

Environmental Policy

Kirin Group's Environmental Policy

Basic policy

Kirin Group, a supplier of food and health products, will contribute to building a society where people and nature live in harmony by reducing the carbon footprint of all its business operations, implementing environmental conservation activities, and bringing environmental value to its customers.

Activity policy

1. Implementing an environmental policy throughout the entire value chain and all aspects of business activities, and
2. Assuring the quality of environmental activities through assessments and audits.

Under the leadership of top management and through the participation of all employees, Kirin Group will incorporate environmental measures into business management and pursue challenging goals by recognizing them as one of the top management priorities.

■ Legal requirements

We will comply with environmental laws, regulations, and agreements as well as voluntary control standards with high moral values.

■ Technological development

We will develop technologies that coexist with nature and are valuable for both the global environment and our customers.

■ Environmental management

We will develop an environmental management system and make continuous improvements in accordance with our business strategy.

■ Human resources development

We will make continuous efforts to develop human resources who contribute to environmental conservation activities.

■ Environmental performance

We will promote resource/energy saving, reduce greenhouse gas emissions, prevent environmental pollution, and promote the 3 R's (Reduce, Reuse, Recycle).

■ Communication

We will conduct community-based environmental conservation activities while providing accurate environmental information to increase transparency and gain trust.

Revised on October 2008

Policies on Plastic Policy

The Kirin Group Plastic Policy

1. Promoting recycling of PET bottles

The plastic containers, packaging, and other materials provided by the Kirin Group are mostly PET used for beverage bottles and the Kirin Group has used recycled resin for a part of them. The Kirin Group will promote the recycling of PET bottles by aiming to increase this recycled plastic ratio to 50% by 2027.

The recycling of PET bottles cannot be promoted without an efficient method for collecting high-quality used PET bottles. At the Kirin Group, we will proactively work with national and local governments, and industry organizations to create an efficient collection and reuse system for high-quality used PET bottles.

2. Efforts to reduce single-use plastic* and replace it with other materials

Most plastic waste is comprised of what is referred to as single-use plastic. The Kirin Group will make efforts to reduce the single-use plastic provided by its group companies and replace it with other materials.

* Disposable plastic that is used only and not intended for reuse.

3. Improving sustainability of raw materials for PET bottle

At the Kirin Group, we have made continuous efforts to reduce the weight of our PET bottles from the standpoint of reducing our environmental impact. We will keep striving toward even lighter bottles in the future.

In addition, to improve the sustainability of raw materials for PET bottle, we will study the introduction of PET bottle materials derived from inedible plants to reduce our dependence on petroleum resources.

In addition to the above measures, we will proactively participate in educational programs to promote plastic recycling, coastal cleanup activities, and other programs.

Kirin Beverage Company, Limited also supports the Soft Drink Business Plastic Resource Reclamation Declaration 2018 announced last year by the Japan Soft Drink Association, and will take proactive measures to realize the "100% Effective Utilization of PET Bottles by 2030" plan put forth by the industry.

Established on February 2019

Policies on biological resources

Kirin Group's Declaration of Support for Biodiversity Conservation

Kirin Group relies on the bounty of nature to make products. We utilize the power and wisdom nature has to offer in conducting its business activities. Because of that, we recognize the importance of conserving biodiversity as business challenges. Kirin Group actively pursues a broad range of activities to protect biodiversity in order to continue offering new joys of "food and well-being" into the future.

1. Kirin Group promotes sustainable use of resources while ensuring conservation of biodiversity

The Kirin Group is committed to sustainable use of resources while taking biodiversity into consideration in all of its business activities so that all people around the world may continue to enjoy the bounty of nature.

2. Kirin Group makes effective use of its technologies

As a company that offers new joys of "food and well-being," the Kirin Group makes effective use of its technologies when conducting business activities to contribute to the sustainable use of resources and protection of biodiversity.

3. Kirin Group works in cooperation with stakeholders

Kirin Group adds a biodiversity perspective to the environmental protection activities which have continuously been engaged in and works in cooperation with customers and local partners to continue conserving biodiversity.

4. Kirin Group properly complies with treaties and laws

Kirin Group complies with treaties, laws and regulations concerning biodiversity and strives to help people enjoy the blessings of biodiversity worldwide.

Established and announced in October 2010

Kirin Group's Guidelines on Sustainable Sourcing of Biological Resources

Purpose The purpose of the Guidelines is to present the fundamental principles of the Group so that it can continue to ensure the "sustainable sourcing of biological resources" based on the Kirin Group's Declaration of Support for Biodiversity Conservation.

Applicable scope The Guidelines apply to biological resources procured by the Kirin Group's operating companies in Japan for which the Group has specified that there is risk of illegal deforestation, environmental destruction and such like based on risk assessment performed.

Guidelines on Sustainable Sourcing of Biological Resources

Kirin Group procures applicable biological resources based on the following principles.

- 1. Resources that the Group has confirmed;**
not to derive from a plantation developed illegally, to have been produced through appropriate procedures in compliance with the laws and regulations of the areas where the raw material is produced.
- 2. Resources deriving from plantations, forests, etc. that have been certified by credible third parties.**
- 3. Resources that have not been produced by entities which are considered to be involved in environmental destructions.*1**

*1 Reference is currently made to the FSC's Policy for the Association of Organization with FSC.

Established in December 2012, announced in June 2013

Related Information → P.26 ~ P.35

Kirin Group Action Plan for the Sustainable Use of Biological Resources

1. Black Tea

Kirin Company, Limited conducts the following three-step survey and, through annual reviews, is raising the level of sustainability.

- Step.1** Specify the tea growers from which to procure black tea leaves.
- Step.2** Evaluate the sustainability*1 of the specified growers.
- Step.3** Aim to use black tea leaves from those growers with a high level of sustainability.

2. Paper and Printed Materials

Kirin Company, Limited, Kirin Brewery Company, Limited, Kirin Beverage Company, Limited and Mercian Corporation will:

Office paper*2

aim to use only FSC®-certified paper or recycled paper by the end of 2020.

Containers and packaging*3 *4

- 1) 6-can packs: aim to use only FSC-certified paper by the end of 2017.
- 2) Gift boxes: aim to use only FSC-certified paper by the end of 2020.
- 3) Drink boxes: aim to use only FSC-certified paper by the end of 2020.
- 4) Cardboard cartons for products: aim to use only FSC-certified paper by the end of 2020.

Other

Priority will be given to the use of paper that is FSC-certified, paper made with wood from FSC-managed forests, paper made from recycled paper, and paper that has been confirmed through supplier surveys as not resulting in the destruction of high conservation value forests*5.

3. Palm Oil*6

Operating companies in Japan will use the Book and Claim model in their handling of palm oil used as a primary or secondary ingredient. Book and Claim is a model for the trading of certificates approved by the Roundtable on Sustainable Palm Oil (RSPO).

When the identification of palm oil producers and the direct purchase of sufficient quantities of RSPO-certified palm oil becomes possible, a new, upgraded action plan will be formulated.

Notes

- *1 Sustainability of tea in Step 2 will be evaluated according to the status of Rainforest Alliance certification.
- *2 "Office paper" refers to copy paper, envelopes (excluding non-standard sizes and some industrial-use envelopes), business cards, and printed materials such as company pamphlets.
- *3 Includes Kirin-Tropicana Inc.
- *4 Excludes limited-edition products, small-lot product varieties, special shapes, imported products, etc.
- *5 HCVF (High Conservation Value Forest), as defined by FSC®.
- *6 Palm oil refers to the oil derived from the fruit of the oil palms, and includes palm kernel oil obtained from their seeds.

Established on February 2013
Revised on February 2017

Kirin Group's Principles of Managing Access to Genetic Resources

- 1.The Group shall respect international agreements concerning biodiversity.
- 2.Access to genetic resources shall be based on prior informed consent of the country providing such resources, and no genetic resources whose backgrounds are unknown shall be carried in or used.
- 3.Use of genetic resources, including fair and equitable sharing of the benefits arising out of their utilization, shall be properly managed in accordance with international treaties.

Established and announced in October 2010

Consideration of the Environment in Product Development

Guidelines on Environmentally Conscious Design for Containers and Packaging

1. Purpose

The Kirin Group aims to pass down the bounty of natural environment of our Earth in sustainable form to the future generations and continue providing value to customers and society on the whole. To this end, we comply with the relevant laws and regulations and with the Guidelines on Environmentally Conscious Design for Containers and Packaging in pursuing product development in consideration of the environment and promoting reduction and recycling of wastes in its business activities. By so doing, the Kirin Group aims to realize a society that is based on 100% recycling so as to balance the environmental impact produced by the Kirin Group's value chain with the Earth's ability to supply resources.

2. Basic Concept for Development, Design and Adoption of Containers and Packaging

- (1) In development and design, maintain quality, safety and hygiene of product contents, safety of containers and packaging, and appropriate presentation of product information as prerequisites, and take into account environmental applicability, user-friendliness, transport efficiency and economic performance.
- (2) In adoption, select containers and packaging that meet customers' purchasing and drinking styles, form of selling, and characteristics of product contents.

3. Concept of Caring for the Environment in Development, Design and Adoption of Containers and Packaging

- (1) Strive to reduce the environmental impact associated with containers and packaging throughout the lifecycle, i.e., from procurement to recycling, and keep the impact on the natural environment to a minimum.
- (2) In order to make effective use of resources and contribute to the realization of the circular economy, use materials that are easy to recycle or dispose of, that have minimal environmental impact, and materials that use recyclable resources.
- (3) In order to contribute to realizing a decarbonized society, select materials that require low energy use and that generate minimal greenhouse gas emissions during processes of manufacturing containers and packaging and of transporting products.
- (4) Select materials in consideration of preventing environmental pollution at the stage of disposal.
- (5) Promote the 3R (reduce, reuse, recycle) + Renewable (sustainable resources) activities in accordance with the following.

4. Guidelines for promoting the 3R (reduce, reuse, recycle) + Renewable (sustainable resources)

- (1) Reduce
 1. Make efforts to reduce weight of containers and packaging, sales promotion tools, etc. and to reduce the amount of materials used.
 2. Make efforts to design containers and packaging so that the volume can be reduced as much as possible by folding or crushing them when they are recycled or disposed of.
 3. Shift to simple packaging, try to eliminate individual pieces of wrapping and outer packaging, and make efforts to keep packaging reasonable.
- (2) Reuse
 1. Make efforts to design containers and packaging so that the number of reuses and refills can be repeated as much as possible.
 2. Make efforts to keep the environmental impact associated with reuse and refilling as small as possible.
- (3) Recycle
 1. Use single material as much as possible, and when using two or more types of materials, make efforts so as to enable their easy separation.
 2. Make efforts to use recycled materials and those with high recycling rates.
 3. Make efforts to adopt specifications and designs that facilitate separated discharge, sorted collection, and material sorting.

Established by Kirin Brewery in 1998. The scope was expanded to cover the entire Japanese alcoholic and non-alcoholic beverages businesses from 2014, and then to cover all domestic group companies excluding the pharmaceuticals business from 2019.

* The Kirin Group performs LCA (Life Cycle Assessment) on major containers for alcoholic beverages and non-alcoholic beverages whenever necessary. We also take into account the product characteristics, unit of purchase by customer at each purchase, major sales store format, projection on collection of empty containers and other relevant factors on a comprehensive basis to select containers.

