

# **Kyowa Hakko Bio**

# **CSV PROGRESS REPORT 2023**

Published August 2023

# BY THE NUMBERS

## Kyowa Hakko Bio

### Sales bases

Japan, the United States,  
Germany, Italy, China,  
Singapore

### Production bases

Japan, the United  
States, China,  
Thailand



### Net sales

Approx.  
¥51.1 billion

### Number of employees

Overseas 916  
Domestic 1,125

\*Figures differ from below due to different calculation methods

### Sales composition

Domestic  
Approx. 47%   
Overseas  
Approx. 53%

### Percentage of

Female employees 24%  
Female managers 17%

Corporate name	Kyowa Hakko Bio Co., Ltd.		
Established	October 1, 2008	Capitalization	10,000 million Japanese yen
Number of employees	2,118 (consolidated)	President	Yuki Kanzaki, President and Chief Executive Officer
Address of head office	NAKANO CENTRAL PARK SOUTH, 4-10-2 Nakano, Nakano-ku Tokyo 164-0001, Japan		
Description of business	Manufacture and sale of pharmaceutical raw materials, amino acids, and healthcare ingredients		
Parent company	Kirin Holdings Company, Limited		

# TOP MESSAGE



Kyowa Hakko Bio, as a member of the Kirin Group, is a CSV company that leverages its advanced biochemical technologies to resolve global social issues, contributing to the achievement of better health and a more sustainable society. In the past, we had limited opportunities to communicate our non-financial activities to our stakeholders. Therefore, we have created this CSV Progress Report to provide you with a better understanding of our company.

The Kirin Group has formulated its CSV Purpose as a set of guidelines for our role and purpose in society for each of the four priority issues: “A Responsible Alcohol Producer,” “Health and Well-Being,” “Community Engagement,” and “The Environment.” Within this framework, the Kyowa Hakko Bio Group is actively engaged in contributing to “Health and Well-Being” and “The Environment.” Especially with regard to “Health and Well-Being,” we recognize that our role as a company in the health science sector presents a unique opportunity to deliver functional health materials and pharmaceutical raw ingredients to customers around the world, thereby achieving both social and economic value. In 2023, alongside our existing amino acid plant, we completed a new Human Milk Oligosaccharides (HMOs) production facility at Thai Kyowa Biotechnologies, creating an environment to provide this product to people around the world. Furthermore, advancements are being made in evaluating the health benefits of our flagship product, Citicoline, for applications beyond brain health, and efforts to develop production technology and expand production capacity are proceeding smoothly. Through these initiatives, we anticipate that in 2024 and beyond, we will be able to reach an even larger global customer base with our proprietary materials, thereby practicing our commitment to contribute to people’s health and well-being more than ever before.

Simultaneously, we are constantly advancing initiatives to address societal issues such as the environment and human rights across every stage of the value chain, spanning from raw material procurement to the production process and sales. For example, we have set GHG emission reduction targets and are collaboratively working within the Group to achieve them. In addition, we are taking on the challenge of introducing analytical methods to visualize the environmental impact, including GHG emissions, generated throughout the value chain. Based on the results, we will channel our efforts into developing new fermentation, purification, and manufacturing technologies that are even more environmentally and people friendly. This is just one example. We will continue to take on the challenge of developing environmentally friendly manufacturing processes in various forms.

The CSV non-financial goal of Kyowa Hakko Bio is to “contribute to people’s health by delivering our materials to as many individuals across the world as possible.” Through ongoing value creation, we will strive to exceed your expectations.

**Yuki Kanzaki**  
President and Chief Executive Officer,  
Kyowa Hakko Bio Co., Ltd.

# About This Report

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### Editorial Policy

In putting together CSV Progress Report 2023, we focused on conveying the efforts of the Kyowa Hakko Bio Group, primarily centered around FY2022, in a clear and understandable manner in order to deliver assurance and trust to all stakeholders involved in our business activities.

### Reporting Period

FY2022 (January to December 2022), with some inclusion of periods immediately before and after.

### Organizations Covered by the Report (FY2022)

Kyowa Hakko Bio Co., Ltd.  
Kyowa Pharma Chemical Co., Ltd.  
BioKyowa Inc.  
Shanghai Kyowa Amino Acid Co., Ltd.  
Thai Kyowa Biotechnologies Co., Ltd.  
Kyowa Hakko U.S.A., Inc.  
Kyowa Hakko Europe GmbH  
Kyowa Hakko Bio Italia S.r.l.  
Kyowa Hakko Bio Singapore Pte. Ltd.  
Kyowa Hakko (Guangdong) Pharmaceutical Co., Ltd.

The above companies will collectively be referred to as "the Kyowa Hakko Bio Group" in this report.

### Locations of Related Corporate Information Disclosure

The Kyowa Hakko Bio Group's corporate information is also available on our website.

- Corporate Information <http://www.kyowahakko-bio.co.jp/english/>
- Kyowa Hakko Bio Corporate Guide <http://www.kyowahakko-bio.co.jp/english/corporate/overview/>

As a member of the Kirin Group, the Kyowa Hakko Bio Group shares common policies, purposes, and goals, actively engaging in the practice of CSV. Information pertaining to our CSV reporting can be found on the following pages of the Kirin Group's website.

- Kirin Holdings, Impact <https://www.kirinholdings.com/en/impact/>
- Kirin Holdings, The Environment <https://www.kirinholdings.com/en/impact/env/>
- Kirin Group, Environmental Report [https://www.kirinholdings.com/en/investors/library/env\\_report/](https://www.kirinholdings.com/en/investors/library/env_report/)
- Kirin Holdings, Investors <https://www.kirinholdings.com/en/investors/>
- Kirin Group, Integrated Report <https://www.kirinholdings.com/en/investors/library/integrated/>
- Kirin Holdings, Policies [https://www.kirinholdings.com/en/impact/csv\\_management/various\\_policies/](https://www.kirinholdings.com/en/impact/csv_management/various_policies/)

### Date of Publication

August 2023

### Reference Guidelines

In putting together this report, we referenced global standards such as the Global Reporting Initiative (GRI).

### Department Responsible for Publication

CSV Promotion Team, Corporate Strategy Department,  
Kyowa Hakko Bio Co., Ltd.

