

[Disclosure Based on TCFD Recommendations PDF: 1.3MB](#)

Business Impacts of Climate Change and Holistic Approach

The Kirin Group’s business, which generates value by utilizing ecosystem services, relies heavily on natural capital. As climate change becomes more severe due to greenhouse gases generated by business activities, the agricultural products and water that are the raw materials in Kirin’s business will be most affected. The containers and packaging required to deliver products also damage natural capital if we do not use appropriate container materials and reuse used containers. Based on these recognitions, we have been conducting a variety of risk surveys related to natural capital since around 2010, before the publication of the final TCFD recommendations. We are also taking a holistic approach with the understanding that material issues set out in our Environmental Vision—biological resources, water resources, containers and packaging, and climate change—are interrelated rather than independent issues.

Disclosure Framework

We started scenario analyses immediately after the publication of TCFD’s final recommendations in 2017 based on our many years of accumulated knowledge on the risk assessment of natural capital in the value chain and the impact of climate change, and were able to promptly disclose information in line with TCFD recommendations in the Kirin Group’s Environmental Report published at the end of June 2018.

Disclosure based on TCFD recommendations advanced scientific proof that climate change issues are closely linked to other environmental challenges, and reaffirmed the effectiveness of a holistic approach.

In this part, we explain how the Kirin Group assesses and analyzes the impacts of climate change and promotes transition strategies such as mitigation and adaptation in order to increase resilience to climate change and lead a decarbonized society, in accordance with the new guidance issued by the Task Force on Climate-related Financial Disclosures (TCFD) in October 2021.

Details are available in our Environmental Report and on our website.

Governance

● Supervisory structure

At the Kirin Group, the Board supervises the execution of operations addressing environmental issues, such as climate change, natural capital, and a recycling-oriented society. The Board also deliberates and makes resolutions on basic policies and material matters related to these and other environmental issues.

Specifically, the Board at least once a year receives reports on and reviews strategies, action plans, and the status of progress of environmental management. These involve business risks and growth opportunities associated with environmental issues, including material risks identified in the course of risk management, and the results of scenario analyses.

Disclosure of Information on Climate Change

Meanwhile, the Group Executive Committee deliberates and makes resolutions on material non-financial targets.

Excerpts from the 2022 Board reports (conducted twice)

● February 21

- The Corporate Governance Code has been revised, and it is expected that the Board will “deepen discussions to actively and proactively address sustainability issues.” and strengthening governance is necessary
- To strengthen our internal structure, multiple Group CSV Committee meetings will be held, and each meeting will require reporting to the Board. A new Group Environmental Meeting will be established, and it will be added to the governance structure along with the existing Group Human Rights Meeting
- To strengthen sustainability disclosure, we will disclose information in accordance with the new TCFD guidance and prepare for ISSB compliance

● December 19

- ESG integration is becoming mainstream in corporate valuations, and companies won't be valued by investors if they do not meet expectations for ESG compliance
- At a time when simultaneous disclosure of financial and non-financial information is required, accelerating the aggregation of non-financial information is a major challenge
- The Kirin Group is highly regarded for its progressive approach to TCFD and its trial disclosure under the TNFD, and will continue to take the lead in global disclosure initiatives

● Executive structure

The Senior Executive Officer in charge of CSV Strategy is responsible for environmental issues, including climate change, and also chairs the Group Environmental Meeting. Since FY2021, we have continued to participate in the Ministry of Economy, Trade and Industry's Study Group on Disclosure Policies for Non-financial Information, and have assisted in the making of rules for climate related financial disclosure.

The Group CSV Committee, which meets three times a year to discuss CSV issues, including environmental issues across the Kirin Group, is an advisory body to the President & CEO, which is chaired by President & CEO of Kirin Holdings and whose members consist of Presidents and CEOs of key Group companies and Senior Executive Officers of Kirin Holdings, submits any decisions it makes to the Board.