Environmental Data Calculation Methods

(1) Usage Factors

Energy Use Conversion Factors

| | Japan | Overseas | |
|-------------|---|----------------------|--|
| Fuel | "Act on the Rational Use of Energy" Factors | Lion | <ul style="list-style-type: none"> •Australia - National Greenhouse Account Factors •New Zealand - Measuring Emissions:Detailed Guide •USA - GHG Emission Factors Hub |
| | | Other than the above | "Act on the Rational Use of Energy" Factors |
| Electricity | Used 3.6 (MJ/kWh), which is used by International Energy Agency (IEA) and other organizations | | |

Emission factors for GHG Emissions

| | Japan | Overseas | |
|-------------|---|----------------------|--|
| Fuel | Emission factors from Greenhouse Gas Emissions Calculation and Reporting Manual (Ministry of Environment/Ministry of Economy, Trade & Industry) | Lion | <ul style="list-style-type: none"> •Australia - National Greenhouse Account Factors •New Zealand - Measuring Emissions:Detailed Guide •USA - GHG Emission Factors Hub |
| | | Other than the above | Emission factors from Greenhouse Gas Emissions Calculation and Reporting Manual (Ministry of Environment/Ministry of Economy, Trade & Industry) |
| Electricity | <ul style="list-style-type: none"> •Emission factors published by individual power companies →If none published: Emission factors by country from IEA's Emission Factors for the year in question | | |

(2) Calculation boundaries

Entire Group

| Business | Company |
|---|--|
| Japan Beer and Spirits Business | Kirin Brewery, Kirin Distillery, SPRING VALLEY BREWERY, Eishogen Kirin Brewery (Zhuhai) |
| Japan Non-Alcoholic Beverages Business | Kirin Beverage, Shinshu Beverage, Hokkaido Kirin Beverage, Kirin Maintenance Service, each site of Kirin Beverage Service (Hokkaido, Sendai, Tokyo, Chubu, Kansai) KIRINVIVAX, Tokai Beverage Service |
| Oceania Integrated Beverages Business | Lion, New Belgium Brewing |
| Pharmaceuticals Businesses | Kyowa Kirin, KYOWA KIRIN FRONTIER Co., Ltd., Kyowa Medical Promotion Co., Ltd., Kyowa Kirin plus Co., Ltd., Kyowa Hako Kirin China Pharmaceutical, Kyowa Kirin Pharmaceutical Research |
| Other Businesses (all companies included) | Mercian, NIPPON LIQUOR, Daiichi Alcohol, Wine Curation, Myanmar Brewery Interfood, Vietnam Kirin Beverage, Four Roses Distillery Kyowa Hako Bio, KYOWA PHARMA CHEMICAL, KYOWA ENGINEERING CO.,LTD, BioKyowa Inc., Shanghai Kyowa Amino Acid, Thai Kyowa Biotechnologies Co., Ltd., Kirin Holdings, Kirin Business Expert, KIRIN BUSINESS SYSTEM, KOIWAI DAIRY PRODUCTS, Kirin Echo, Kirin and Communications, Kirin Engineering Kirin City, Kirin Techno-System, KIRIN GROUP LOGISTICS |

Breakdown of Calculations by Business

Refer to above "entire Group" calculation boundary table.

Breakdown of Calculations by Region

| Region | Company |
|----------------|--|
| Japan | Kirin Brewery, Kirin Distillery, SPRING VALLEY BREWERY, Eishogen, Kirin Beverage, Shinshu Beverage, Hokkaido Kirin Beverage, Kirin Maintenance Service, each site of Kirin Beverage Service (Hokkaido, Sendai, Tokyo, Chubu, Kansai) KIRINVIVAX, Tokai Beverage Service, Kyowa Kirin, KYOWA KIRIN FRONTIER Co., Ltd., Kyowa Medical Promotion Co., Ltd., Kyowa Kirin plus Co., Ltd., Kyowa Hakko Bio, KYOWA PHARMA CHEMICAL, KYOWA ENGINEERING CO.,LTD, KOIWAI DAIRY PRODUCTS, Kirin Echo, Kirin and Communications, Kirin Engineering, Kirin City, Kirin Techno-System, KIRIN GROUP LOGISTICS, Mercian, NIPPON LIQUOR, Daiichi Alcohol, Wine Curation, Kirin Holdings, Kirin Business Expert, KIRIN BUSINESS SYSTEM |
| Oceania | Lion |
| Southeast Asia | Myanmar Brewery, Interfood, Vietnam Kirin Beverag, Thai Kyowa Biotechnologies Co., Ltd. |
| Other | Kyowa Hakko Kirin China Pharmaceutical, Kyowa Kirin Pharmaceutical Research, BioKyowa Inc., Shanghai Kyowa Amino Acid, Kirin Brewery (Zhuhai), Four Roses Distillery, New Belgium Brewing |

Calculation boundary of Scope 3 emissions (P.12,59,70,71,100,101)

| Business | Company |
|---|--|
| Japan Beer and Spirits Business | Kirin Brewery, Kirin Distillery, Kirin Brewery (Zhuhai) |
| Japan Non-Alcoholic Beverages Business | Kirin Beverage, Shinshu Beverage |
| Oceania Integrated Beverages Business | Lion |
| Pharmaceuticals Businesses | Kyowa Kirin, Kyowa Hakko Kirin China Pharmaceutical, Kyowa Kirin Pharmaceutical Research |
| Other Businesses (all companies included) | Mercian, Daiichi Alcohol, Myanmar Brewery, Interfood, Vietnam Kirin Beverage, Kyowa Hakko Bio, KYOWA PHARMA CHEMICAL, BioKyowa Inc., Shanghai Kyowa Amino Acid, Thai Kyowa Biotechnologies Co., Ltd., Kirin Holdings, KOIWAI DAIRY PRODUCTS, KIRIN GROUP LOGISTICS |

Message from Top Management

Environmental Strategy

Indicators and Goals

Activity



Governance and Risk Management

Environmental Data

Breakdown of business locations subject to water risk assessments (P.38)

| Constituent/Name of Group Company | Country | Number of manufacturing plants | Remarks |
|--------------------------------------|------------|--------------------------------|---|
| Kirin Brewery | Japan | 9 | Hokkaido Chitose, Sendai, Toride, Yokohama, Nagoya, Shiga, Kobe, Okayama, Fukuoka * Because Kirin Beverage Shiga Plant is attached to Kirin Brewery Shiga Plant, it is included in Kirin Brewery Shiga Plant |
| Kirin Distillery | Japan | 1 | Gotemba |
| Mercian | Japan | 3 | Yatsushiro, Fujisawa, Katsunuma Winery |
| Kirin Beverage | Japan | 1 | Shonan * Because Kirin Beverage Shiga Plant is attached to Kirin Brewery Shiga Plant, it is included in Kirin Brewery Shiga Plant |
| Shinshu Beverage | Japan | 1 | |
| Kyowa Kirin | Japan | 3 | Takasaki, Fuji, Ube |
| | China | 1 | Kyowa Hakko Kirin China Pharmaceutical |
| Kyowa Iryo Kaihatsu | Japan | 1 | |
| Kyowa Hakko Bio | Japan | 3 | Yamaguchi Production Center (Hofu), Yamaguchi Production Center (Ube), Healthcare Plant (Tsuchiura) |
| Kyowa Pharma Chemical | Japan | 1 | Head office |
| Koiwai Dairy Products | Japan | 2 | Koiwai, Tokyo |
| BioKyowa Inc. | America | 1 | |
| Shanghai Kyowa Amino Acid | China | 1 | |
| Thai Kyowa Biotechnologies Co., Ltd. | Thai | 1 | |
| Kirin Brewery (Zhuhai) | China | 1 | |
| Interfood | Vietnam | 1 | |
| Vietnam Kirin Beverage | Vietnam | 1 | |
| Four Roses Distillery | America | 2 | Lawrenceburg, Cox's Creek |
| Myanmar Brewery | Myanmar | 1 | |
| Lion | Austraria | 7 | Castlemaine Perkins, James Boag Brewery, Little Creatures Brewery Fremantle, Tooheys Brewery, West End Brewery, Little Creatures Brewery Geelong, Malt Shovel Brewery |
| | Newzealand | 3 | Pride Brewery, Speights Brewery, Wither Hills Winery |

Environmental Accounting

Environment conservation costs

(Unit: million yen)

| Category | Specific details | Investment amounts | | | Expense amounts | | |
|--|---|--------------------|-------|-------|-----------------|-------|-------|
| | | 2018 | 2019 | 2020 | 2018 | 2019 | 2020 |
| Environmental conservation costs to control environmental impact resulting from production and service activity within the business areas (total of ①②③ below) | | 763 | 1,243 | 1,406 | 5,499 | 5,854 | 4,856 |
| ① Pollution prevention costs | Air and water pollution prevention activities, analysis and measurement of air and water quality, etc. | 533 | 536 | 319 | 2,477 | 2,330 | 2,075 |
| ② Global environmental conservation costs | Solar power generation, CO ₂ recovery, energy saving, cogeneration, etc. | 215 | 655 | 1,064 | 828 | 854 | 814 |
| ③ Resource circulation costs | Reduction of sludge, waste recycling, water recycling, etc. | 16 | 53 | 23 | 2,195 | 2,669 | 1,968 |
| Upstream / downstream costs | Containers and Packaging Recycling Act, Recycling contracting costs | 1 | 86 | 54 | 584 | 375 | 475 |
| Administration costs | Operation of environmental management systems, environmental education, greenification in business sites, etc. | 13 | 35 | 65 | 319 | 300 | 301 |
| Research and development costs | Container lightweighting, R&D regarding mitigation of environmental load of byproducts, wastewater, etc. | 29 | 63 | 40 | 100 | 131 | 158 |
| Social activities costs | Environmental conservation activity costs such as activities to protect the blessings of water, donations to nature conservation groups, etc. | 0 | 0 | 0 | 47 | 49 | 38 |
| Environmental remediation costs | | 0 | 0 | 0 | 0 | 0 | 5 |
| Others | | 0 | 131 | 0 | 1 | 186 | 0 |
| Total | | 806 | 1,559 | 1,566 | 6,550 | 6,895 | 5,834 |

Economic effect

(Unit: million yen)

| Items | Details | 2018 | 2019 | 2020 |
|--|--|------|------|------|
| Proceeds from sales of valuables, etc. | Waste recycling, etc. | 840 | 949 | 656 |
| Resources saving effects | Energy saving, waste reduction, resources saving, etc. | 555 | 591 | 548 |

Calculation boundaries

2018: Kirin Brewery, Kirin Distillery, Eishogen, Kirin Beverages, Shinshu Beverages, Mercian, Kyowa Kirin, Kyowa Hakko Bio, KYOWA PHARMA CHEMICAL, Koiwai Dairy Products, Kirin

2019: Kirin Brewery, Kirin Distillery, Eishogen, Kirin Beverages, Shinshu Beverages, Mercian, Kyowa Kirin, Kyowa Hakko Bio, KYOWA PHARMA CHEMICAL, Koiwai Dairy Products, Kirin Holdings

2020: Kirin Brewery, Kirin Distillery, Eishogen, Kirin Beverages, Shinshu Beverages, Mercian, Kyowa Kirin, Kyowa Hakko Bio, KYOWA PHARMA CHEMICAL, Koiwai Dairy Products, Kirin Holdings

Material Balance

Material Flow (2020, entire Group)

| | Unit | Japan Beer and Spirits Business | Japan Non-Alcoholic Beverages Business | Oceania Integrated Beverages Business | Pharmaceuticals Businesses | Other Businesses | Total | | | |
|--|--|---------------------------------|--|---------------------------------------|----------------------------|------------------|--------|---------|---------|-------|
| | | | | | | | 2020 | 2019 | 2018 | |
| Substance | thousand t | 519 | 61 | 324 | 1 | 404 | 1,308 | 1,431 | 1,484 | |
| | % | 40 | 5 | 25 | 0.0 | 31 | 100 | | | |
| | Raw material | thousand t | 338 | 24 | 85 | 0.1 | 337 | 784 | 889 | 858 |
| | Packaging material | thousand t | 181 | 37 | 239 | 0.5 | 66 | 524 | 542 | 626 |
| Water (fresh water only) | thousand m ³ | 14,295 | 1,815 | 5,054 | 1,747 | 34,700 | 57,611 | 68,218 | 76,319 | |
| | % | 25 | 3 | 9 | 3 | 60 | 100 | | | |
| Water recycling | thousand m ³ | 2,825 | 311 | 246 | 3,735 | 86,534 | 93,651 | 121,334 | 124,003 | |
| Energy | TJ | 3,916 | 857 | 2,269 | 632 | 4,449 | 12,123 | 12,630 | 13,081 | |
| | % | 32 | 7 | 19 | 5 | 37 | 100 | | | |
| Production volumes | Alcoholic and non-alcoholic beverages | thousand kL | 2,823 | 608 | 1,599 | 0 | 745 | 5,775 | 5,860 | 5,881 |
| | Food products/Pharmaceuticals and biochemicals | thousand t | 8 | 0 | 78 | 0.4 | 53 | 139 | 171 | 191 |
| Wastewater | thousand m ³ | 11,820 | 1,450 | 3,313 | 1,840 | 35,489 | 53,912 | 67,387 | 71,747 | |
| | % | 22 | 3 | 6 | 3 | 66 | 100 | | | |
| Greenhouse gas emissions (Scope1+Scope2) | thousand t-CO ₂ e | 224 | 52 | 206 | 44 | 349 | 875 | 949 | 986 | |
| | % | 26 | 6 | 24 | 5 | 40 | 100 | | | |
| NOx | t | 124 | 43 | 185 | 5 | 45 | 403 | 425 | 436 | |
| SOx | t | 0.4 | 0.2 | 1 | 0 | 8 | 10 | 15 | 19 | |
| Waste products | thousand t | 137 | 12 | 190 | 2 | 84 | 426 | 470 | 421 | |
| | % | 11 | 4 | 58 | 0.7 | 26 | 100 | | | |
| | Volume disposed on site | thousand t | 0 | 0 | 0 | 0.5 | 2 | 2 | 12 | |
| | Volume of recycled waste | thousand t | 134 | 12 | 187 | 2 | 81 | 416 | 402 | |
| | Final disposed volume | thousand t | 3 | 0 | 3 | 0.1 | 1 | 12 | 8 | |