Contact:

<http://www.kyowahakko-bio.co.jp/english/contact/>

# The Kyowa Hakko Bio Group's Purpose (Contributing to the Health and Well-Being of People)

## As a Member of the Kirin Group

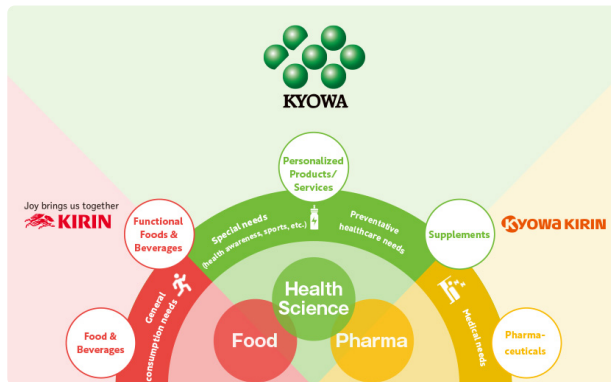
Under the vision of "A global leader in CSV\*, creating value across our world of Food & Beverages to Pharmaceuticals," the Kirin Group is reinforcing its presence in the health science domain.

At the center of this endeavor in the health science domain is the Kyowa Hakko Bio Group, which aims to be a "Japan-based global specialty fermentation company."

\*CSV (Creating Shared Value)

Creating shared value is the practice of creating economic value in a way that also creates value for society by addressing its needs and challenges as the next driving force for growth.

The Kyowa Hakko Bio Group's business domains at the center of the Kirin Group's health science strategy



### What Is the Health Science Domain?

Through many years of research into natural ingredients, cells, and microorganisms, the Kirin Group has succeeded in discovering numerous materials that contribute to health and well-being. The Health Science domain will utilize these unique materials to address the social issues of health and well-being.

## The Kyowa Hakko Bio Group's Purpose

- The Kyowa Hakko Bio Group provides naturally-derived fermentation technology-based materials for pharmaceutical and healthcare fields, as well as science-driven solutions to customers worldwide.
- Through rigorous quality management, we ensure reliability and place a strong emphasis on social responsibility and environmental awareness. Leveraging our long-standing technological expertise and innovative thinking, our mission is to contribute to the health and well-being of people around the world.

### Management Philosophy

We strive to contribute to the health and well-being of people around the world by creating new value through the pursuit of advances in life sciences and technologies.

### VISION

Leverage our advanced biochemical technologies to resolve global social issues. Contribute to the achievement of health and a sustainable society.

### "One KIRIN" Values

As a member of the Kirin Group, we value "Passion. Integrity. Diversity."

**Passion** Our determination to continuously provide our customers and society with new value propositions based on innovative ideas, and our enthusiasm to meet goals with pride in the companies we work for and the brands we offer.

**Integrity** Our gratitude to our stakeholders for always helping us move forward, and our promise to remain honest and humble in every business activity to serve them better.

**Diversity** Our respect for different perspectives and values that enable constructive discussions, and our belief that the "differences" have the power to change the world and create better solutions.

## Through Products That Bear Closely on the Needs of Society

We provide our customers with high-quality materials and science-based solutions.

### Main Products

[For details >](#)

### Application Examples

#### ● Active Pharmaceutical Ingredients

- Amino acids (L-Arginine, BCAA, etc.)
- Nucleic acids (Citicoline\*, etc.)
- Alanyl-Glutamine
- Tranexamic acid
- Prostaglandins

- Health foods
- Sports drinks
- Infant Formula
- Infusions
- Pharmaceuticals
- Cell culture media, etc.

#### ● Healthcare Ingredients

- Amino acids (L-Ornithine, L-Arginine, L-Citrulline, L-Glutamine, BCAA, etc.)
- Health Ingredients (Vitamin K2, etc.)

#### ● Branded Ingredients for Overseas Markets

- [Cognizin™ \(Citicoline\\*1\)](#)
- [Setria™ \(L-glutathione\)](#)
- [Pantesin™ \(Pantethine\)](#)
- [VELOX™ \(L-Citrulline and L-Arginine\)](#)
- [IMMUSE™ \(LC-Plasma\)](#)
- [EYEMUSE™ \(L. paracasei KW3110\)](#)

IMMUSE™ and EYEMUSE™ are clinically researched lactic acid bacteria developed by Kirin Holdings Company, Limited.

#### ● Global Specialty Ingredients

- Human Milk Oligosaccharides (HMOs)\*2
- *Lactococcus lactis* strain Plasma (LC-Plasma)

### \*1 Citicoline [For details >](#)

A substance in the body required for the maintenance of cell membranes in the brain and nerve cells. In North America, Citicoline is incorporated into dietary supplements as well as functional foods and beverage for the purpose of enhancing attention and concentration. In Japan and Asia, it is utilized as a treatment for memory impairments associated with conditions such as strokes and traumatic head injuries.

### \*2 Human Milk Oligosaccharides (HMOs) [For details >](#)

HMOs are the general term for complex sugar molecules (Oligosaccharides) that are contained in human breast milk. HMOs are known to be important nutrient for infants as they are particularly abundant in human colostrum while being nearly absent from bovine milk.

# Materiality for CSV Promotion

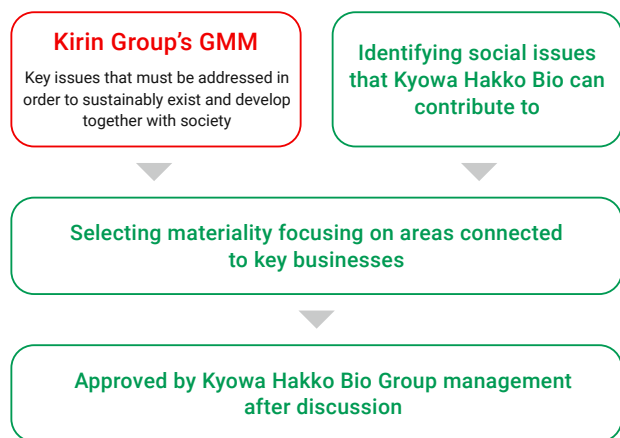
The Kirin Group has formulated the Group Materiality Matrix (GMM), which outlines the key issues that must be addressed in order to sustainably exist and develop together with society. This GMM also covers the Kyowa Hakko Bio Group's business and analyzes the impact on stakeholders and the Kirin Group's business.

In line with this GMM, we have identified priority issues (Materiality) that should be addressed through the business activities of the Kyowa Hakko Bio Group. We plan to review the materiality in a timely manner in response to the interests of our stakeholders and changes in our strategic focus on CSV.

## Kyowa Hakko Bio's Materiality

- Ensuring product safety and security
- Contributing to people's health and well-being through products
- Promoting employee health and a vibrant workplace
- Contributing to a better environment
- Corporate governance

## Process to Select Materiality



## Four Focus Areas Based on Our Vision

As a long-term plan up to 2027, we have established the following four focus areas under our vision of "Leverage our advanced biochemical technologies to resolve global social issues. Contribute to the achievement of health and a sustainable society."