In 2022, we increased the number of meetings of the Group CSV Committee (from once a year to 3 times a year) and established a new Group Environmental Meeting (twice a year) under the Group CSV Committee.

| Committee | Chairperson | Committee Members | Main Agenda | Meeting Frequency |
|-----------------------------|--------------------------------|---|---|---|
| Group CSV Committee | KH President | <ul style="list-style-type: none"> • KH Internal Officers • Kirin Group • Presidents of key domestic and overseas operations | <ul style="list-style-type: none"> • Exchanging views on Group CSV policies, strategies, and action plans • Monitoring Group companies' implementation of CSV initiatives • Reports from affiliated meeting bodies | 3 times/year Of those, one held as a Group ESG Meeting |
| Group Environmental Meeting | Chief Officer in charge of CSV | <ul style="list-style-type: none"> • Chief Officer in charge of Supply Chain Management • KH Head of CSV Strategy • KH Head of Corporate Planning • KH Head of Accounting | <ul style="list-style-type: none"> • Monitoring progress on various road maps to realize the Kirin Group's Environmental Vision 2050 and exchanging views on policies, strategies, and plans | Twice/year |

● Performance linkage

In view of the importance of environmental issues, including climate change, executive compensation is set to be linked to the performance evaluation of non-financial metrics (the Group's Scope 1 + Scope 2 reduction targets, water consumption per unit at Lion production sites with high water stress, and recycling of PET bottles), one of the key management indicators in the Medium-Term Business Plan.

Environmental issues, including climate change, are included in the CSV commitment, one of the non-financial target for Group companies, and are reflected in their business plans and the performance evaluations of their top management.

Business Impact Assessment of Risks and Opportunities of Climate Change

Since 2017, continued scenario analyses have helped us improve our level of understanding and strategies for the risks and opportunities posed by climate change. In addition to our own manufacturing sites, we also analyze the yield of agricultural products, procurement costs, carbon pricing, etc. Businesses analyzed include Kirin Brewery, Kirin Beverage, Mercian, Lion, Kyowa Kirin, Kyowa Hakkō Bio, and Koiwai Dairy

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Products, which account for approximately 90% of the Kirin Group's sales.

Scenario analyses use group scenarios that combine temperature scenarios (RCP) and socioeconomic scenarios (SSP), such as those of the IPCC. It is necessary to take into account the fact that the impact estimates analyzed and calculated are subject to uncertainties in the research results, information, and data used. We will continue to reflect new research findings, information, and data to improve accuracy.

● Financial impact

| | Business Risks/Social Issues | Financial Impact |
|------------------------|---|--|
| Physical risks | Decline in yields of agricultural products | 2° C scenario: Approx. 0.9 billion yen to 2.5 billion yen (2050) 4° C scenario: Approx. 2.5 billion yen to 9.7 billion yen (2050) |
| | Shutdowns due to floods | Approx. 1 billion yen (once-in-200-year disaster, a total of 20 locations in Japan) |
| | Shutdowns due to droughts | Approx. 30 million to 0.6 billion yen |
| Transition risks | Financial impact of carbon pricing on energy | 1.5° C scenario: Approx. 9.5 billion yen to 427 billion yen (2030) |
| | | 2° C scenario: Approx. 69 billion yen (2030) |
| | | 4° C scenario: Approx. 1 billion yen (2030) |
| | Financial impact of carbon pricing on agricultural products*1 | RCP2.6/SSP1: Approx. 0.7 billion yen to 3.0 billion yen (2050) RCP8.5/SSP3: Approx. 1.6 billion yen to 5.7 billion yen (2050) |
| Business opportunities | Spread of infectious diseases | Immunity & health supplements market: Approx. 28,961.4 million USD (2030) |
| | Increased heatstroke | Drinks for heatstroke market: Approx. 94 billion to 188 billion yen (2100, 4° C scenario) |

*1 If GHG emissions are not reduced.

•The financial impact of a decline in yields of agricultural products due to climate change and carbon pricing on agricultural products are assessed using the 25–75 percentile range of the distribution of forecast data for price fluctuations. Due to high uncertainty, estimates of carbon pricing under the 1.5° C scenario are included in the Environmental Report as reference values.

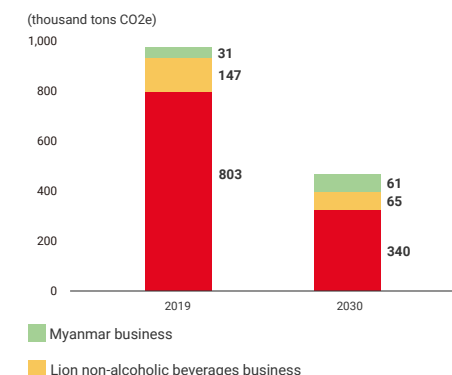
Analysis of impacts on assets

We estimated the impact of the sale of the Lion non-alcoholic beverages business in 2021 and the Myanmar business in 2023. There were no significant changes in the physical and transition risks, and although GHG emissions from the divested businesses were confirmed retroactively to the base year, we determined that there is no need to

change targets.