Water Resources

Trends in water use volumes and water consumption rate (entire Group)

| | Water use volume (thousand m ³) | Water consumption rate(by sales revenue) (m ³ /million yen) |
|------|--|---|
| 2016 | 81,620 | 44 |
| 2017 | 79,583 | 43 |
| 2018 | 76,319 | 40 |
| 2019 | 68,218 | 35 |
| 2020 | 57,611 | 31 |

Trend in water use volumes (by business)

(Unit: thousand m³)

| | Japan Beer and Spirits Business | Japan Non-Alcoholic Beverages Business | Oceania Integrated Beverages Business | Pharmaceuticals Businesses | Other Businesses (all companies included) | Total |
|------|------------------------------------|---|--|-------------------------------|--|--------|
| 2016 | 12,896 | 2,656 | 5,514 | 3,110 | 57,443 | 81,620 |
| 2017 | 13,190 | 2,341 | 5,469 | 3,047 | 55,534 | 79,583 |
| 2018 | 14,049 | 2,345 | 5,378 | 2,309 | 52,238 | 76,319 |
| 2019 | 14,470 | 2,211 | 5,023 | 2,232 | 44,283 | 68,218 |
| 2020 | 14,295 | 1,815 | 5,054 | 1,747 | 34,700 | 57,611 |

Trend in water use volumes (by region)

(Unit: thousand m³)

| | Japan | Oceania | Southeast Asia | Other | Total |
|------|--------|---------|----------------|--------|--------|
| 2016 | 62,707 | 5,514 | 2,560 | 10,838 | 81,620 |
| 2017 | 61,721 | 5,469 | 2,500 | 9,892 | 79,583 |
| 2018 | 58,120 | 5,378 | 2,811 | 10,011 | 76,319 |
| 2019 | 50,333 | 5,023 | 3,654 | 9,208 | 68,218 |
| 2020 | 40,187 | 4,598 | 3,449 | 9,377 | 57,611 |

Trends in annual water use volumes by water source (entire Group)

| | Unit | Fresh water*1 | | | | | Total |
|------|-------------------------|------------------|---|----------------------|-------------|-----------------------------------|--------|
| | | Service water | Rivers (including industrial water) | Underground water | Storm water | Gray water*2 (Reclaimed water) | |
| 2016 | thousand m ³ | 9,946 | 41,375 | 30,289 | 2 | 8 | 81,620 |
| | % | 12 | 51 | 37 | 0.0 | 0.0 | 100 |
| 2017 | thousand m ³ | 9,765 | 42,150 | 27,667 | 1 | 0 | 79,583 |
| | % | 12 | 53 | 35 | 0.0 | 0.0 | 100 |
| 2018 | thousand m ³ | 10,312 | 40,415 | 25,592 | 0 | 0 | 76,319 |
| | % | 14 | 53 | 34 | 0.0 | 0.0 | 100 |
| 2019 | thousand m ³ | 10,605 | 35,679 | 21,934 | 0 | 0 | 68,218 |
| | % | 16 | 52 | 32 | 0.0 | 0.0 | 100 |
| 2020 | thousand m ³ | 10,566 | 24,936 | 22,109 | 0 | 0 | 57,611 |
| | % | 18 | 43 | 38 | 0.0 | 0.0 | 100 |

*1 No use of sea water or external wastewater or quarry water collected in the quarry.

*2 Externally supplied gray water

Trend in water use volumes of Japan Integrated Beverages Business

| | Unit | Kirin Brewery | Kirin Distillery | Kirin Beverage | Shinshu Beverage | Mercian |
|------|-------------------------|---------------|------------------|----------------|---------------------|---------|
| 2016 | thousand m ³ | 11,009 | 1,324 | 1,359 | 1,297 | 4,317 |
| | m ³ /kL | 5.0 | 3.1 | 2.9 | 5.2 | 32.6 |
| 2017 | thousand m ³ | 11,199 | 1,383 | 968 | 1,374 | 3,391 |
| | m ³ /kL | 5.3 | 3.2 | 2.2 | 5.2 | 25.5 |
| 2018 | thousand m ³ | 12,006 | 1,379 | 971 | 1,374 | 3,240 |
| | m ³ /kL | 5.3 | 3.1 | 2.1 | 5.3 | 22.5 |
| 2019 | thousand m ³ | 12,509 | 1,380 | 968 | 1,243 | 2,825 |
| | m ³ /kL | 5.3 | 3.1 | 2.2 | 4.8 | 19.8 |
| 2020 | thousand m ³ | 12,280 | 1,386 | 925 | 890 | 3,669 |
| | m ³ /kL | 5.3 | 3.3 | 2.3 | 4.2 | 19.6 |

* Because Kirin Beverage Shiga Plant is attached to Kirin Brewery Shiga Plant, it is included in Kirin Brewery Shiga Plant

Trend in use of recycled water in entire Group manufacturing plants and business locations

| | Unit | Cyclical use | | | Recycling rate (%) |
|------|-------------------------|---------------|----------------|---------|--------------------|
| | | Re-used water | Recycled water | Total | |
| 2016 | thousand m ³ | 13,386 | 86,180 | 99,566 | 55 |
| | % | 13.4 | 86.6 | 100.0 | |
| 2017 | thousand m ³ | 15,123 | 90,944 | 106,067 | 57 |
| | % | 14.3 | 85.7 | 100.0 | |
| 2018 | thousand m ³ | 18,993 | 105,010 | 124,003 | 62 |
| | % | 15.3 | 84.7 | 100.0 | |
| 2019 | thousand m ³ | 15,901 | 105,433 | 121,334 | 64 |
| | % | 13.1 | 86.9 | 100.0 | |
| 2020 | thousand m ³ | 3,864 | 89,788 | 93,651 | 62 |
| | % | 4.1 | 95.9 | 100.0 | |

Trend in wastewater volume by destination (entire Group)

| | Unit | Wastewater volume | | | | |
|------|-------------------------|-------------------|----------------------------------|-----------------------------|--------|--------|
| | | Sewage water | Direct release into rivers, etc. | Indirect release into ocean | Other* | Total |
| 2016 | thousand m ³ | 6,620 | 27,068 | 37,898 | 109 | 71,695 |
| | % | 9 | 38 | 53 | 0.2 | 100 |
| 2017 | thousand m ³ | 7,224 | 27,679 | 38,559 | 102 | 73,563 |
| | % | 10 | 38 | 52 | 0.1 | 100 |
| 2018 | thousand m ³ | 6,980 | 26,063 | 38,604 | 99 | 71,747 |
| | % | 10 | 36 | 54 | 0.1 | 100 |
| 2019 | thousand m ³ | 9,551 | 24,603 | 33,135 | 98 | 67,387 |
| | % | 14 | 37 | 49 | 0.1 | 100 |
| 2020 | thousand m ³ | 8,888 | 23,587 | 21,342 | 95,755 | 53,912 |
| | % | 16 | 44 | 40 | 0.2 | 100 |

* Water sprayed onto forest areas

Containers and Packaging

Volume of resources used in containers and packaging

| | Unit | Japan Beer and Spirits Business | Japan Non-Alcoholic Beverages Business | Oceania Integrated Beverages Business | Pharmaceuticals Businesses | Other Businesses (all companies included) | Total |
|------|------------|---------------------------------|--|---------------------------------------|----------------------------|---|-------|
| 2016 | thousand t | 208 | 45 | 391 | 0.2 | 114 | 759 |
| | % | 27 | 6 | 51 | 0.03 | 15 | 100 |
| 2017 | thousand t | 219 | 51 | 332 | 0.3 | 117 | 719 |
| | % | 30 | 7 | 46 | 0.03 | 16 | 100 |
| 2018 | thousand t | 179 | 51 | 281 | 0.2 | 115 | 626 |
| | % | 29 | 8 | 45 | 0.03 | 18 | 100 |
| 2019 | thousand t | 178 | 49 | 249 | 0.6 | 65 | 542 |
| | % | 33 | 9 | 46 | 0.1 | 12 | 100 |
| 2020 | thousand t | 181 | 37 | 239 | 0.5 | 66 | 524 |
| | % | 35 | 7 | 46 | 0.1 | 13 | 100 |

Volume of resources used by container (Major companies in Japan)

(Unit: t)

| | | Aluminum cans | Steel cans | PET bottles | Glass bottles | Drink boxes | Cartons | 6-can packs |
|------|------------------|---------------|------------|-------------|---------------|-------------|---------|-------------|
| 2016 | Volume reduction | 18,795 | — | 11,326 | 960 | — | 6,078 | 3,564 |
| | Volumes used | 68,850 | 11,580 | 63,000 | 33,531 | 7,584 | 111,631 | 13,736 |
| 2017 | Volume reduction | 30,031 | — | 7,710 | 1,332 | — | 8,792 | 3,444 |
| | Volumes used | 66,915 | 11,295 | 60,561 | 31,276 | 6,311 | 102,693 | 13,974 |
| 2018 | Volume reduction | 19,226 | — | 12,218 | 870 | — | 5,798 | 3,629 |
| | Volumes used | 73,724 | 9,424 | 68,677 | 31,183 | 6,515 | 107,771 | 13,969 |
| 2019 | Volume reduction | 22,975 | — | 11,998 | 340 | — | 5,910 | 3,646 |
| | Volumes used | 77,912 | 8,542 | 74,894 | 27,844 | 7,825 | 109,526 | 14,611 |
| 2020 | Volume reduction | 24,177 | — | 12,244 | 248 | — | 6,237 | 4,008 |
| | Volumes used | 81,137 | 6,876 | 67,061 | 23,853 | 6,995 | 103,738 | 15,601 |

* Reduction volumes are totals for Kirin Brewery and Kirin Beverage, use volumes are totals for Kirin Brewery, Kirin Beverage, and Mercian.