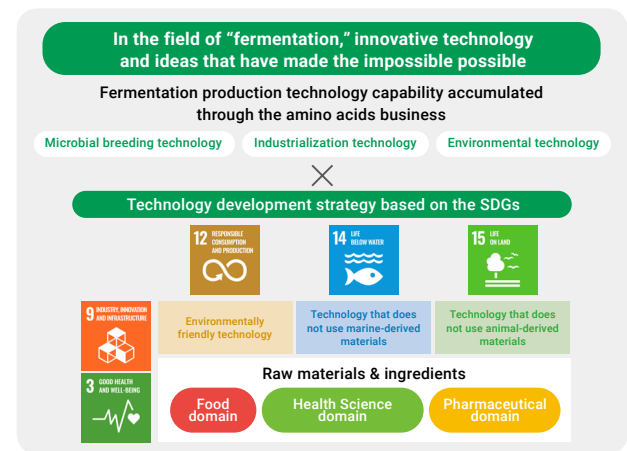
We will continue to strengthen our organizational foundation and aim for further development and growth under our new business strategy. We are committed to increasing our corporate value by achieving both "social contribution" and "high profitability" as we move toward an exciting future.

<p>The IV fluids you may get when you are hospitalized due to illness or injury. In fact, this infusion formulation also contains nutritional ingredients manufactured by us.</p> 	<p>Functional Amino Acids that respond to your desire to give the gift of energy to your future self. The production of these supplement materials is our specialty.</p> 
<p>In the era of 100-year life, healthy life expectancy is attracting attention. We will promote R&amp;D and commercialization to support a longevity society.</p> 	<p>HMOs (human milk oligosaccharides), an advanced material that is being researched for its potential function in the immune system, gut and brain. Our production supports "infant health."</p> 

## Initiatives That Contribute to Sustainable Development Goals (SDGs)

In order to realize the Kirin Group's CSV management, we will continuously work on enhancing our technical expertise in the field of fermentation while keeping pace with the evolving consumer needs and advances in surrounding technologies and strive to create value that benefits society.

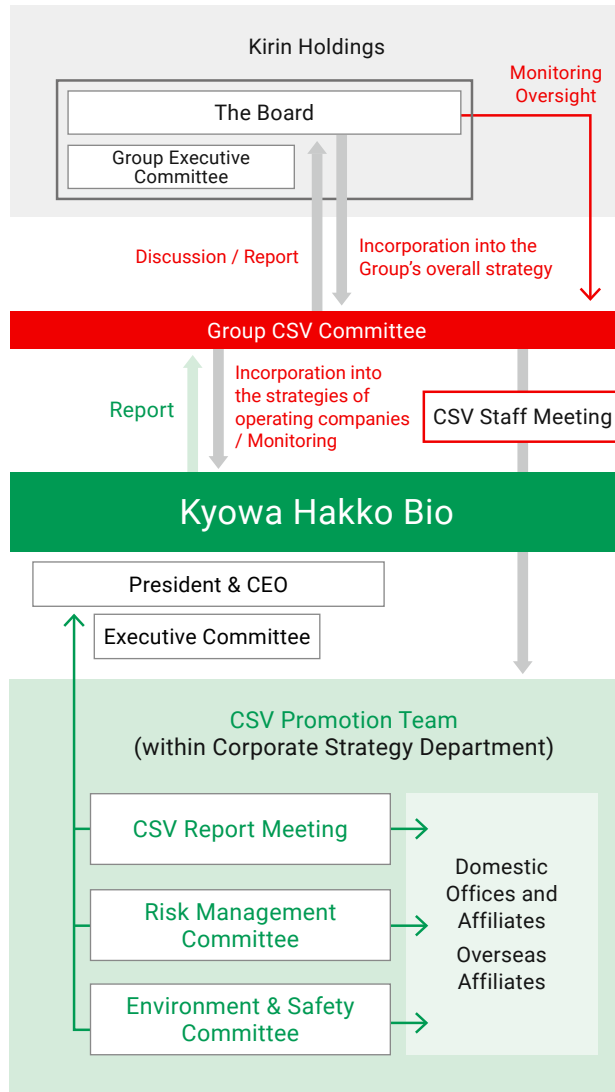
For example, we believe that the impact on natural resources caused by production using plant- and animal-based raw materials is a major social issue, and we are investing in R&D in the development of new products to contribute through our technology.



The Kyowa Hakko Bio Group aims to make further progress by maximizing synergies in the domains of active pharmaceutical ingredients, intermediates, and fine chemicals through the organic combination of Kyowa Hakko Bio's fermentation technology and Kyowa Pharma Chemical's organic synthesis technologies.

# CSV Management

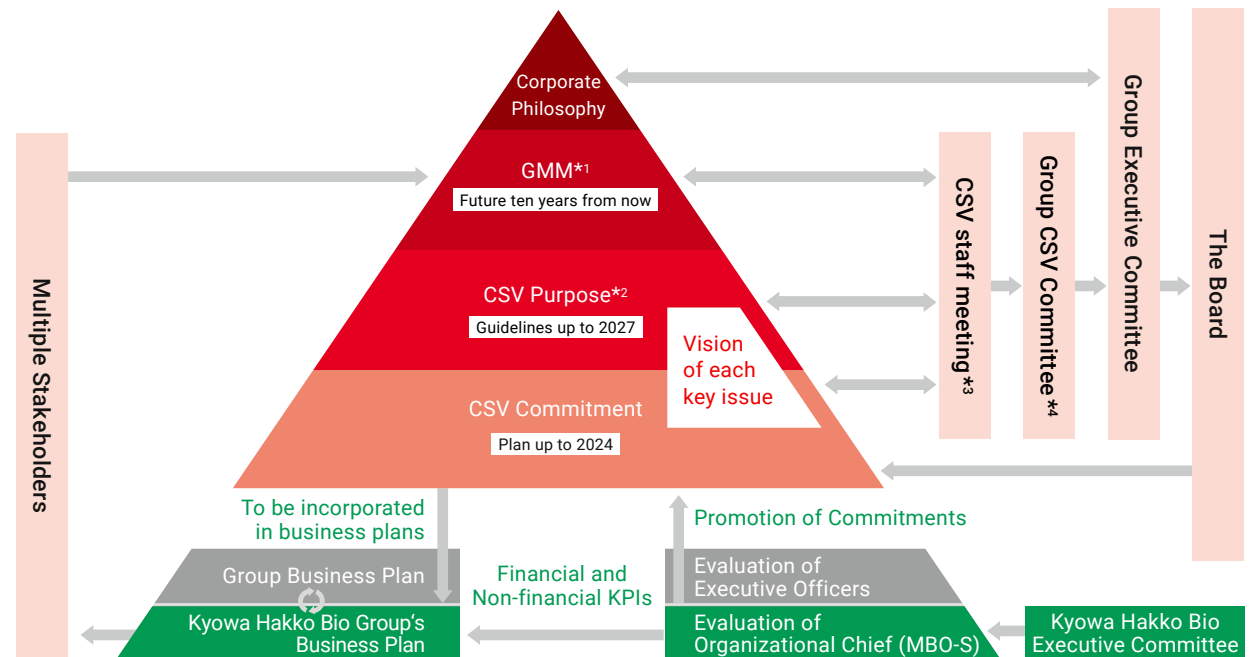
In 2022, the Kyowa Hakko Bio Group established a CSV Promotion Team within the Corporate Strategy Department to control global CSV activities. The President & CEO of Kyowa Hakko Bio Group serves as the chief executive for CSV activities, and we are working to solve issues and create a system to promote CSV. In addition, the CSV Promotion Team is responsible for integrating CSV into our management and business strategies through continuous communication and collaboration with executives and relevant departments.