The estimated exposure of assets in a typical once-in-200-year disaster (a total of 20 locations in Japan) is as follows. While we believe it is unlikely that boilers, delivery trucks, etc., will be forced out of service before they reach their end of life due to laws and regulations, we have disclosed the book values below for reference although they are not material.

Impact of divestments on GHG emissions



Assets exposed to risk

| | Items Subject to Analysis | Impact |
|------------------------|--------------------------------------|-------------------------|
| Impact of divestment | Before business divestment | 515 thousand tons CO2e |
| | After divestment | 463 thousand tons CO2e |
| Assets exposed to risk | Exposure | Approx. 1 billion yen |
| | Residual value of related facilities | Approx. 1.1 billion yen |

Strategy

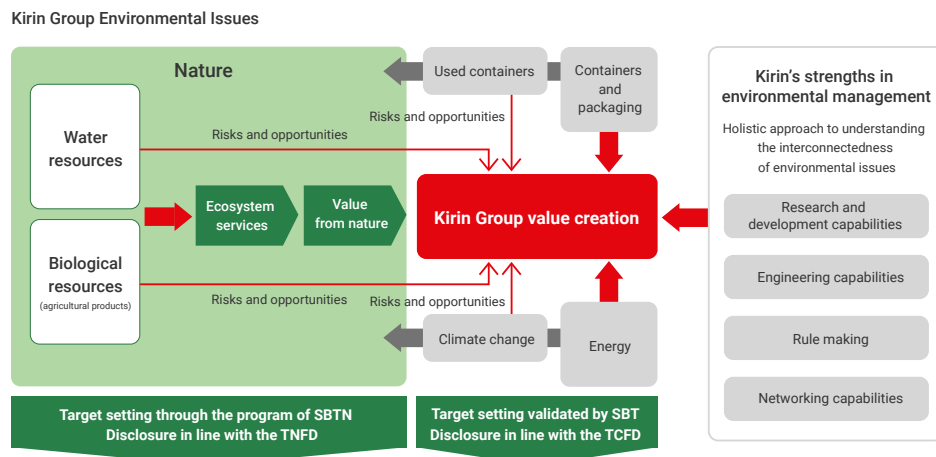
Considering the business characteristics of the Kirin Group, in order to sustainably create value, it is necessary to simultaneously respond to both the sustainable use of natural capital and increased resilience, as well as to minimize the challenges posed by climate change, containers, and packaging that impede this.

While the scenario analyses draw on multiple research findings and include different views, they generally indicate that climate change impacts on agricultural products and water are inevitable.

Although we have judged that there will be no major impact that will change the industrial structure, the impact will be considerable as a company that creates value through ecosystem services generated by natural capital. We believe that it is essential to continue to focus on reducing GHG emissions, making agricultural production areas sustainable, and addressing water risks and stresses.

We were also able to grasp social issues related to heat stroke and infectious diseases caused by climate change. We expect this can contribute to our business in the Health & Well-being domain, which the Kirin Group defines as a growth area.

