

**② Environment**

The following companies are included in the scope of the Boundary.  
 Kirin Brewery, Kirin Distillery, SPRING VALLEY BREWERY, Eishogen, Kirin Brewery (Zhuhai), Kirin Beverage, Shinshu Beverage, Hokkaido Kirin Beverage, Kirin Maintenance Service, KIRIN Tropicana, each site of Kirin Beverage Service (Hokkaido, Sendai, Tokyo, Chubu, Kansai), Hakodate Daiichi Vending, KIRINIVIVAX, Tokai Beverage Service, Lion, New Belgium Brewing Company, Kyowa Kirin, Kyowa Kirin Frontier, Kyowa Medical Promotion, Kyowa Kirin plus, Kyowa HAKKO Kirin China Pharmaceutical, Kyowa Kirin Pharmaceutical Research, Mercian, NIPPON LIQUOR, Daiichi Alcohol, Wine Curation, Myanmar Brewery, Interfood, Vietnam Kirin Beverage, AZUMA KIRIN, Four Roses Distillery, Kyowa HAKKO Bio, KYOWA PHARMA CHEMICAL, KYOWA Engineering, BioKyowa Inc., Shanghai Kyowa Amino Acid, Thai Kyowa Biotechnologies, Kirin Holdings, Kirin Business Expert, KIRIN BUSINESS SYSTEM, KOIWA DAIRY PRODUCTS, Kirin Echo, Kirin and Communications, Kirin Engineering, Kirin City, Kirin Techno-System, KIRIN GROUP LOGISTICS  
 Click on the \* in the "Indicator" column for a supplementary explanation of the indicators and where the boundary differs from the above.