## Kirin Group's CSV Governance Structure

The Kyowa Hakko Bio Group is promoting the CSV Commitment as a medium-term action plan to achieve the Group Materiality Matrix (GMM), which outlines the key issues that must be addressed in order to sustainably exist and develop together with society, and the CSV Purpose of the Kirin Group by incorporating them into our business plans, including the 2027 Long-term Plan (Vision).








The CSV Promotion Team and related departments are responsible for checking the progress of the CSV Commitment and managing the promotion. We also report quarterly to Kirin Holdings (KH) on the status of plan implementation, and exchange information and opinions in a timely manner.



\*1: Group Materiality Matrix  
 \*2: Translate management philosophy into social significance  
 \*3: Members: KH functional units planning staff, major operating companies' planning staff  
 \*4: Chair: The CEO of Kirin Holdings Members: KH functional units director, the CEO of major operating companies

# Kyowa Hakko Bio Group's CSV Commitments

Related Article: Kirin Holdings "2022-2024 CSV Commitments" [▶](#)

	Group Materiality Matrix	SDG targets that we can particularly contribute to	Approach	Our Achievements	2022 Achievements	Target Value	Target Year
<b>Health and Well-Being</b>   	Support for maintaining the immune system Helping to improve the performance of brain function and prevent decline Improvement of access to nutrition	2.2 3.3 3.4 9.5	By supplying high-quality Human Milk Oligosaccharides (HMOs) to a wide range of markets, from infant formula to health foods, we will contribute to the improvement of customers' health in a wide range of regions and age groups, leading to the growth of our business.	Number of users of HMO-containing products (infant formula, health foods, etc.) in Japan and overseas	Completion of HMOs production facility	2 million people	2027
	Helping to improve the performance of brain function and prevent decline	2.2 3.4 9.5	By supplying Citicoline, a brain-health nutrient, we will be able to support our customers' healthy lifestyle and expand our market by prescribing it to patients and meeting the needs of the health food market for brain function.	Number of users of Citicoline-containing products (pharmaceuticals, health foods, etc.) in Japan and overseas	1.53 million people	4 million people	2027
	Support for the prevention of non-communicable diseases Support for maintaining the immune system*1	3.3	We will contribute to global health by implementing Japan-originated immunological research in society. We will use <i>Lactococcus lactis</i> strain Plasma to support the maintenance of customers' immune function, promote the development of proper immune care habits, and develop new markets in Japan and overseas through product development that leverages the Group's assets.	Number of people who continue to consume <i>Lactococcus lactis</i> strain Plasma in Japan and overseas	0.64 million people (Kirin Group)	1.9 million people (Kirin Group)	2024
	Ensuring food safety and security*1	2.4	We promote hygiene management and food safety management systems globally using international certification (GFSI recognized scheme and ISO 22000 scheme) to ensure the safety and security of our customers.	Acquisition rate of international food safety certification (GFSI certification and ISO 22000)	87% (Kirin Group)	96% (Kirin Group)	2024
	Implementation of health management*1	3.4	As a corporate group that delivers "health" to customers, we aim to create an environment where employees and their families can spend the rest of their lives in good health and mental well-being, and where employees can demonstrate their individual abilities.	Survey score of presenteeism*3 in targeted companies*2	62.55 (Kirin Group)	Improvement from 2022 (Kirin Group)	2027
Percentage of people who maintain appropriate weight in targeted companies*2				64.3% (Kirin Group)	Improved from 2020 (63.8%) (Kirin Group)	2024	
Percentage of employees of domestic business companies with responsible alcohol consumption (Percentage of people whose score is less than 8 on Alcohol Use Disorders Identification Test)				72.5% (Kirin Group)	Over 73% (Kirin Group)	2024	
<b>The Environment</b>    	Sustainable use of biological resources	15.4	Through the procurement of FSC® certified paper and other means, we will work to ensure the sustainability of raw materials that may otherwise be destroyed by deforestation.	Usage site ratio of FSC-certified paper or recycled paper for paper containers and packaging	80%	100%	2030
	Sustainable use of water resources	6.4	By reducing the amount of water used in our business activities, we will ensure the sustainability of water resources by conducting water resource preservation activities and other measures.	Reduction rate of water use volume GHG (Greenhouse Gas)	51.7%	32% (compared to 2015)	2030
	Overcoming climate change	7.2 13.1	In addition to achieving RE100 at an early stage and making 100% of the energy used by our company come from renewable energy sources, we will expand the use of renewable energy in society and work with stakeholders to build a business model that contributes to a decarbonized society.	GHG (Greenhouse Gas) emission reduction rate: Scope 1+2	30%	55% (compared to 2019) 32% (compared to 2019)	2030 2024
				Ratio of renewable energy to electricity used by the entire Group GHG (Greenhouse Gas)	29%	100%	2040
			GHG (Greenhouse Gas) emission reduction rate: Scope 3	21% 1% (Kirin Group*1)	30% (compared to 2019) (Kirin Group*1)	2030	

\*1: The target values and achievements related to this issue are the values of the entire Kirin Group's CSV Commitment, to which the Kyowa Hakko Bio Group contributes as a member.