Disclosure of Information on Climate Change

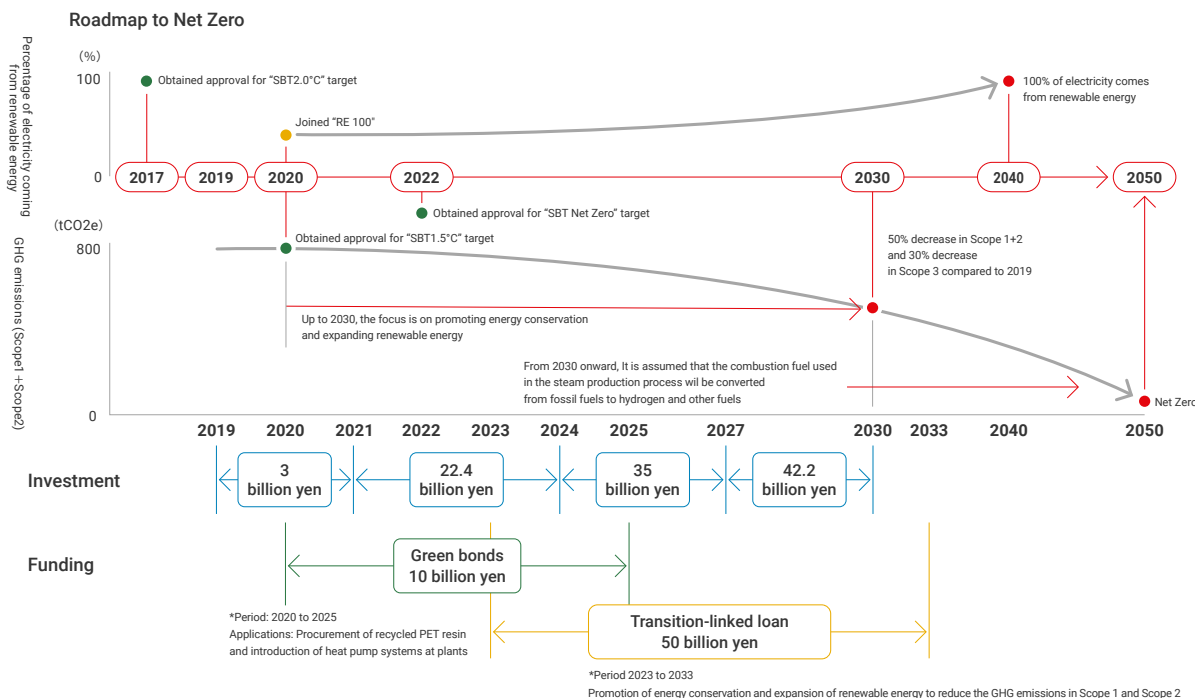


Transition Plan

The Kirin Group has formulated a roadmap for achieving science-based GHG emission reduction targets and net zero targets in order to limit the global average temperature increase to 1.5° C compared to pre-industrial levels. The roadmap was discussed and resolved by the Executive Committee, and has been in operation since January 2022. We have also developed and implemented investment plans and funding measures in response to our roadmap. Exploration and trials will continue for Scope 3, starting with reduction measures in the packaging and agricultural domains. As for climate change adaptation measures, we will expand the promotion of sustainable agriculture and forestry. We also plan to participate in a pilot program for international initiatives to develop natural capital target setting methodologies and disclosure frameworks to lead rule making. The roadmap will be reviewed regularly and updated appropriately in light of scientific advances, regulations, and other factors.

| | Significant Issues | Response Strategy | Progress |
|---|--------------------------|---|---|
| Adaptation (Sustainable use of natural capital) | Biological resources | <ul style="list-style-type: none"> Brewing technology that does not rely on barley Mass plant propagation technologies Support for farms to acquire certification for sustainable agriculture | <ul style="list-style-type: none"> Established mass propagation technology for hop seedlings Joined a corporate engagement program of the Science Based Targets Network (SBTN) for Nature and a pilot test of the Taskforce on Nature-related Financial Disclosures (TNFD) Commenced a survey on highly risky business sites, based on the results of natural disaster and flood simulations, to determine whether we need to take out insurance on these sites Implemented flood prevention and facilities measures at pharmaceutical plants that require a stable supply |
| | Water resources | <ul style="list-style-type: none"> Sharing of knowledge against floods Facilities to protect against floods Sharing of knowledge against droughts Development and deployment of water conservation techniques | |
| Mitigation (Minimizing impact on natural capital) | Containers and packaging | <ul style="list-style-type: none"> Promotion of PET-to-PET Lightweight containers | <ul style="list-style-type: none"> Joined Alliance To End Plastic Waste Increase use of 100% recycled plastic R100 PET bottles Practical application of chemical recycling Formulated a roadmap to reducing GHG emissions up to 2030 (in 2022). Finalized the reduction targets and paths for Group companies, and started to work toward these targets We have installed PPA-based (except for Yokohama Plant) large-scale solar power generation systems in all plants of Kirin Brewery (in 2021), Kyowa Kirin's Ube Plant, and Mercian's Fujisawa Plant (in 2023). We have also raised the percentage of renewable energy in the overall amount of energy procured to 100% at Kirin Brewery's Nagoya Plant (2020), Sendai Plant (2022), Okayama Plant, and Fukuoka Plant, Kyowa Kirin's Takasaki Plant, all production sites of Lion in Australia and New Zealand (2023), and all wineries of Chateau Mercian (2022). Kirin Holdings received SBT's net zero certification for the first time as a food company in the world (2022) |
| | Climate change | <ul style="list-style-type: none"> Achieving science-based GHG emission reduction targets Profit and loss neutral energy conversion (through 2030) | |
| Business opportunities | Infectious diseases | <ul style="list-style-type: none"> Providing corresponding products | <ul style="list-style-type: none"> Expanded product lineup Supply and provision of ingredients to partner companies Raising awareness of heatstroke |
| | Heatstroke | <ul style="list-style-type: none"> Providing drinks to address heatstroke | |