(Ref.) Trends in recycling rates of other containers in Japan

The Kirin Group pursues initiatives in cooperation with Japanese industry organizations involved in container recycling.

| | | 2015 | 2016 | 2017 | 2018 | 2019 | Target* |
|---------------|--|-------|-------|-------|-------|-------|---------|
| Aluminum cans | Weight of consumed (thousand t) | 332 | 341 | 336 | 331 | 330 | — |
| | Recycled weight (thousand t) | 299 | 315 | 310 | 309 | 324 | — |
| | Recycling rate (%) | 90.1 | 92.4 | 92.5 | 93.6 | 97.9 | ≥92 |
| Steel cans | Weight of consumed (thousand t) | 486 | 463 | 451 | 439 | 427 | — |
| | Recycled weight (thousand t) | 451 | 435 | 422 | 404 | 398 | — |
| | Recycling rate (%) | 92.9 | 94.0 | 93.4 | 92.0 | 93.3 | ≥90 |
| PET bottles | Sales volume of specified PET bottles (thousand t) | 563 | 596 | 587 | 626 | 593 | — |
| | Recycling volume in Japan (thousand t) | 262 | 279 | 298 | 334 | 327 | — |
| | Recycling volume outside Japan (thousand t) | 227 | 221 | 201 | 195 | 182 | — |
| | Recycling volume of used PET bottle (thousand t) | 489 | 500 | 498 | 529 | 509 | — |
| | Recycling rate (%) | 86.9 | 83.9 | 84.8 | 84.6 | 85.8 | ≥85 |
| Glass bottles | Melted weight (thousand t) | 1,618 | 1,606 | 1,583 | 1,553 | 1,465 | — |
| | Cullet usage volume (thousand t) | 1,228 | 1,211 | 1,189 | 1,160 | 1,103 | — |
| | Cullet usage rate (%) | 75.9 | 75.4 | 75.1 | 74.7 | 75.3 | — |
| | Recycling rate (%) | 68.4 | 71.0 | 69.2 | 68.9 | 67.6 | ≥70 |

* Recycling target of 4th Voluntary Action Plan


State of sale and collection of returnable glass bottles (Kirin Brewery)

| | Sale volumes(million bottles) | Collected volume(million bottles) | Collection rate (%) |
|------|-------------------------------|-----------------------------------|---------------------|
| 2016 | 232.0 | 232.7 | 100 |
| 2017 | 224.6 | 227.8 | 101 |
| 2018 | 205.1 | 203.2 | 99 |
| 2019 | 182.6 | 182.3 | 100 |
| 2020 | 107.3 | 114.6 | 107 |

* Total of major returnable bottles (large, medium, small bottles)

* Kirin Brewery is engaged in the re-use of beer bottles and commercial large draft kegs. With the diversification of containers, the volume of returnable bottles used has fallen, but the collection rate is 99%. Kirin Beverage also uses returnable bottles for Kirin Lemon and other products and has a collection rate of nearly 100%.

Climate Change

Actual results for Fiscal 2020 marked with  have received independent assurance by KPMG AZSA Sustainability Co., Ltd. in accordance with International Standard on Assurance Engagements (ISAE) 3000 and ISAE3410.

Trends in greenhouse gas emissions


■ Scope 1 (direct emissions) + Scope 2 (indirect emissions from energy use)

Trends in greenhouse gas emissions and emissions intensity (entire Group)

| | Greenhouse gas emissions (thousand tCO ₂ e) | | Greenhouse gas emissions intensity (per unit of sales) (tCO ₂ e/million yen) | |
|------|---|------------------------------|--|------|
| | | (of which, CO ₂) | Japan standard | IFRS |
| 2016 | 1,012 | (1,010) | 0.52 | 0.55 |
| 2017 | 996 | (995) | — | 0.53 |
| 2018 | 986 | (983) | — | 0.51 |
| 2019 | 949 | (948) | — | 0.49 |
| 2020 | 875 | (874) | — | 0.47 |


Trends in greenhouse gas emissions (by business)

(Unit: thousand tCO₂e)

| | Japan Beer and Spirits Business | Japan Non-Alcoholic Beverages Business | Oceania Integrated Beverages Business | Pharmaceuticals Businesses | Other Businesses (all companies included) | Total  |
|------|---------------------------------|--|---------------------------------------|----------------------------|---|---|
| 2016 | 233 | 70 | 251 | 65 | 393 | 1,012 |
| 2017 | 231 | 61 | 247 | 62 | 396 | 996 |
| 2018 | 232 | 59 | 235 | 55 | 405 | 986 |
| 2019 | 232 | 56 | 229 | 56 | 376 | 949 |
| 2020 | 224 | 52 | 206 | 44 | 349 | 875 |

Trends in greenhouse gas emissions (by region)

(Unit: thousand tCO₂e)

| | Japan | Oceania | Southeast Asia | Other | Total  |
|------|-------|---------|----------------|-------|---|
| 2016 | 593 | 251 | 46 | 122 | 1,012 |
| 2017 | 581 | 247 | 50 | 119 | 996 |
| 2018 | 570 | 235 | 57 | 124 | 986 |
| 2019 | 520 | 229 | 76 | 124 | 949 |
| 2020 | 463 | 187 | 72 | 153 | 875 |

Trends in greenhouse gas emissions and emission intensities from manufacturing plants

(a) Kirin Brewery

| | Greenhouse gas emissions (thousand tCO ₂ e) | Greenhouse gas emissions intensity (kgCO ₂ e/kL) |
|------|--|---|
| 2016 | 194 | 89 |
| 2017 | 191 | 90 |
| 2018 | 195 | 85 |
| 2019 | 196 | 84 |
| 2020 | 189 | 82 |

*Greenhouse gas emissions include the greenhouse gas emissions from sold electricity.

(b) Kirin Beverage

| | Shonan Plant | |
|------|--|---|
| | Greenhouse gas emissions (thousand tCO ₂ e) | Greenhouse gas emissions intensity (kgCO ₂ e/kL) |
| 2016 | 31 | 77 |
| 2017 | 28 | 64 |
| 2018 | 27 | 60 |
| 2019 | 26 | 59 |
| 2020 | 25 | 62 |

(c) Mercian*

| | Greenhouse gas emissions (thousand tCO ₂ e) |
|------|--|
| 2016 | 28 |
| 2017 | 29 |
| 2018 | 30 |
| 2019 | 25 |
| 2020 | 44 |

*Alcohol business was transferred from Kyowa Hakko Bio to Mercian in July 2020.

(d) Kyowa Kirin (global)

| | Greenhouse gas emissions intensity (thousand tCO ₂ e/t) |
|------|--|
| 2018 | 253 |
| 2019 | 124 |
| 2020 | 106 |

Trends in energy usage (entire Group)


| Energy usage by type | 2016 | 2017 | 2018 | 2019 | 2020 |
|--------------------------------------|---------|---------|---------|---------|---------|
| Total usage (TJ) | 12,803 | 12,972 | 13,081 | 12,630 | 12,123 |
| Coal (t) | 1,758 | 2,294 | 2,339 | 2,079 | 1,613 |
| Gasoline (kL) | 3,887 | 3,600 | 3,621 | 4,758 | 3,706 |
| Kerosene (kL) | 166 | 1,466 | 1,399 | 1,342 | 1,379 |
| Diesel oil (kL) | 12,242 | 13,790 | 12,611 | 14,965 | 14,573 |
| Heavy fuel oil (kL) | 11,674 | 12,475 | 14,006 | 9,430 | 7,429 |
| LPG (t) | 2,623 | 3,334 | 3,356 | 3,331 | 2,698 |
| Town gas (thousand Nm ³) | 111,648 | 110,950 | 112,987 | 96,747 | 95,972 |
| LNG (t) | 0 | 0 | 0 | 0 | 0 |
| Purchased electricity (MWh) | 818,925 | 811,123 | 811,507 | 777,626 | 719,361 |
| Renewable electricity (MWh) | 843 | 23,848 | 31,657 | 31,947 | 74,439 |
| Purchased steam (TJ) | 1,979 | 1,925 | 1,886 | 1,599 | 1,461 |
| Other (TJ) | 1,662 | 1,771 | 1,811 | 2,413 | 2,308 |

Breakdown and Trends in Greenhouse Gas Emissions

■ Scope 1 (direct emissions)


Trends in greenhouse gas emissions from fuel use (by business)

(Unit: thousand tCO₂e)

| | Japan Beer and Spirits Business | Japan Non-Alcoholic Beverages Business | Oceania Integrated Beverages Business | Pharmaceuticals Businesses | Other Businesses (all companies included) | Total  |
|------|---------------------------------|--|---------------------------------------|----------------------------|---|---|
| 2016 | 159 | 45 | 77 | 18 | 101 | 401 |
| 2017 | 164 | 44 | 74 | 21 | 103 | 405 |
| 2018 | 168 | 42 | 74 | 18 | 110 | 412 |
| 2019 | 169 | 40 | 72 | 20 | 108 | 411 |
| 2020 | 162 | 38 | 73 | 19 | 105 | 398 |

Trends in greenhouse gas emissions from fuel use (by region)

(Unit: thousand tCO_{2e})

| | Japan | Oceania | Southeast Asia | Other | Total  |
|------|-------|---------|----------------|-------|---|
| 2016 | 259 | 77 | 18 | 47 | 401 |
| 2017 | 266 | 74 | 21 | 44 | 405 |
| 2018 | 271 | 74 | 21 | 46 | 412 |
| 2019 | 264 | 72 | 26 | 48 | 411 |
| 2020 | 253 | 63 | 23 | 60 | 398 |


Breakdown of greenhouse gas emissions in Scope 1(2020)

(Unit: thousand tCO_{2e})

| CO ₂ | CH ₄ | N ₂ O | HFCs | PFCs | SF ₆ |
|-----------------|-----------------|------------------|------|------|-----------------|
| 398 | 0.5 | 0.1 | 0 | 0 | 0 |


Scope 2 (indirect emissions from energy use)

Trends in greenhouse gas emissions from electricity and steam purchases (by business) (Unit: thousand tCO_{2e})

| | Japan Beer and Spirits Business | Japan Non-Alcoholic Beverages Business | Oceania Integrated Beverages Business | Pharmaceuticals Businesses | Other Businesses (all companies included) | Total  |
|------|---------------------------------|--|---------------------------------------|----------------------------|---|---|
| 2016 | 74 | 26 | 174 | 46 | 292 | 611 |
| 2017 | 67 | 17 | 173 | 41 | 293 | 591 |
| 2018 | 64 | 17 | 161 | 37 | 295 | 574 |
| 2019 | 62 | 16 | 157 | 35 | 268 | 538 |
| 2020 | 61 | 14 | 133 | 24 | 244 | 477 |

Trends in greenhouse gas emissions from electricity and steam purchases (by region) (Unit: thousand tCO_{2e})

(Unit: thousand tCO_{2e})

| | Japan | Oceania | Southeast Asia | Other | Total  |
|------|-------|---------|----------------|-------|---|
| 2016 | 334 | 174 | 28 | 75 | 611 |
| 2017 | 315 | 173 | 28 | 75 | 591 |
| 2018 | 299 | 161 | 36 | 79 | 574 |
| 2019 | 256 | 157 | 50 | 76 | 538 |
| 2020 | 209 | 125 | 49 | 94 | 477 |

Scope3 (other indirect emissions)

Trends in CO₂ emissions by other parties related to business activities (by business)

See P. 93 for calculation boundaries

(Unit: thousand tCO₂)

| | Japan Beer and Spirits Business | Japan Non-Alcoholic Beverages Business | Oceania Integrated Beverages Business | Pharmaceuticals Businesses | Other Businesses (all companies included) | Total |
|------|---------------------------------|--|---------------------------------------|----------------------------|---|-------|
| 2016 | 1,521 | 1,099 | 800 | 14 | 767 | 4,200 |
| 2017 | 1,413 | 1,060 | 1,083 | 15 | 793 | 4,364 |
| 2018 | 1,483 | 1,060 | 761 | 14 | 845 | 4,163 |
| 2019 | 1,456 | 1,091 | 712 | 13 | 835 | 4,107 |
| 2020 | 1,413 | 965 | 726 | 9 | 876 | 3,989 |

Trends in CO₂ emissions by other parties related to business activities (by region)

See P. 93 for calculation boundaries

(Unit: thousand tCO₂)

| | Japan | Oceania | Southeast Asia | Other | Total |
|------|-------|---------|----------------|-------|-------|
| 2016 | 3,244 | 800 | 112 | 44 | 4,200 |
| 2017 | 3,081 | 1,083 | 152 | 47 | 4,364 |
| 2018 | 3,145 | 761 | 209 | 48 | 4,163 |
| 2019 | 3,084 | 712 | 267 | 44 | 4,107 |
| 2020 | 2,941 | 726 | 275 | 47 | 3,989 |

Trends in CO₂ emissions* accompanying transportation volumes and distances (Japan)

| | | Kirin Brewery | Kirin Beverage | Mercian | Total |
|------|--|---------------|----------------|---------|-----------|
| 2015 | Transport volumes (thousand ton kilometer) | 604,865 | 791,106 | 85,488 | 1,481,459 |
| | CO ₂ emissions (thousand tons-CO ₂) | 51 | 66 | 8 | 125 |
| 2016 | Transport volumes (thousand ton kilometer) | 641,171 | 830,808 | 87,036 | 1,559,015 |
| | CO ₂ emissions (thousand tons-CO ₂) | 52 | 71 | 8 | 131 |
| 2017 | Transport volumes (thousand ton kilometer) | 735,996 | 822,256 | 87,904 | 1,646,156 |
| | CO ₂ emissions (thousand tons-CO ₂) | 55 | 68 | 8 | 131 |
| 2018 | Transport volumes (thousand ton kilometer) | 823,267 | 906,144 | 94,212 | 1,823,623 |
| | CO ₂ emissions (thousand tons-CO ₂) | 62 | 84 | 8 | 155 |
| 2019 | Transport volumes (thousand ton kilometer) | 755,308 | 963,748 | 90,991 | 1,810,047 |
| | CO ₂ emissions (thousand tons-CO ₂) | 55 | 76 | 8 | 139 |

* Tally period is April to March of following year for each year. Calculated within the reporting scope of specified consigners, in line with the calculation standards of the Act on the Rational Use of Energy.