\*2: From the Kyowa Hakko Group, Kyowa Hakko Bio (non-consolidated) is included as one of the target companies for this commitment. For more information, please see the Kirin Group CSV Commitments at [https://www.kirinholdings.com/en/impact/csv\\_management/commitment/](https://www.kirinholdings.com/en/impact/csv_management/commitment/)

\*3: The condition of being at work with health problems

# Compliance and Corporate Ethics

The Kyowa Hakko Bio Group is committed to compliance and corporate ethics based on the Kirin Group Compliance Policy and Compliance Guidelines.

## Adherence to Compliance Policy

In the Kirin Group, the Group Compliance Policy sets forth the fundamental concepts and behaviors that are legally and ethically required of executives and employees in order to implement [the Kirin Group's Corporate Philosophy](#), Vision, and Values. More specific actions have been summarized and clarified in [the Compliance Guidelines](#). The Kyowa Hakko Bio Group applies and adheres to the policy and guidelines in accordance with the characteristics of each business and country.

## Establishment and Fostering of Compliance Awareness

The Kirin Group has created “The RULE” as an educational tool and disseminates it to ensure thorough compliance. The Kirin Group conducts training to cultivate compliance awareness among all executives and employees involved in the business, and work on important issues such as anti-corruption, anti-bribery, prevention of unfair competition and anti-competitive practices, and prevention of information security breaches. Based on this training content, the Kyowa Hakko Bio Group conducts training at each site tailored to each business and country.

In 2022, 93% of Kyowa Hakko Bio Group employees participated in compliance training. We will continue our educational activities and strive to achieve a participation rate close to 100%.

Percentage of sites with compliance learning opportunities  
100%

Percentage of compliance training participants  
93%



## Business and Compliance Risk Assessment

Many employees participate in the identification of business risks covering the operations of all Kyowa Hakko Bio Group companies and departments, and annual assessments of business risks including compliance risks are conducted. Identified risks are discussed by the relevant departments, solutions are established, and risks are controlled through implementation. Regarding anti-corruption, anti-bribery, and prevention of unfair competition, we have begun risk assessments at all sites using a checklist. In addition, we conduct compliance and human rights awareness surveys for all Group employees to understand what they think and feel, and by addressing the issues identified, we create brighter and more comfortable workplaces and promote compliance.

## Information Security Risk Countermeasures

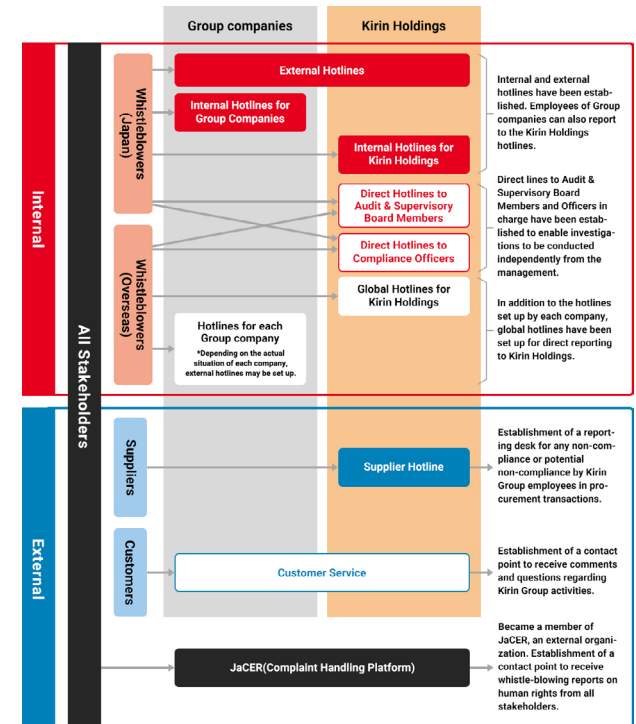
The Kirin Group recognizes information security as one of its key risks and is implementing various measures to strengthen Group governance and promote technological measures based on the development and enhancement of internal rules and employee awareness. As a member of the Kirin Group, we are committed to reducing risks such as leakage or loss of information assets, including sales, manufacturing, and R&D, and to avoiding risks in protecting privacy data.

- With respect to personal information held by our company, we have established the [Privacy Statement](#) and handle the personal information of our customers, business partners, etc. in an appropriate manner.
- We conduct information security training to raise employee awareness and are working on measures to improve security at our overseas sites.

[Kirin Holdings Information Security Report](#)  
[Kirin Group Privacy Data Protection Policy](#)

## Establishment of Hotline and Promoting Awareness Among Employees

With the aim of preventing serious problems associated with corporate activities, we have established an internal and external reporting hotline to ensure transparency and accountability. Securing multiple lines in addition to the normal reporting lines to managers helps to provide an environment that facilitates reporting. The hotline is made known to all employees through compliance training and human rights training.



[For details >](#)



# Product Stewardship: Responsible Product Management

[Related Article: Kirin Holdings "Our Approaches in Quality" >](#)

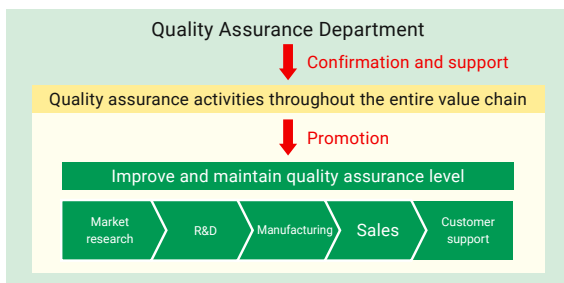
In order to deliver unwavering trust and peace of mind to our customers around the world, we are aware of our responsibility for safety, hygiene, and the environment throughout the product life cycle, and we continue our efforts to improve the quality of the entire value chain. Please see the following pages for information on the environment, human rights, and occupational health.

## Kyowa Hakko Bio Group's Quality Policy

To deliver high-quality products and services that can ensure safety and security of customers, each and every one of us recognizes the importance of our individual tasks and responsibilities and conducts reliable quality assurance activities throughout every step of the process.

## Promoting Quality Assurance Level Improvement

Based on our quality policy, the Kyowa Hakko Bio Group is working daily to improve quality and enhance quality assurance in all departments, including those of our affiliates. Our Quality Assurance Department confirms these quality-related activities and provides support to improve the level of quality assurance throughout the entire value chain, from product development to support after delivery of products to customers.



### Proper Manufacturing and Quality Control

At the Kyowa Hakko Bio Group's API manufacturing facilities, we adhere to guidelines and have received certification for compliance with pharmaceutical Good Manufacturing Practice (GMP) standards, which are set by regulatory authorities in each country for pharmaceutical manufacturing facilities. We ensure proper management of all processes, from raw material procurement and management to manufacturing and shipping, to deliver

high-quality products with effectiveness and safety. In addition, our food material manufacturing plants have acquired FSSC 22000, an international certification standard for food safety management systems.