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● Reducing Scope 1 and Scope 2 emissions

(Unit: thousand tons CO2e)

| | 2021 | 2024 | 2030 | 2050 |
|-----------------|------|------|------|------|
| Kirin Brewery | 185 | 140 | 90 | 0 |
| Kirin Beverage | 40 | 37 | 20 | 0 |
| Mercian | 59 | 45 | 27 | 0 |
| Lion | 84 | 74 | 51 | 0 |
| Kyowa Kirin | 41 | 27 | 25 | 0 |
| Kyowa Hakko Bio | 201 | 165 | 109 | 0 |

● Investment amounts

(Unit: hundred million yen)

| | 2019-2021 MTBP | 2022-2024 MTBP | 2025-2027 MTBP | 2028-2030 MTBP |
|---|-------------------|-------------------|-------------------|-------------------|
| Investment in/ measures for energy conservation | 15 | 74 | 104 | 48 |
| Expansion of renewable energy | 15 | 150 | 237 | 362 |
| Energy transition | 0 | 0 | 9 | 12 |
| Total | 30 | 224 | 350 | 422 |

*Figures for MTBP from 2019 to 2021 are actual. The 2022-2023 plan was estimated at the time of planning the transition-linked loan and the figures may be revised.

*The investment value includes all cost related to install and procure the renewable energy.

● Scope 1 + 2 emissions reductions

For Scope 1 and Scope 2 reductions, we will combine three approaches: promoting energy conservation, expanding renewable energy, and transitioning energy. Up to 2030, we will increase energy efficiency and reduce its use, transitioning the energy mix from fossil fuels to electricity and utilizing electricity made from renewable energy sources.

After 2030, in order to achieve net zero in 2050, it will be necessary to switch the combustion fuel used in the steam production process from fossil fuels to hydrogen and other fuels that do not emit GHG. Infrastructure development and technological innovations are necessary, so there is uncertainty about achieving these goals. We will take the initiative in taking on the challenges of practical application and engage in appropriate policy proposals and rule making.

● Scope 3 emissions reduction

Of the categories defined in the GHG Protocol, we have identified the following categories as the areas of focus: Category 1 (manufacture of ingredients and materials) making up the largest proportion of the total emissions at approximately 60%, Category 4 (transport) making up the second largest proportion, and Category 9 (distribution). We will promote reductions through "encouragement of reduction at business partners" and "reducing our own independent emissions."

Lion has also shown in pilot tests that it can raise Scope 3 reduction targets by pooling actual GHG emissions with suppliers and customers with a third party, without mutual disclosure. This approach has

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been published by Australia's Climate Leaders Coalition as the Scope 3 Roadmap, which was presented by Lion's CEO at COP27.

| | |
|---|--|
| Encouragement of reduction at business partners | We plan to reduce emissions with an emphasis on engagement based on the emissions reduction plan and the status of progress in both quantitative and qualitative terms at each company, obtained through questionnaires to major suppliers |
| Reduction of our own independent emissions | We will make containers and packaging lighter and raise the percentage of recycled resin in PET bottles by leveraging the competence of our own research institute to develop containers and packaging in-house |

● Investment plan

Until 2030, our basic principle for environmental investment is profit and loss neutral. Specifically, we will offset increases in depreciation from investments and the cost of procuring renewable energy with cost benefits derived from energy saving. We use Net Present Value (NPV) as an indicator for environmental investments aimed mainly at reducing GHG emissions and have incorporated Internal Carbon Pricing (ICP: \$63/tCO₂e) into our framework for making investment decisions. We intend to accelerate the reduction of GHG emissions by reflecting ICP in the roadmap. In 2020, we issued green bonds (totaling 10 billion yen) to finance the procurement of recycled PET resin and the introduction of heat pump systems at plants. Then, in January 2023, we financed the projects related to energy saving and renewable energy, which we are promoting as part of initiatives to reduce Scope 1 and 2 GHG emissions, with a transition-linked loan (totaling 50 billion yen) for the first time as a food company in Japan. The loan is subject to the FY2022 subsidy for global warming countermeasures promotion project and the performance-linked interest subsidies program offered by the Ministry of Economy, Trade and Industry based on the Industrial Competitiveness Enhancement Act (financial support for promoting the transition towards achieving a carbon-neutral economy).