Indicator		Boundary		2018	2019	2020	2021	Reference Page	(Link)
Biological resource	Number of small-scale farmers supported for acquisition of Rainforest Alliance certification			120	120	2,120	2,120	Sustainable use of biological resources	<a href="https://www.kirinholdings.com/en/impact/env/3_1a/">https://www.kirinholdings.com/en/impact/env/3_1a/</a>
	Percentage of cases of certification acquired for palm oil in primary and secondary raw materials on environmental audits. (%)	Method of purchasing (Book & Claim method) sustainable palm oil approved by the Roundtable on Sustainable Palm Oil (RSPO). Excluding palm kernel	Operating companies in Japan	100	100	100	100		
Water resources	Freshwater consumption (thousand m3)			73,675	65,853	55,702	50,278	Sustainable use of water resources	<a href="https://www.kirinholdings.com/en/impact/env/3_2/">https://www.kirinholdings.com/en/impact/env/3_2/</a>
	Japan			58,120	50,333	40,187	35,485		
	Oceania			2,733	2,658	2,689	2,483		
	Southeast Asia			2,811	3,654	3,449	2,945		
	Other			10,011	9,178	9,377	9,365		
	Recycled water consumption at plants and offices (thousand m3)			105,010	105,433	89,788	88,805		
	Reused water consumption at plants and offices (thousand m3)			18,993	15,901	3,864	1,978		
Drainage volume (thousand m3)			69,491	65,214	52,340	48,323			
Containers and packaging	Use of resources for containers and packaging (thousand tons)			626	542	524	480	Sustainable recycling of containers and packaging	<a href="https://www.kirinholdings.com/en/impact/env/3_3a/">https://www.kirinholdings.com/en/impact/env/3_3a/</a>
Climate change	Greenhouse gas emissions (thousand tons of CO2e)			5,012	5,045	4,739	4,411	Overcoming climate change	<a href="https://www.kirinholdings.com/en/impact/env/3_4a/">https://www.kirinholdings.com/en/impact/env/3_4a/</a>
	Scope1	Fuel: Australia - National Greenhouse Accounts Factors New Zealand - Guidance for Voluntary, Corporate Greenhouse Gas Reporting Other than the above: "Greenhouse Gas Emissions Calculation and Reporting Manual (Ministry of the Environment/Ministry of Economy, Trade and Industry) factors"	Kirin Brewery, Kirin Distillery, SPRING VALLEY BREWERY, Eishogen, Kirin Beverage, Shinshu Beverage, Hokkaido Kirin Beverage, Kirin Maintenance Service, KIRIN Tropicana, each site of Kirin Beverage Service (Hokkaido, Sendai, Tokyo, Chubu, Kansai), Hakodate Daiichi Vending, KIRINIVIVAX, Tokai Beverage Service, Lion, New Belgium Brewing Company, Kyowa Kirin, Kyowa Kirin Frontier, Kyowa Medical Promotion, Kyowa Kirin plus, Kyowa HAKKO Kirin China Pharmaceutical, Kyowa Kirin Pharmaceutical Research, Mercian, NIPPON LIQUOR, Daiichi Alcohol, Wine Curation, Kyowa HAKKO Bio, KYOWA PHARMA CHEMICAL, KYOWA Engineering, BioKyowa Inc., Shanghai Kyowa Amino Acid, Thai Kyowa Biotechnologies, Kirin Holdings, Kirin Business Expert, KIRIN BUSINESS SYSTEM, KOIWA DAIRY PRODUCTS, Kirin Echo, Kirin and Communications, Kirin Engineering, Kirin City, Kirin Techno-System, KIRIN GROUP LOGISTICS	377	393	372	368		
	Scope2	Electricity: Emission factors published by individual power companies If none published: Emission factors by country from IEA's CO2 Emissions from Fuel Combustion for the year in question		472	441	384	354		
	Scope3	For Scope 3 emissions, the Lion beverage company is excluded after 2019 and the emissions intensity is changed to the LCA database (IDEA) provided by AIST.	Kirin Brewery, Kirin Distillery, Kirin Beverage, Shinshu Beverage, Lion, Kyowa Kirin, Kyowa HAKKO Kirin China Pharmaceutical, Kyowa Kirin Pharmaceutical Research, Mercian, Daiichi Alcohol, Kyowa HAKKO Bio, KYOWA PHARMA CHEMICAL, BioKyowa Inc., Shanghai Kyowa Amino Acid, Thai Kyowa Biotechnologies, Kirin Holdings, KOIWA DAIRY PRODUCTS, KIRIN GROUP LOGISTICS	4,163	4,211	3,983	3,689		
	Greenhouse gas emission intensity per unit of net sales			0	0	0	0		
Reducing industrial wastes and preventing pollution	Energy use (TJ)			11,843	11,421	11,182	10,922	Environmental Report (Environmental Data)	<a href="https://www.kirinholdings.com/en/investors/files/pdf/environmental2022_11.pdf">https://www.kirinholdings.com/en/investors/files/pdf/environmental2022_11.pdf</a>
	Waste generation (thousand tons)			417	431	272	312		
	Recycling rate (%)			100	100	100	100		
	NOx emissions (tons)			397	380	403	356		
	SOx emissions (tons)			19	13	10	12		
	VOC emissions (tons)		Kyowa Kirin, Kyowa HAKKO Bio, KYOWA PHARMA CHEMICAL	481	314	242	393		
	Emissions of Class I designated chemical substances under PRTR Act (tons)		Kyowa Kirin, Kyowa HAKKO Bio, KYOWA PHARMA CHEMICAL	57	49	35	47		
Environmental management	Environmental audits planned and conducted (excluding internal audits of business offices) by the Environment Management System Secretariat of the Head Office (Kirin Holdings CSV Strategy Department)		Kirin Holdings Company, Limited, Kirin and Communications Company, Limited, Kirin Business Expert, Kirin Echo Company, Limited, Kyowa HAKKO Bio Co., Ltd., Koiwai Dairy Products Company, Limited, Kirin City, Kirin Brewery Company, Limited, Heineken Kirin, Eishogen, Brooklyn Brewery Corporation, KLS Higashinoh, Kirin Beverage Company, Limited, Hokkaido Kirin Beverage, Hokkaido Kirin Beverage Service, Tokyo Kirin Beverage Service, Tokai Kirin Beverage Service, Chubu Kirin Beverage Service, Kansai Kirin Beverage Service, Mercian Corporation, NIPPON LIQUOR	13	10	16	21	Environmental Report (Environmental Management)	<a href="https://www.kirinholdings.com/en/investors/files/pdf/environmental2022_10.pdf">https://www.kirinholdings.com/en/investors/files/pdf/environmental2022_10.pdf</a>
	Number of companies reviewed in environmental audits								
	Number of participants in environmental training	Participants in training provided by the Technical Talent Development Center and Kirin Holdings CSV Strategy Department Conducted with virtual from 2020	Operating companies in Japan	320	290	567	735		
	Serious accidents and violations affecting environmental pollution			0	0	0	0		