We also actively accept audits by domestic and overseas customers who use our products. In addition to our voluntary efforts, we have accumulated quality improvement activities through third-party surveys, and are working daily to create a system that can stably maintain a high level of quality. We also conduct regular quality audits of contract manufacturers to check compliance with our agreements and GMP ministerial ordinances, and request improvements when necessary.

## Initiatives throughout the Product Life Cycle

### Appropriate Measures in the Use of Advanced Technologies

Our Group, which is based on biochemicals, always gives first priority to safety, health, and environmental impact with respect to the technologies used in research, development, and production, and takes appropriate measures to address these issues.

We strictly adhere to biosafety standards established worldwide and ensure safety by disposing of waste at appropriate facilities. We take all possible measures to protect health and the environment, recognizing the risks and complying with the World Health Organization (WHO) Laboratory Biosafety Manual and the Cartagena Protocol on Biosafety. Furthermore, we support the principles of the Convention on Biological Diversity and the Nagoya Protocol and are committed to protect biodiversity and ensure fair and equitable use of genetic resources.

Our R&D also rigorously evaluates the safety of developed products to confirm the safety of future customers and their impact on the environment.

### Promoting Sustainable Logistics

The Kyowa Hakko Bio Group takes appropriate

measures to ensure security related to security trade by comprehensively taking into account political situations, legal systems, and the reputation of our counterparties in each country and region. We are proactively addressing issues in the logistics and promoting measures such as reducing workload by using pallets and prioritizing marine transportation.

### Providing Appropriate and Accurate Product Information

We provide customers with accurate information on sales, development, and manufacturing activities. We also obtain and provide information on certifications related to pharmaceuticals and foods required by our customers in various countries, as well as certifications related to religious dietary guidelines such as Halal and Kosher.

### Providing Reliable Product Handling Information

The Kyowa Hakko Bio Group provides Safety Data Sheets (SDS) in accordance with the GHS (Globally Harmonized System of Classification and Labeling of Chemicals) format in order to accurately communicate product specifications, safe usage, and disposal risks. For product sales to Europe, we comply with the REACH Regulation. Through these initiatives, we strive to comply with local regulations and ensure that our customers can use our products with peace of mind.

### Response to Product Defects

The Product Recall Standards stipulate our response in the event of a serious product accident, and we place the highest priority on compliance with laws and regulations as well as the health and safety of patients and customers.

### Risk Assessment of Environment, Safety, and Quality

When launching a new manufacturing business, we comprehensively evaluate the safety, environmental impact, and health effects of raw materials used at every stage from the research to production. Even after launching, in the event of changes in equipment or manufacturing methods, we evaluate risks from the perspectives of the environment, safety, and quality before implementing them.

# The Environment (Vision and Policy)

The Kyowa Hakko Bio Group recognizes the resolution of social issues connected to the environment as one of its key management issues. Working alongside internal and external stakeholders, the Group makes efforts to create positive impacts while at the same time minimizing environmental impact.

## Kirin Group's Environmental Vision 2050

In 2020, the Kirin Group introduced the Kirin Group's Environmental Vision 2050 towards improving the resilience of society and companies.

The Kyowa Hakko Bio Group, as a member of the Kirin Group, identifies this vision as the ideal state that society should aspire to and actively works towards its realization. Furthermore, the targets based on the vision, along with the measures and technologies required to achieve them, are shared within the Kirin Group, and we will work as one to make steady progress.

[For details >](#)

## Promotion of Environmental Management

The Kyowa Hakko Bio Group has established the Kyowa Hakko Bio Group Environmental Policy and conducts global environmental management activities based on it. The Environmental Policy is regularly reviewed and improved in conformity with the latest regulations and best practices.

Following ISO14001 and other environmental management systems, the Environmental Management Division at Kyowa Hakko Bio's head office conducts audits of the Group's manufacturing sites, and strives to improve each company's environmental management system. In Japan, to ensure even greater transparency and independence, the Group has conducted strict surveys on compliance with environmental laws and regulations using an external consultant since 2009. Additionally, Kirin Holdings' CSV Strategy Department conducts internal environmental audits of each site of the Kyowa Hakko Bio Group according to the established standards, which are then integrated into management reviews.

## Kyowa Hakko Bio Group Environmental Policy

### Basic Policy

We leverage our advanced biochemical technologies to contribute to health and well-being as well as the conservation of the global environment and the realization of a sustainable society.

### Activity Policy

We have set the resolution of social issues connected to the environment as one of our key management issues, and under the leadership of management, we seek to address them with the participation of all employees.

#### 1. Compliance

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

#### 2. Contribution to a Circular Society

We will set sustainable development targets pertaining to the environment and work to achieve them by improving water and energy consumption efficiency and developing new solutions.

#### 3. Environmental Management

We will create a PDCA cycle for environmental activities and make continuous improvements in accordance with our business strategy.

#### 4. Human Capital Development

We will continuously develop Human Capital that can create and implement a positive impact on the environment in our own company and society as a whole.

#### 5. Communication

We will disseminate highly transparent and reliable information and broadly promote communication with stakeholders.

January 1, 2022  
Yuki Kanzaki

## Environmental Risk Management and Countermeasures

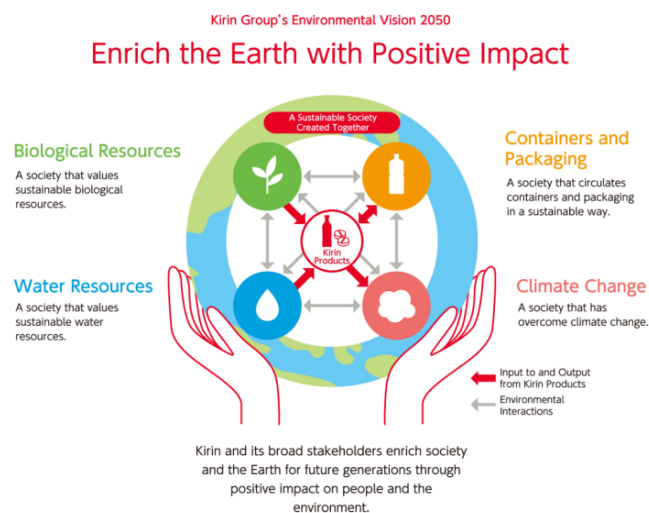
The Kyowa Hakko Bio Group continuously conducts environmental risk assessments and understands its business activities' impact upon the environment.

To further reduce any environmental impacts from manufacturing, we conduct R&D of manufacturing processes and review operational processes and facilities.