Risk Management

Climate change risks consist of two categories: physical risks and transition risks. Of these, areas producing raw materials and manufacturing sites are exposed to physical risks. Since 2013, the company has made various efforts to make its areas producing raw materials sustainable while accumulating knowledge on recovery from flood damage suffered by manufacturing facilities. To reduce GHG emissions, which is a significant transition risk, we are prioritizing the “additionality” of substantially increasing renewable energy and the “ethicality” of energy generation from the perspective of the environmental impact and human rights. We have promoted the installation of large-scale solar power generation at our plants and participation in the wind power generation business.

In addition, natural disasters of unprecedented scale and legal regulations that change the structure of industry are becoming a reality, and we believe that the approach of setting scenarios and analyzing and evaluating them is quite effective for risks that would have an extremely material impact on business if they occurred, regardless of the possibility of such events. We will apply this approach not only to climate change but also to other challenges to minimize risks and expand business opportunities.

Material risks, including those related to climate change, are managed by the Group Risk and Compliance Committee, which meets every quarter and is chaired by the Senior Executive Officer in charge of Risk Management. For the BCP, we have reviewed our traditional event-by-event approach and transitioned to an all-hazard approach to business continuity planning whereby we work out countermeasures with a focus on the loss of management resources, regardless of the event.

Metrics and Targets

| Response | Items | Targets | Results |
|---------------------|--|-----------------------------------|---------------------------------------|
| Mitigation measures | GHG emissions reduction targets (relative values) | Net zero (2050) | 4,411 thousand tons CO ₂ e |
| | Scope1+2 | 50% reduction (in 2030 from 2019) | 13% reduction |
| | Scope 3 | 30% reduction (in 2030 from 2019) | 722 thousand tons CO ₂ e |
| | Percentage of renewable energy in total energy consumption | 100% (2040) | 17% |
| Adaptation measures | Number of small farms that received training for the acquisition of certification in Sri Lanka | 10,000 farms (2025) | 2,120 farms |
| | Ratio of certified palm oil in Japan | Maintain 100% | 100% |
| | Lion water efficiency* | Less than 2.4 kl/kl (2025) | 3.8kl/kl |
| | Kyowa Hakko Bio water consumption | 32% reduction (in 2030 from 2015) | 52% reduction from 2015 |
| | Ratio of FSC-certified paper container used in the Japan Non-Alcoholic Beverages Businesses | Maintain 100% | 100% |
| | Proportion of recycled materials used in PET bottles in Japan | 50% (2027) | 4.9% |

*Tooheys Brewery, Castlemaine Perkins Brewery, James Boag Brewery, Pride

Disclosure of Natural Capital

In 2010, the year of the 10th Conference of the Parties (COP10) to the Convention on Biological Diversity held in Nagoya, we commenced a risk assessment of biological resources and acknowledged the dependency of our operations on natural capital of specific regions. Recognizing this, we have continued and expanded support tea farms for the acquisition of the Rainforest Alliance certifications in Sri Lanka, the main producing area of tea leaves for *Kirin Gogo-no-Kocha*. As for water resources, we are acting on our early recognition that water stress and risk vary widely by country and region given our experience conducting business in Japan where water resources are relatively abundant and in Australia where water stress is intense. Our non-financial information disclosure related to natural capital and our efforts toward achieving science-based targets are as follows:

| | |
|------------------------|--|
| Information disclosure | <ul style="list-style-type: none"> • Participated in the TNFD Forum as the first Japanese food and Pharmaceutical company. We also participated in TNFD consultation group in Japan. • Disclosed the LEAP approach (Locate-Evaluate-Assess-Prepare) proposed in the Beta 0.1v of the TNFD framework. It is in the Kirin Group's Environmental Report published in July 2022 as the first in the word on a trial basis. • Participated in the TNFD pilot program and contributed to the rule making • Mariko Vineyard has been selected as an approved site for the ministry of the environment's 30by30 alliance for biodiversity. The vineyard, which grows grapes for Japan Wine, was introduced as a nature positive example at the 15th Conference of the Parties (COP15) to the Convention on Biological Diversity. |
| Target setting | <ul style="list-style-type: none"> • Participated in the Corporate Engagement Program organized by Science Based Target Network for the first time as a Japanese food and Pharmaceutical company • Disclosed the AR3T framework on a trial basis in the Kirin Group's Environmental Report published in July 2022. We prioritized our production sites based on the proposed methodology presented by the SBTN in it. |