Independent Assurance

The Kirin Group has been receiving independent assurances to ensure the reliability and transparency of information disclosed.

The Kirin Group has engaged an independent third party to provide assurance on the 2020 CO₂ emissions in Scope 1 and 2 from the entire Kirin Group and those in Scope 3 from Kirin Brewery, Kirin Beverage and Mercian. The independent assurance report is shown on (P.116).

Calculation results of Scopes 1 and 2 for the entire Kirin Group*1 (2020) (Unit:tCO₂e/year)

| Scope1 | Scope2 |
|---------|---------|
| 398,216 | 476,789 |

Calculation results of Scope 3 for Kirin Brewery, Kirin Beverage and Mercian (2020) (Unit:tCO₂/year)

| Upstream/ Downstream | Scope3 Categories | Calculation results | Remarks |
|-------------------------|---|---------------------|---|
| Upstream | 1 Products and services purchased | 1,569,466 | Calculated by multiplying the purchased volume of raw materials, etc. by the CO ₂ emission factors for producing each type of raw material, etc. |
| | 2 Capital goods | — | Not calculated |
| | 3 Fuel and energy-related activities not included in Scopes 1 and 2 | 40,336 | Calculated by multiplying the purchased volume of fuel or electricity by CO ₂ emission factors for each energy type |
| | 4 Transportation and delivery (upstream) | 304,761 | Calculated by multiplying the shipping volume of products as shipper and the purchased volume of raw materials, etc. by the distance of transportation and then by the CO ₂ emission factors for each transportation method (the amount of CO ₂ emissions based on shipping volume of products as shipper is calculated using FY2019 data) |
| | 5 Waste from operations | 6,392 | Calculated by multiplying the amount of waste discharged, etc. by the CO ₂ emission factors for each disposal method |
| | 6 Business travel | 975 | Calculated by multiplying the number of employees by the annual average distance of transportation and then by the CO ₂ emission factors for each means of transportation, considering the percentage of travel restrictions to prevent the spread of COVID-19 |
| | 7 Employee commuting | 2,156 | Calculated by multiplying the number of employees by the annual average distance of transportation and then by the CO ₂ emission factors for each means of transportation, considering the percentage of employees who are restricted from coming to work to prevent the spread of COVID-19 |
| | 8 Leased assets (upstream) | — | Included in Scopes 1 and 2 |
| Downstream | 9 Transportation and delivery (downstream) | 717,706 | Customers: Calculated by multiplying the product sales volume by the CO ₂ emission factors for selling products for each sales method Vending machines: Calculated by multiplying the estimated power consumption of vending machines in operation by the CO ₂ emission factor for electricity |
| | 10 Processing of sold products | — | Not applicable |
| | 11 Use of sold products | 33,735 | Calculated by multiplying the product sales volume by the estimated power consumption per product unit amount in homes, etc. and by the CO ₂ emission factors for electricity. From 2019, the amount of CO ₂ injected into products is considered as the amount of CO ₂ released to the atmosphere. The amount is calculated based on the product specifications. |
| | 12 Disposal of sold products | 51,919 | Calculated by multiplying the amount of containers and packaging disposed by the CO ₂ emission factors for each type of container and packaging |
| | 13 Leased assets (downstream) | — | Not applicable |
| | 14 Franchises | — | Not applicable |
| | 15 Investments | — | Not applicable |
| Total | | 2,727,446 | |

Progress toward Mid-Term Greenhouse Gas Emission Reduction Targets Through SBTs*2 (2020)

(Unit:tCO₂e)

■ Scope1+2

| | | Total |
|---|--------|---------|
| Scope1+Scope2 | | 875,006 |
| | Scope1 | 398,216 |
| | Scope2 | 476,789 |
| Reduction rate (compared to 2019 base year) | | -8% |

■ Scope3

| | | Total |
|---|---|-----------|
| Scope3 | | 3,988,639 |
| Upstream | 1 Products and services purchased | 2,308,001 |
| | 2 Capital goods | — |
| | 3 Fuel and energy-related activities not included in Scopes 1 and 2 | 127,901 |
| | 4 Transportation and delivery (upstream) | 396,149 |
| | 5 Waste from operations | 28,919 |
| | 6 Business travel | 7,894 |
| | 7 Employee commuting | 8,070 |
| | 8 Leased assets (upstream) | — |
| Downstream | 9 Transportation and delivery (downstream) | 958,298 |
| | 10 Processing of sold products | — |
| | 11 Use of sold products | 44,017 |
| | 12 Disposal of sold products | 109,389 |
| | 13 Leased assets (downstream) | — |
| | 14 Franchises | — |
| | 15 Investments | — |
| Reduction rate (compared to 2019 base year) | | -3% |

*1 Methods of calculating Scope 1 and 2 emissions

- Fuel: Lion calculates emissions according to the calculation standards set by the Australian and New Zealand governments.
- All other manufacturing sites calculate emissions according to the calculation standards in Japan's Act on Promotion of Global Warming Countermeasures and Act on the Rational Use of Energy.
- Electricity: Calculated by multiplying the amount of purchased electricity by the CO₂ emission factors published by the individual power companies (or, if there are no published figures, by the country-specific emission factor published by the IEA).
- Greenhouse gas emissions include the greenhouse gas emissions from sold electricity.

*2 By 2030, reduce GHG emissions of Scope 1+2 by 50% and Scope 3 by 30% compared to 2019.

Trends in biogas electricity and biogas generated at Kirin Brewery plans

| | Biogas electricity generated (Unit: million kWh) | Biogas generated (Unit: thousand Nm ³) |
|------|---|---|
| 2016 | 21.2 | 8,593 |
| 2017 | 19.2 | 8,115 |
| 2018 | 18.6 | 8,689 |
| 2019 | 21.9 | 9,009 |
| 2020 | 22.5 | 8,526 |

Trend in annual electricity consumption per one can and bottle vending machine shipped

| | Annual electricity consumption (Unit: kWh/year) |
|------|---|
| 2015 | 708 |
| 2016 | 724 |
| 2017 | 712 |
| 2018 | 702 |
| 2019 | 704 |

Source: Japan Vending Machine Manufacturers Association

Breakdown of electricity usage (entire Group)

(Unit: thousand kWh)



| | | 2018 | 2019 | 2020 | |
|---|------------------------------|----------------------|---------|---------|--------|
| Purchased electricity | Renewable energy | Solar power | — | — | 18,546 |
| | | Hydro-electric power | 30,813 | 30,480 | 53,753 |
| | | Wind power | 502 | 499 | 403 |
| | | Total | 31,315 | 30,979 | 72,703 |
| | Non-renewable energy | 780,694 | 777,626 | 719,361 | |
| Private power generated | Biogas-generated electricity | 19,099 | 22,291 | 25,313 | |
| | Solar-generated electricity | 342 | 968 | 1,736 | |
| | Other than renewable energy | 165,746 | 160,790 | 135,476 | |
| Electricity usage | | 997,197 | 992,654 | 954,590 | |
| Of which, renewable energy (excluding energy mix) | | 50,757 | 54,238 | 99,752 | |



Green bonds

18th Series of Unsecured Corporate Bonds (Green Bonds) funding allocation and impact reporting (as of December 2020)

| Amount raised | Unallocated amount |
|------------------|--------------------|
| 10.0 billion yen | 7.7 billion yen |

| Project name | Summary | Impact reporting |
|---|---|--|
| Procurement of recycled PET resin | <p>Recycled PET resin is produced by mechanical recycling of used PET bottles. By using recycled PET resin as the raw material for PET bottles, it is possible to recycle PET bottles into PET bottles, which contributes to reducing the use of fossil resources. It has been shown that this process reduces CO2 emissions at the manufacturing stage by approximately 50-60% compared with the production of petroleum-derived PET bottles. While 613,000 tons of PET bottles are manufactured annually in Japan, the total amount of recycled PET resin used as a raw material for PET bottles is only 72,700 tons. As such, there is a need to expand the use of recycled PET resin in PET bottle manufacturing.</p> <p>Amount allocated (cumulative): 2.1 billion yen (99% refinanced)</p> |  <p>The ratio of recycled PET resin across the Kirin Group as a whole was 1.5%.</p> |
| Introduction of heat pump systems at plants | <p>A heat pump system is a technology that recovers low-temperature heat sources from air and water and converts them into high-temperature energy by adding energy. In industrial applications, unutilized heat sources such as waste air and waste heat are used to generate high-temperature energy, which is then applied to production processes such as heating, insulation, sterilization, drying, cleaning, and distillation. The Kirin Group plans to replace the burning of fossil fuels in the heating process, which accounts for the majority of GHG emissions from manufacturing processes, with heat pump systems. We are working to develop a manufacturing system that emits less GHGs by sourcing the electric power we use as a source of energy from renewable energy. We have completed the introduction of heat pump systems at five plants in Japan.</p> <p>Amount allocated (cumulative): 0.2 billion yen (99% refinanced)</p> |  <p>The Kirin Group reduced GHG emissions by 3,400 tons in FY2020 through the introduction of heat pump systems.</p> |

Reduction of waste and prevention of pollution

Volume of waste generated (2020)

(Unit: thousand tons. Figures in brackets: %)

| Japan Beer and Spirits Business | Japan Non-Alcoholic Beverages Business | Oceania Integrated Beverages Business | Pharmaceuticals Businesses | Other Businesses (all companies included) | Total |
|---------------------------------|--|---------------------------------------|----------------------------|---|--------------|
| 137 (32) | 12 (3) | 190 (45) | 2 (0.6) | 84 (20) | 426 (100) |

Trends in volume of waste generated and recycling rates (Japan)

| | Volume of waste generated (thousand t) | Volume disposed on site (thousand t) | Volume of recycled waste (thousand t) | Final disposed volume (thousand t) | recycling rates (%) |
|------|--|--------------------------------------|---------------------------------------|------------------------------------|---------------------|
| 2016 | 237 | 17 | 219 | 0.4 | 99.8 |
| 2017 | 243 | 24 | 219 | 0.6 | 99.7 |
| 2018 | 346 | 12 | 333 | 0.7 | 99.8 |
| 2019 | 230 | 2 | 227 | 0.6 | 99.8 |
| 2020 | 151 | 3 | 148 | 0.3 | 99.8 |

Wastewater quality

| | COD (t) | | | | Nitrogen (t) | | | Phosphorous (t) | | |
|------|---------|----------|-------|-----------------------|--------------|----------|-------|-----------------|----------|-------|
| | Japan | Overseas | Total | load / tonne product* | Japan | Overseas | Total | Japan | Overseas | Total |
| 2018 | 742 | 3,127 | 3,869 | 11.0 | 344 | 826 | 1,169 | 45 | 220 | 264 |
| 2019 | 735 | 3,682 | 4,417 | 5.6 | 315 | 754 | 1,069 | 47 | 265 | 312 |
| 2020 | 620 | 5,010 | 5,630 | 6.8 | 205 | 766 | 971 | 48 | 265 | 313 |