In developing new products, we proceed with commercialization only after ensuring all raw materials

and products are safe for the environment.

Through REACH registration and clear definitions of hazard and risk information in Safety Data Sheets (SDS), we openly disclose any environmental risks of products to customers and transport workers. Towards maintaining a sustainable and enriched earth, we give thorough consideration to the environment by conducting appropriate countermeasures.

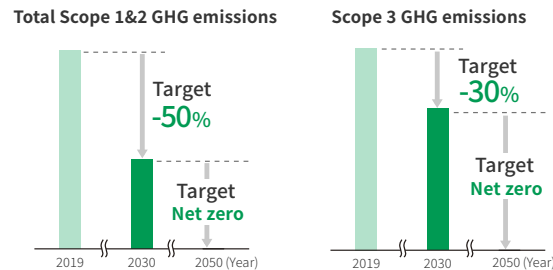


# The Environment (Climate Change)

Related Article: Kirin Holdings "Overcoming Climate Change" >

In addition to the greenhouse gas (GHG) emission reduction targets set by the Kirin Group, the Kyowa Hakko Bio Group has set its own targets tailored to its businesses and is actively working to achieve them.

## Kirin Group Targets



- Kirin Group has obtained approval for its 1.5°C-aligned target by the Science Based Targets initiative (SBTi). The Group has set ambitious GHG emission reduction targets, aiming for a 50% reduction in Scopes 1 and 2 and a 30% reduction in Scope 3 emissions by 2030, all compared to 2019 levels. Additionally, its long-term reduction target of achieving net-zero GHG emissions across the entire value chain by 2050 has been certified as SBT Net Zero by the SBTi.



- The Kirin Group joined RE100 and obtained certification for its renewable energy ratio target of 100% in used electricity by 2040.

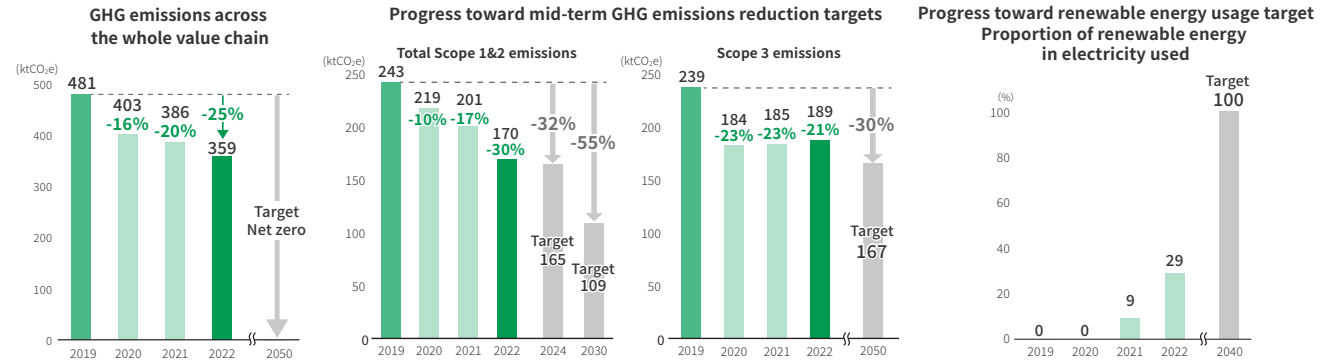


- The Kirin Group was selected for the A-List, the highest rating, in the CDP's "climate change" and "water security" categories in 2022.



As a member of the Kirin Group, the Kyowa Hakko Bio Group is also subject to evaluation and has thus contributed to these achievements.

## Kyowa Hakko Bio Group Targets & Progress



### Use of Renewable Energy

The Kyowa Hakko Bio Group aims to achieve a 100% renewable energy ratio in used electricity by 2040. A portion of the electricity consumed at Kyowa Pharma Chemicals' manufacturing plants is already sourced from renewable energy. Furthermore, at the Kyowa Hakko Bio Group's overseas manufacturing sites, Thai Kyowa Biotechnologies and Shanghai Kyowa Amino Acid, we have introduced "Renewable Energy Certificates (I-REC)." With the anticipation of a growing global demand for Human Milk Oligosaccharides (HMOs), full-scale operations have commenced at a newly established manufacturing facility in Thailand. However, we are committed to balancing business growth with reducing our negative impact on the environment. Plans are also underway to gradually introduce these initiatives at other sites.

Additionally, we will promote efficient energy consumption through a shift to energy-saving equipment and facility operation management.

#### Installation of photovoltaic generation facilities at the Yamaguchi Production Center

At the Yamaguchi Production Center, we attracted photovoltaic generation facilities with a maximum output of 12 MW (equivalent to energy consumed by approximately 3,600 households) on unused land within the premises in 2016 and are actively promoting the spread of clean energy.

### Introduction of Energy-Saving Equipment

When installing or replacing manufacturing facilities, we prioritize the selection of energy-efficient equipment with low GHG emissions. For instance, at Thai Kyowa Biotechnologies' new facility, we have introduced a concentration system with an MVR (Mechanical Vapor Recompression) steam compressor, allowing us to reuse steam.



### Introduction of High-Efficiency Boilers

At BioKyowa, which manufactures amino acids in the United States, natural gas is used as a heat source during production. In order to reduce the use of natural gas, in 2020, we replaced all boilers with high-efficiency package boilers that control the number of operating units. This change has reduced annual natural gas consumption by approximately 8%.



# The Environment

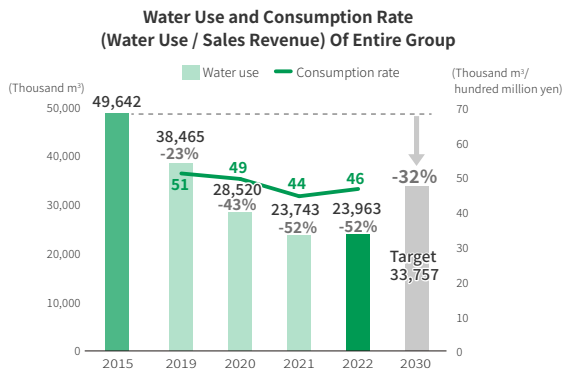
## (Water Resources, Biological Resources, Containers and Packaging)

In the field of fermentation production, where the Kyowa Hakko Bio Group excels, water resources are indispensable in the process of utilizing microorganisms to produce substances. With manufacturing sites in Japan, the United States, China, and Thailand, the Kyowa Hakko Bio Group acknowledges that water risk and water stress varies significantly by country and region and takes measures to conserve water tailored to water stress at each location. We also ensure environmentally friendly discharge into aquatic ecosystems.