* Kyowa Kirin (global) (Unit: kg/ t)

Trend in emissions of air pollutants

Trends in emissions of NOx and SOx (entire Group)

(Unit: t)

| | NOx | SOx |
|------|-----|-----|
| 2016 | 442 | 64 |
| 2017 | 431 | 95 |
| 2018 | 436 | 19 |
| 2019 | 425 | 15 |
| 2020 | 403 | 10 |

Trends in emissions of VOCs (Kyowa Kirin Group, Kyowa Hakko Bio Group)

(Unit: t)

| | Methanol | Acetone | Substances subject to PRTR Act | Ethyl acetate, etc. | Total |
|------|----------|---------|--------------------------------|---------------------|-------|
| 2016 | 324 | 21 | 55 | 88 | 488 |
| 2017 | 417 | 21 | 62 | 97 | 596 |
| 2018 | 308 | 13 | 57 | 103 | 481 |
| 2019 | 183 | 8 | 49 | 74 | 314 |
| 2020 | 144 | 6 | 35 | 57 | 242 |

Soil Investigations Status (2020)

| Number of investigations | Area of investigations (m ²) |
|--------------------------|--|
| 2 | 4,441 |

Targets regarding chemical substances

Kyowa Kirin Group

50% reduction of VOC emissions in 2020 compared to FY2003 levels

Status of PCB management (2020)

| High-concentration capacitors, reactors, etc. | Trace-quantity capacitor reactors, etc. | High-concentration stabilizers | Trace-quantity stabilizers |
|---|---|--------------------------------|----------------------------|
| 0 | 12 | 58 | 22 |

Status of asbestos management (2020)

| Number of buildings | Area (m ²) |
|---------------------|------------------------|
| 4 buildings | 2,440 |

Status of HCFC management (2020)

| Number of offices | Weight (kg) |
|-------------------|-------------|
| 12 locations | 23,086 |

Status of HFC management (2020)

| Number of offices | Weight (kg) |
|-------------------|-------------|
| 9 locations | 15,382 |



Site Data

Kirin Brewery (2020) *1

| Brewery | Energy intensity (GJ/kL) | Water use per unit of production (m ³ /kL) | GHG emissions per unit of production (kgCO ₂ e/kL) | Wastewater intensity (m ³ /kL) |
|------------------|--------------------------|---|---|---|
| Hokkaido Chitose | 1.56 | 4.5 | 147 | 3.3 |
| Sendai | 1.42 | 11.1 | 90 | 11.4 |
| Toride | 1.10 | 5.1 | 47 | 4.1 |
| Yokohama | 3.52 | 6.2 | 174 | 4.4 |
| Nagoya | 1.20 | 4.7 | 77 | 4.2 |
| Shiga*2 | 1.20 | 4.0 | 72 | 3.5 |
| Kobe | 1.06 | 3.5 | 59 | 3.5 |
| Okayama | 1.05 | 5.4 | 75 | 4.3 |
| Fukuoka | 1.43 | 5.5 | 75 | 5.3 |

*1 Energy intensity and unit GHG emissions include electricity sold.

Kirin Beverage*2 (2020)

| Plant | Water use (thousand m ³) | GHG emissions (thousand tCO ₂ e) | Waste emissions (t) | Recycling rate (%) |
|--------|--------------------------------------|---|---------------------|--------------------|
| Shonan | 925 | 25 | 7,404 | 100 |

*2 The Shiga Plant of Kirin Beverage is included in Kirin Brewery because it is co-located with the Shiga Plant of Kirin Brewery.

Mercian (2020)

| Plant | Water use (thousand m ³) | GHG emissions (thousand tCO ₂ e) | Waste emissions (t) | Recycling rate (%) |
|-----------------|--------------------------------------|---|---------------------|--------------------|
| Fujisawa | 292 | 7 | 170 | 100 |
| Yatsushiro | 2,434 | 20 | 827 | 100 |
| Hofu*3 | 912 | 16 | 0.08 | 100 |
| Château Mercian | 31 | 0.4 | 23 | 100 |

*3 Transfer of alcohol business from Kyowa Hakko Bio to Mercian from July 2020

Kyowa Kirin Group (Japan, 2020)

| Plant | Water use (thousand m ³) | GHG emissions (tCO ₂ e) | Waste emissions (t) |
|--|--------------------------------------|------------------------------------|---------------------|
| Kyowa Kirin Tokyo Research Park | 15 | 2,599 | 51 |
| Kyowa Kirin Fuji Research Park / CMC Research Center | 1,328 | 14,120 | 203 |
| Kyowa Kirin Bio Production Technology Laboratories / Takasaki Plant | 308 | 11,618 | 748 |
| Kyowa Kirin Ube Plant | 73 | 8,692 | 462 |

KOIWAI DAIRY PRODUCTS

| Plant | Water use per unit of production(m ³ /t)*4 | | |
|--------------|---|------|------|
| | 2018 | 2019 | 2020 |
| Koiwai Plant | 52 | 59 | 58 |

*4 Unit water consumption for dairy products



Status of Environmental Management Certifications

Status as of July 2021

Japan

| | |
|--|----|
| Number of independently certified business locations | 6 |
| Number of business locations making self-declaration of conformity | 21 |
| Number of uncertified business locations | 2 |
| Certification rate (%) | 93 |

Overseas

| | |
|--|----|
| Number of certified business locations | 27 |
| Number of uncertified business locations | 7 |
| Certification rate (%) | 79 |

Other information disclosure

Disclosure of environmental information through products

| Label name | Nature of disclosure |
|--|---|
| Eco-Rail | In 2006, Kirin Beverage, and in 2010, Kirin Brewery were selected as "Eco-Rail" mark-certified companies by the Ministry of Land, Infrastructure, Transport and Tourism for proactively tackling global environmental issues with the use of rail freight transport. |
| Carbon Footprint | Kirin Brewery launched Carbon Footprint initiatives together with the beer industry in 2008. The Product Category Rule (PCR), which is the rule for the calculation of beer categories, was certified in February 2011 and revised in December 2013. |
| Rainforest Alliance certification seal | In March 2015, 500ml paper packs of <i>Kirin Gogo-no-Kocha Straight Tea</i> were labeled with Rainforest Alliance certification seal. We plan to launch new Rainforest Alliance Certified products in 2021. |
| FSC Certification Label | Kirin Brewery and Kirin Beverage (including Tropicana) display the FSC certification label on many of their paper containers to encourage understanding among consumers about the importance of protecting the forests. Mercian displays the label on some of its paper containers. |
| Organic Wine | Mercian sells organic wines certified by Euro Leaf, ECOCERT, BIODYVIN, bioagricert, SOHISCERT and so on. |

GRI Contents Index

This report uses the following disclosure matters of the GRI Standard 2016 as reference.

| GRI Contents Index Standard | Disclosure matters | Page number or URL |
|--|--|--|
| General Disclosures | | |
| GRI 102: General Disclosures 2016 | 102-1 Name of the organization | P.5 |
| | 102-2 Activities, brands, products, and services | P.5 Domains (https://www.kirinholdings.com/en/domains/) |
| | 102-3 Location of headquarters | P.5 Corporate Overview (https://www.kirinholdings.com/en/profile/overview/) |
| | 102-4 Location of operations | P.5 Group Companies (https://www.kirinholdings.com/en/profile/organization/) |
| | 102-5 Ownership and legal form | P.5 Corporate Overview (https://www.kirinholdings.com/en/profile/overview/) |
| | 102-6 Markets served | P.5 Group Companies (https://www.kirinholdings.com/en/profile/organization/) |
| | 102-7 Scale of the organization | P.5 Kirin Group profile (https://www.kirinholdings.com/en/investors/esg/esg/) Group Companies (https://www.kirinholdings.com/en/profile/organization/) |
| | 102-8 Information on employees and other workers | P.5 ESG data (Kirin Group profile, Employee) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| | 102-9 Supply chain | P.27, 37, 45, 59, 80 Promoting responsible procurement (https://www.kirinholdings.com/en/impact/procurement/csr/) |
| | 102-10 Significant changes to the organization and its supply chain | P.3 KIRIN CSV REPORT 2020 P.77 ESG data (Notes) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| | 102-11 Precautionary Principle or approach | P.10, 78, 88-92 Kirin Group's Environmental Policy (https://www.kirinholdings.com/en/impact/env/policy/mission/) |
| | 102-12 External initiatives | P.85-86 ESG data/Guideline Content Index/Third-Party Evaluations (https://www.kirinholdings.com/en/investors/esg/esg/) The GC and the Kirin Group (https://www.kirinholdings.com/en/impact/csv_management/gc/) Embracing Diversity (https://www.kirinholdings.com/en/drivers/hr/diversity/) |

| GRI Contents Index Standard | Disclosure matters | Page number or URL |
|-----------------------------|---|--|
| | 102-13 Membership of associations | P.85-86 |
| | 102-14 Statement from senior decision-maker | P.4, 6 Message from Top Management (https://www.kirinholdings.com/en/purpose/message/) |
| | 102-15 Key impacts, risks, and opportunities | P.9, 12-23, 26, 28, 38-39, 42, 76 Business Risk Factors (https://www.kirinholdings.com/en/purpose/risks/) Management Issues for Sustainable Growth (Group Materiality Matrix) (https://www.kirinholdings.com/en/impact/materiality/) Scenario analysis (TCFD) (https://www.kirinholdings.com/en/impact/env/tcf/) |
| | 102-16 Values, principles, standards, and norms of behavior | P.5, 7, 75, 77-80, 88-92 Corporate Policy (https://www.kirinholdings.com/en/profile/philosophy/) Policy and system (https://www.kirinholdings.com/en/impact/env/policy/mission/) Compliance (https://www.kirinholdings.com/en/purpose/governance/compliance/) Promoting responsible procurement (https://www.kirinholdings.com/en/impact/procurement/csr/) |
| | 102-17 Mechanisms for advice and concerns about ethics | P.81 Compliance (https://www.kirinholdings.com/en/purpose/governance/compliance/) |
| | 102-18 Governance structure | P.75-78 Management Structure (https://www.kirinholdings.com/en/purpose/governance/management/) ESG data (Governance) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| | 102-19 Delegating authority | P.75-78 System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) Policy and system (https://www.kirinholdings.com/en/impact/env/policy/mission/) |
| | 102-20 Executive-level responsibility for economic, environmental, and social topics | P.75-78 System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) Policy and system (https://www.kirinholdings.com/en/impact/env/policy/mission/) |
| | 102-21 Consulting stakeholders on economic, environmental, and social topics | P.82-84 Overview (https://www.kirinholdings.com/en/purpose/governance/governance/) IR Events Releases and Presentations (https://www.kirinholdings.com/en/investors/library/event/archive/) Stakeholder Engagement (https://www.kirinholdings.com/en/impact/csv_management/stakeholders/) |

| GRI Contents Index Standard | Disclosure matters | Page number or URL |
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| GRI 102: General Disclosures 2016 | 102-22 Composition of the highest governance body and its committees | P.75 KIRIN CSV REPORT 2021 P.52-54, 59 Management (https://www.kirinholdings.com/en/purpose/governance/provisions/) |
| | 102-23 Chair of the highest governance body | KIRIN CSV REPORT 2021 P.53-54 ESG data (Governance) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| | 102-24 Nominating and selecting the highest governance body | KIRIN CSV REPORT 2021 P.52 Management Structure (https://www.kirinholdings.com/en/purpose/governance/management/) |
| | 102-25 Conflicts of interest | KIRIN CSV REPORT 2021 P.57 Corporate Governance Policy (https://www.kirinholdings.com/en/purpose/files/pdf/governance_policy.pdf) |
| | 102-26 Role of highest governance body in setting purpose, values, and strategy | P.75-78 System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) Policy and system (https://www.kirinholdings.com/en/impact/env/policy/mission/) |
| | 102-27 Collective knowledge of highest governance body | P.75 System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) |
| | 102-28 Evaluating the highest governance body's performance | KIRIN CSV REPORT 2021 P.58 System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) Policy and system (https://www.kirinholdings.com/en/impact/env/policy/mission/) |
| | 102-29 Identifying and managing economic, environmental, and social impacts | P.9, 75-78 System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) Stakeholder Engagement (https://www.kirinholdings.com/en/impact/csv_management/stakeholders/) Policy and system (https://www.kirinholdings.com/en/impact/env/policy/mission/) |
| | 102-30 Effectiveness of risk management processes | P.9, 76 System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) Policy and system (https://www.kirinholdings.com/en/impact/env/policy/mission/) |
| | 102-31 Review of economic, environmental, and social topics | P.9, 74-76 System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) |
| | 102-32 Highest governance body's role in sustainability reporting | The Kirin Group's Environmental Vision 2050 has been approved by the Board of Kirin Holdings. The overall content of the Kirin Group Environmental Report is supervised by the Senior Executive Officer (in charge of CSV strategy, Group general environmental manager) of Kirin Holdings Company, Limited. System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) Policy and system (https://www.kirinholdings.com/en/impact/env/policy/mission/) |

| GRI Contents Index Standard | Disclosure matters | Page number or URL |
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| | 102-33 Communicating critical concerns | P.75-78 System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) Risk Management (https://www.kirinholdings.com/en/purpose/governance/risk_management/) Policy and system (https://www.kirinholdings.com/en/impact/env/policy/mission/) |
| | 102-35 Remuneration policies | P.75 KIRIN CSV REPORT 2021 P.60-61 Remuneration of Officers (https://www.kirinholdings.com/en/purpose/governance/compensation/) |
| | 102-36 Process for determining remuneration | KIRIN CSV REPORT 2021 P.60-61 Remuneration of Officers (https://www.kirinholdings.com/en/purpose/governance/compensation/) |
| | 102-40 List of stakeholder groups | P.82-86 Stakeholder Engagement (https://www.kirinholdings.com/en/impact/csv_management/stakeholders/) |
| | 102-41 Collective bargaining agreements | ESG data (Employee) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| | 102-42 Identifying and selecting stakeholders | P.82-86 Stakeholder Engagement (https://www.kirinholdings.com/en/impact/csv_management/stakeholders/) |
| | 102-43 Approach to stakeholder engagement | P.82-86 Stakeholder Engagement (https://www.kirinholdings.com/en/impact/csv_management/stakeholders/) Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) A Responsible Alcohol Producer (https://www.kirinholdings.com/en/impact/alcohol/policies/) Embedding the Kirin Group Human Rights Policy in practice (https://www.kirinholdings.com/en/impact/human_rights/policies/) |
| | 102-44 Key topics and concerns raised | P.82-84 Stakeholder Engagement (https://www.kirinholdings.com/en/impact/csv_management/stakeholders/) Embedding the Kirin Group Human Rights Policy in practice (https://www.kirinholdings.com/en/impact/human_rights/policies/) |
| | 102-45 Entities included in the consolidated financial statements | P.3 Group Companies (https://www.kirinholdings.com/en/profile/organization/) |
| | 102-46 Defining report content and topic Boundaries | P.8-10, 77 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) Management Issues for Sustainable Growth (Group Materiality Matrix) (https://www.kirinholdings.com/en/impact/materiality/) |

| GRI Contents Index Standard | Disclosure matters | Page number or URL |
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| GRI 102: General Disclosures 2016 | 102-47 List of material topics | P.8-11, 19-23, 26 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) Management Issues for Sustainable Growth (Group Materiality Matrix) (https://www.kirinholdings.com/en/impact/materiality/) |
| | 102-48 Restatements of information | No corrections to the previous year's report. See page 93 for changes in the calculation boundaries due to business divestitures. |
| | 102-49 Changes in reporting | P.3 ESG data (Notes) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| | 102-50 Reporting period | P.3 |
| | 102-51 Date of most recent report | July 2020 |
| | 102-52 Reporting cycle | Year |
| | 102-53 Contact point for questions regarding the report | Back cover |
| | 102-54 Claims of reporting in accordance with the GRI Standards | P.3 |
| | 102-55 GRI content index | P.109-113 GRI Contents Index (https://www.kirinholdings.co.jp/csv/esg_gri/gri.html) |
| 102-56 External assurance | P.116 | |

Material topics

Biological Resources

| | | |
|-----------------------------------|---|---|
| GRI 103: Management Approach 2016 | 103-1 Explanation of the material topic and its Boundary | P.10-21, 27 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) Management Issues for Sustainable Growth (Group Materiality Matrix) (https://www.kirinholdings.com/en/impact/materiality/) |
| | 103-2 The management approach and its components | P.10-12, 19-23, 27-36, 90-92 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) |
| | 103-3 Evaluation of the management approach | P.15, 23, 26, 28 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) |

| GRI Contents Index Standard | Disclosure matters | Page number or URL |
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| GRI 304: Biodiversity 2016 | 304-2 Significant impacts of activities, products, and services on biodiversity | P.29-36, 48 |
| | 304-3 Habitats protected or restored | P.31-35 |
| | 304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations | P.31-33, 35 |

Water Resources

| | | |
|-----------------------------------|---|--|
| GRI 103: Management Approach 2016 | 103-1 Explanation of the material topic and its Boundary | P.10-21, 37 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) Management Issues for Sustainable Growth (Group Materiality Matrix) (https://www.kirinholdings.com/en/impact/materiality/) |
| | 103-2 The management approach and its components | P.10-12, 19-23, 37-43, 92 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) |
| | 103-3 Evaluation of the management approach | P.16-17, 22, 24, 26, 38 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) |
| GRI 303: Water and Effluents 2018 | 303-1 Interactions with water as a shared resource | P.37-43 Water Resources (https://www.kirinholdings.com/en/impact/env/3_2/) |
| | 303-2 Management of water discharge related impacts | P.43 |
| | 303-3 Water withdrawal | P.38-39, 93, 95-98, 107 ESG data (Water resources) (https://www.kirinholdings.co.jp/csv/esg_gri/esg.html) |
| | 303-4 Water discharge | P.93, 95-96, 98, 105, 107 ESG data (Water resources) (https://www.kirinholdings.co.jp/csv/esg_gri/esg.html) |
| | 303-5 Water consumption | P.38-39, 44, 93, 95-98, 107 |

Containers and Packaging

| | | |
|-----------------------------------|---|--|
| GRI 103: Management Approach 2016 | 103-1 Explanation of the material topic and its Boundary | P.10-11, 19-21, 45 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) Management Issues for Sustainable Growth (Group Materiality Matrix) (https://www.kirinholdings.com/en/impact/materiality/) |
| | 103-2 The management approach and its components | P.10-11, 19-23, 46-56, 89, 92 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) |

| GRI Contents Index Standard | Disclosure matters | Page number or URL |
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| GRI 103 : Management Approach 2016 | 103-3 Evaluation of the management approach | P.16-18, 22, 26, 46 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) |
| GRI 301 : Materials 2016 | 301-1 Materials used by weight or volume | P.46, 58, 96, 98-99 ESG data (Containers and packaging) (https://www.kirinholdings.com/en/impact/env/3_4/) |
| | 301-2 Recycled input materials used | P.22,46-47, 53-54, 58, 99, 107 Containers and packaging (https://www.kirinholdings.com/en/impact/env/3_4/) |
| | 301-3 Reclaimed products and their packaging materials | P.52, 57-58, 99 Containers and packaging (https://www.kirinholdings.co.jp/csv/env/packaging.html) |
| Climate Change | | |
| GRI 103 : Management Approach 2016 | 103-1 Explanation of the material topic and its Boundary | P.10-21, 59 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) Management Issues for Sustainable Growth (Group Materiality Matrix) (https://www.kirinholdings.com/en/impact/materiality/) |
| | 103-2 The management approach and its components | P.10-12, 19-23, 60-70, 92 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) |
| | 103-3 Evaluation of the management approach | P.17-18, 22, 24, 26, 60 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) |
| GRI 201 : Economic Performance 2016 | 201-2 Financial implications and other risks and opportunities due to climate change | P.12-20 Scenario Analysis (TCFD) (https://www.kirinholdings.co.jp/csv/env/tcf.html) |
| GRI 302 : Energy 2016 | 302-1 Energy consumption within the organization | P.73, 93, 96, 100, 103 ESG data(Climate Change) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| | 302-2 Energy consumption outside of the organization | P.103 |
| | 302-3 Energy intensity | P.107 |
| | 302-4 Reduction of energy consumption | P.93, 96, 100, 103 |
| | 302-5 Reductions in energy requirements of products and services | P.103 |

| GRI Contents Index Standard | Disclosure matters | Page number or URL |
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| GRI 305 : Emissions 2016 | 305-1 Direct (Scope 1) GHG emissions | P.71, 93-94, 100-102 ESG data (Climate change) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| | 305-2 Energy indirect (Scope 2) GHG emissions | P.71, 93-94, 101-102 ESG data (Climate change) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| | 305-3 Other indirect (Scope 3) GHG emissions | P.60, 71-72, 93-94, 101-102 ESG data (Climate change) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| | 305-4 GHG emissions intensity | P.72, 93-94, 99-100, 107 ESG data (Climate change) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| | 305-5 Reduction of GHG emissions | P.22, 60-62, 65-66, 68-69, 71-73, 93-94, 102 Climate change (https://www.kirinholdings.com/en/impact/env/3_1/) |
| | 305-6 Emissions of ozone-depleting substances (ODS) | P.105 |
| | 305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions | P.96, 105-106 ESG data (Reducing industrial wastes and preventing pollution) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| Waste and prevention of pollution | | |
| GRI 103 : Management Approach 2016 | 103-1 Explanation of the material topic and its Boundary | P.10-11, 19-21, 27, 45, 79 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) Management Issues for Sustainable Growth (Group Materiality Matrix) (https://www.kirinholdings.com/en/impact/materiality/) |
| | 103-2 The management approach and its components | P.10-11, 19-23, 36, 46-56, 79, 89, 92 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) |
| | 103-3 Evaluation of the management approach | P.16-17, 22, 24, 26, 28, 46 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) |
| GRI 306 : Waste 2020 | 306-1 Waste generation and significant waste-related impacts | P.36, 45, 79 |
| | 306-2 Management of significant waste-related impacts | P.11, 19-23, 36, 46-47, 49-56, 79 |
| | 306-3 Waste generated | P.93, 96, 105, 107 ESG data (Reducing industrial wastes and preventing pollution) (https://www.kirinholdings.com/en/investors/esg/esg/) |

Message from Top Management

Environmental Strategy

Indicators and Goals

Activity



Governance and Risk Management

Environmental Data

TCFD Recommendations' Recommended Disclosure Index

| | Recommended Disclosure | Page |
|---------------------|---|--|
| Governance | a) Describe the board's oversight of climate-related risks and opportunities. | P.12, 75, 77 |
| | b) Describe management's role in assessing and managing climate-related risks and opportunities. | P.12, 75, 77 |
| Strategy | a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term. | P.12-19 |
| | b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning. | P.12-19 |
| | c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2° C or lower scenario. | P.12-20 |
| Risk Management | a) Describe the organization's processes for identifying and assessing climate-related risks. | P.12, 76 |
| | b) Describe the organization's processes for managing climate-related risks. | P.12, 76-78, 80 |
| | c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management. | P.12, 76-78, 80 |
| Metrics and Targets | a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process. | P.12, 17-18, 21-23, 60 KIRIN CSV REPORT 2021 P.61-62 |
| | b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks. | P.12, 14, 60, 71-73, 99-102 |
| | c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets. | P.10, 12, 14, 21-23, 26, 60, 71-73, 102 |

CDSB framework

| | Reporting requirements | Page |
|--------|---|--|
| REQ-01 | Governance | P.4, 6, 12, 75-78 |
| REQ-02 | Management's environmental policies, strategy and targets | P.7, 9-23, 27, 28, 37, 39, 45, 59, 82-86 |
| REQ-03 | Risks and opportunities | P.12-20 |
| REQ-04 | Sources of environmental impacts | P.28, 29, 31, 33, 35, 36, 44, 46, 57-58, 71-73, 93-103, 105-106 |
| REQ-05 | Performance and comparative analysis | P.22, 26, 28, 38, 46, 60 |
| REQ-06 | Outlook | P.4, 6 |
| REQ-07 | Organisational boundary | P.3, 93-95 |
| REQ-08 | Reporting policies | P.3, 93, 109-115 The reporting provisions are consistent with those of the previous year. |
| REQ-09 | Reporting period | P.3 |
| REQ-10 | Restatements | No corrections to the previous year's report. See page 93 for changes in the calculation boundaries due to business divestitures. |
| REQ-11 | Conformance | P.3, 9, 113 |
| REQ-12 | Assurance | There is no third-party assurance concerning conformance with the CDSB framework. Third-party assurance has been obtained for some GHG emissions. (P.99-102, 116) . |

| GRI Contents Index Standard | Disclosure matters | Page number or URL |
|---|---|--|
| GRI 306 : Waste 2020 | 306-4 Waste diverted from disposal | P.58, 93, 96, 99, 105, 107 ESG data (Reducing industrial wastes and preventing pollution) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| | 306-5 Waste directed to disposal | P.93, 96, 105 |
| GRI 307 : Environmental Compliance 2016 | 307-1 Non-compliance with environmental laws and regulations | No legal violations in the year ESG data (Environmental management) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| Supply chain | | |
| GRI 103 : Management Approach 2016 | 103-1 Explanation of the material topic and its Boundary | P.10, 19-21, 27, 37, 45, 59 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) Management Issues for Sustainable Growth (Group Materiality Matrix) (https://www.kirinholdings.com/en/impact/materiality/) |
| | 103-2 The management approach and its components | P.10-12, 19-23, 80-82 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) Promoting responsible procurement (https://www.kirinholdings.com/en/impact/procurement/csr/) |
| | 103-3 Evaluation of the management approach | P.22, 24, 26, 28, 38, 46, 60, 81 Our CSV Commitment (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect03) System to Promote CSV (https://www.kirinholdings.com/en/impact/csv_management/promotion_impact/) Promoting responsible procurement (https://www.kirinholdings.com/en/impact/procurement/csr/) |
| GRI 308 : Supplier Environmental Assessment 2016 | 308-2 Negative environmental impacts in the supply chain and actions taken | P.16-17, 28-29, 33, 36, 38-39, 47-48, 63, 66, 81 ESG data (Supplier) (https://www.kirinholdings.com/en/investors/esg/esg/) |

SASB Content Index

Food & Beverage sector/ Alcoholic beverages industry October 2018 version

Sustainability Disclosure Topics & Accounting Metrics

| Topics | Accounting Metrics | Code | Disclosure |
|---|--|--------------|---|
| Energy Management | (1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable* ^a | FB-AB-130a.1 | P.96, P.100 |
| Water Management | (1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress* ^b | FB-AB-140a.1 | P.38, P.39, P.44, P.97-98 |
| | Description of water management risks and discussion of strategies and practices to mitigate those risks | FB-AB-140a.2 | P.10-11, P.16-17, P.19-20, P.21, P.37-44 |
| Responsible Drinking & Marketing | Percentage of total advertising impressions made on individuals at or above the legal drinking age* ^c | FB-AB-270a.1 | n/a |
| | Number of incidents of non-compliance with industry or regulatory labeling and/or marketing codes* ^d | FB-AB-270a.2 | ESG Data (Social, Customer) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| | Total amount of monetary losses as a result of legal proceedings associated with marketing and/or labeling practices* ^e | FB-AB-270a.3 | ESG Data (Social, Customer) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| | Description of efforts to promote responsible consumption of alcohol | FB-AB-270a.4 | A Responsible Alcohol Producer (Our CSV Commitment) (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect01) A Responsible Alcohol Producer (Policy and System) (https://www.kirinholdings.com/en/impact/alcohol/policies/) |
| Packaging Lifecycle Management | (1) Total weight of packaging, (2) percentage made from recycled and/or renewable materials, and (3) percentage that is recyclable, reusable, and/or compostable* ^f | FB-AB-410a.1 | P.22, P.46, P.57-58, P.98-99 |
| | Discussion of strategies to reduce the environmental impact of packaging throughout its lifecycle | FB-AB-410a.2 | P.10-11, P.13, P.19-20, P.21-23, P.45-58 |
| Environmental & Social Impacts of Ingredient Supply Chain | Suppliers' social and environmental responsibility audit (1) non-conformance rate and (2) associated corrective action rate for (a) major and (b) minor non-conformances* ^g | FB-AB-430a.1 | Efforts to promote CSR procurement (https://www.kirinholdings.com/en/impact/procurement/csr/) ESG Data (Social, Supplier) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| Ingredient Sourcing | Percentage of beverage ingredients sourced from regions with High or Extremely High Baseline Water Stress* ^h | FB-AB-440a.1 | P.16-17 Kirin Group Environmental Report 2020 P.41 (https://www.kirinholdings.com/en/investors/library/env_report/) |
| | List of priority beverage ingredients and description of sourcing risks due to environmental and social considerations | FB-AB-440a.2 | P.14-17, P.19-20, P.27-36, P.37-41 |

Activity Metrics

| Activity Metrics | Code | Disclosure |
|---|-------------|---|
| Volume of products sold* ⁱ | FB-AB-000.A | P.96 |
| Number of production facilities* ^j | FB-AB-000.B | Group Companies (https://www.kirinholdings.com/en/profile/organization/) P.39, P.95 |
| Total fleet road miles traveled* ^k | FB-AB-000.C | P.101 |

*a Percentage of grid electricity and renewable energy can be estimated from the amount of energy consumed.

*b Total water consumed can be estimated based on (water consumed - wastewater volume).

*c Not disclosed.

*d Only the information on alcoholic beverages is disclosed.

*e Monetary losses are not disclosed. In addition, for some cases of violation of laws concerning alcoholic beverages, a reference URL is provided in the notes.

*f The content ratio of recycled materials is disclosed in some containers.

*g Kirin Holdings discloses the self-assessment rate of suppliers, but not the rate of non-conformance. In the event of non-conformance, Kirin makes requests for correction.

*h Although the percentage is not disclosed, water consumption by raw material and by country is disclosed. The results of scenario analyses, including those on the water risk of agricultural products, which are important sources for beverages, are disclosed.

*i Volume of products sold is not disclosed, but volume of products manufactured is disclosed.

*j Number of major production facilities is disclosed.

*k While the total distance traveled is not disclosed, freight transport volume (= freight weight x distance of transport) within the reporting boundaries of specified consignors in the Act on the Rational Use of Energy is disclosed only for Japan.

Sustainability Disclosure Topics & Accounting Metrics

| Topics | Accounting Metrics | Code | Disclosure |
|---|--|--------------|---|
| Fleet Fuel Management | Fleet fuel consumed, percentage renewable* ^a | FB-NB-110a.1 | P.100, P.101 |
| Energy Management | (1) Operational energy consumed, (2)percentage grid electricity, (3) percentage renewable* ^b | FB-NB-130a.1 | P.68, P.96, P.100 |
| Water Management | (1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress* ^c | FB-NB-140a.1 | P.38, P.39, P.44, P.97-98 |
| | Description of water management risks and discussion of strategies and practices to mitigate those risks | FB-NB-140a.2 | P.10-11, P.16-17, P.19-20, P.21, P.37-44 |
| Health & Nutrition | Revenue from (1) zero- and low-calorie, (2) noadded- sugar, and (3) artificially sweetened beverages* ^d | FB-NB-260a.1 | ESG Data (Social, Customer) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| | Discussion of the process to identify and manage products and ingredients related to nutritional and health concerns among consumers* ^e | FB-NB-260a.2 | Our CSV Commitment (Supporting self-care for healthy people and people with pre-disease) (https://www.kirinholdings.com/en/impact/csv_management/commitment/#sect01) |
| Product Labeling & Marketing | Percentage of advertising impressions (1) made on children and (2) made on children promoting products that meet dietary guidelines* ^f | FB-NB-270a.1 | n/a |
| | Revenue from products labeled as (1) containing genetically modified organisms (GMOs) and (2) non-GMO* ^g | FB-NB-270a.2 | n/a |
| | Number of incidents of non-compliance with industry or regulatory labeling and/or marketing codes* ^h | FB-NB-270a.3 | ESG Data (Social, Customer) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| | Total amount of monetary losses as a result of legal proceedings associated with marketing and/or labeling practices* ⁱ | FB-NB-270a.4 | ESG Data (Social, Customer) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| Packaging Lifecycle Management | (1) Total weight of packaging, (2) percentage made from recycled and/or renewable materials, and (3) percentage that is recyclable, reusable, and/or compostable* ^j | FB-NB-410a.1 | P.22, P.46, P.57-58, P.98-99 |
| | Discussion of strategies to reduce the environmental impact of packaging throughout its lifecycle | FB-NB-410a.2 | P.10-11, P.13, P.19-20, P.21-23, P.45-58 |
| Environmental & Social Impacts of Ingredient Supply Chain | Suppliers' social and environmental responsibility audit (1) non-conformance rate and (2) associated corrective action rate for (a) major and (b) minor non-conformances* ^k | FB-NB-430a.1 | Efforts to promote CSR procurement (https://www.kirinholdings.com/en/impact/procurement/csr/) ESG Data (Social, Supplier) (https://www.kirinholdings.com/en/investors/esg/esg/) |
| Ingredient Sourcing | Percentage of beverage ingredients sourced from regions with High or Extremely High Baseline Water Stress* ^l | FB-NB-440a.1 | P.16-17 Kirin Group Environmental Report 2020 P.41 (https://www.kirinholdings.com/en/investors/library/env_report/) |
| | List of priority beverage ingredients and description of sourcing risks due to environmental and social considerations | FB-NB-440a.2 | P.14-16, P.19-20, P.27-36, P.37-41 |

Activity Metrics

| Activity Metrics | Code | Disclosure |
|---|-------------|---|
| Volume of products sold* ^m | FB-NB-000.A | P.96 |
| Number of production facilities* ⁿ | FB-NB-000.B | Group Companies (https://www.kirinholdings.com/en/profile/organization/) P.39, P.95 |
| Total fleet road miles traveled* ^o | FB-NB-000.C | P.101 |

*a Fuel consumed by energy type and CO₂ emissions from transportation as a shipper are disclosed, but fleet fuel consumed is not disclosed. The percentage of recyclable vehicle fuel is not disclosed (not used).

*b Total energy consumption by energy type and GHG emissions from plants are disclosed, but operational energy consumed is not disclosed. The data of some plants, the amount of purchased electricity, and the amount of renewable electricity are disclosed.

*c Total water consumed can be estimated based on (water consumed - wastewater volume). Although data on water stress by country is disclosed, the percentage of regions with high baseline water stress to total water withdrawn and total water consumed is not disclosed.

*d Revenues from no-added sugar beverages are not disclosed, but revenues from low-sugar and low-fat products are disclosed. Revenue from artificially sweetened beverages is not disclosed.

*e Commitment is disclosed, but no specific management process is disclosed.

*f Not disclosed.

*g Not disclosed.

*h Only the information on alcoholic beverages is disclosed.

*i Monetary losses are not disclosed. In addition, for some cases of violation of laws concerning alcoholic beverages, a reference URL is provided in the notes.

*j The percentage of recycled material content in some containers is disclosed.

*k Kirin Holdings discloses the self-assessment rate of suppliers, but not the rate of non-conformance. In the event of non-conformance, Kirin makes requests for correction.

*l Although the percentage is not disclosed, water consumption by raw material and by country is disclosed. The results of scenario analyses, including those on the water risk of agricultural products, which are important sources for beverages, are disclosed.

*m Volume of products sold is not disclosed, but volume of products manufactured is disclosed.

*n Number of major production facilities is disclosed.

*o While the total distance traveled is not disclosed, freight transport volume (= freight weight x distance of transport) within the reporting boundaries of specified consignors in the Act on the Rational Use of Energy is disclosed only for Japan.

Independent Assurance Report



The KIRIN, the messenger of Good Luck.



The KIRIN is a mythical creature, a messenger of good luck. Derived from various ancient legends, it is said to appear as a prelude to joyous times to come. The KIRIN, a gentle creature, flies the skies; its feet never touching the ground as not to harm any insects or plants. The KIRIN, which creates the rich natural environment for future generations, is a symbol of the Kirin Group.