### Water Resources Reduction of Water Use

We actively reduce water use toward the conservation and sustainability of water resources.

By utilizing cooling towers and ponds, we have introduced a cooling system for recycling and reusing water. This allows us to effectively reduce water consumption and contribute to the conservation of valuable water resources.



### Setting Stricter Wastewater Standards

Regarding plant wastewater, we have set voluntary standards that are stricter than those required by regional regulations. Before releasing wastewater into rivers and sewers, we always confirm water quality items, such as COD and nitrogen.



At some overseas plants, we use excess sludge for composting and other purposes, thereby contributing to global environmental conservation.

### Water Resources Water Risk Assessment

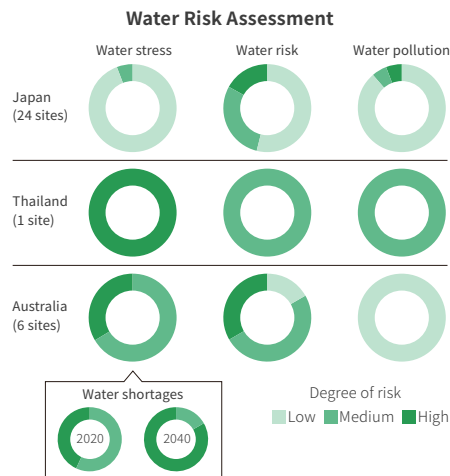
Toward the sustainable use of water resources, the Kirin Group has been quantitatively assessing water risk and stress using surveys since 2014 and has taken measures to conserve water tailored to water risk and stress at each business site. Through the water risk and stress surveys, the Kyowa Hakko Bio Group confirmed that water stress at Thai Kyowa Biotechnologies was high. [For details >](#)

Based on the survey results, it was determined that urgent measures were necessary at Thai Kyowa Biotechnologies, and water-saving equipment was introduced into the Human Milk Oligosaccharides (HMOs) production facility completed in 2022. We are also actively exploring measures for our existing facilities.

Kirin Holdings also conducts a scenario analysis based on the TCFD recommendations to study and identify the impact of climate change on the major agricultural produce volumes used by the Kirin Group. The scenario analysis includes corn, which is used as a raw material for the Kyowa Hakko Bio Group. This result is integrated into the strategies of the entire Kirin Group. [For details >](#)

#### Water-saving enterprises in 2022

Shanghai Kyowa Amino Acid was recognized by the Shanghai State Taxation Bureau



### Biological Resources Containers and Packaging Environmentally Friendly Packaging

The Kyowa Hakko Bio Group values the use of sustainable biological resources and promotes the adoption of FSC (Forest Stewardship Council) certified or recycled copy paper and paper packaging materials. We have set a target of achieving 100% use of FSC certified or recycled paper for paper packaging materials by 2030, and four out of five sites have already accomplished it.

We also adopt recyclable fiber drums made entirely of paper for packaging bulk goods on a global scale, in consideration of customers' waste disposal burden and the environmental impact.

#### Number of sites that have adopted paper packaging materials



#### Fiber drum comparison



# The Environment (Pollution Prevention, Waste and Chemical Substance Management)

## Preventing and Responding to Accidents

- All manufacturing sites manage a ledger of legal requirements and establish voluntary control standard values stricter than the regulations in each country to thoroughly prevent environmental pollution.  
We conduct risk assessments related to the introduction of new equipment, modifications to existing facilities, and the handling of chemicals. Our goal is to minimize risk by identifying and mitigating hazards, harmful effects, and factors contributing to local pollution.
- For substances requiring careful handling such as hazardous or toxic materials, we implement clear labeling, assign separate and lockable storage, prepare operational procedures, and provide training in advance to the employees involved.
- For the prevention of accidents and any recurrence, we have established a system for the reporting of environmental accidents within the Kyowa Hakko Bio Group, in which we share examples of near-misses and accidents and extend countermeasures to other sites. We use internal environmental audits to check the status of initiatives taken toward achieving environmental targets, see how measures to prevent environmental accidents and near-miss cases are being shared with individual sites, and confirm the status of legal compliance.
- The emergency response procedure in the event of an environmental accident is based on the Crisis Occurrence Criteria, whose content is reviewed to match individual manufacturing sites on an annual basis. In addition, in the event of an environmental accident, an Environmental Accident Report is prepared on the basis of criteria that is specified by each manufacturing site and submitted to Kirin Holdings.

## Appropriate Waste Management

- The Kirin Group is working toward its declared goal of the implementation and firm establishment of thorough appropriate management of waste. To this end, we established the Kirin Holdings Waste Management Rules and are promoting the appropriate treatment of waste within the common Group systems. These rules standardize contract templates and the frequency and content of contractor audit programs, and by keeping an updated list of staff in charge of waste management, we provide education (industrial waste treatment practitioner training) based on standardized textbooks.
- We promote the reduction of final disposal volume by setting KPIs for the amount of waste and byproducts generated and the rate of recycling. Under the concept of Reduce, Reuse, and Recycle (3Rs), we take countermeasures such as recycling dewatered sludge into raw materials for cement and soil amendments at individual sites. Kyowa Hakko Bio's Yamaguchi Production Center has achieved zero emissions\* since March 2016, as Kyowa Pharma Chemical has done since 2012.

\*As per our definition, zero emission means reducing the amount of final landfill disposal to 0.1% or less of the amount of waste generated.

## Reducing Emissions of Air Pollutants

The Kyowa Hakko Bio Group strives to comply with all laws and regulations relating to air pollution in the various countries where we operate. We have also established voluntary standards pertaining to NOx, SOx, particles of soot, fluorocarbon, etc. that are stricter than those required by environmental legislation and are working to reduce our emission of air pollutants. In addition, we adopt centrifugal chillers with refrigerants whose Global Warming Potential (GWP) is 1 and Ozone Depletion Potential (ODP) is zero at the time of replacements.

## Preventing Soil Contamination

When selling assets, the Kirin Group conducts thorough investigations of soil contamination and provides appropriate information while responding as necessary. In 2022, we conducted a soil survey of the former site of Kyowa Hakko Bio's Tsukuba Research Laboratory and confirmed that there were no problems.

## Managing Chemical Substances

The Kirin Group appropriately manages its chemical substances in accordance with regulations like the PRTR (Pollutant Release and Transfer Registers) Act, which focuses on promoting environmentally sound management of specific chemical substances and controlling their release into the environment. The Kyowa Hakko Bio Group treats volatile organic compounds (VOCs), which constitute a significant portion of the chemical emissions generated due to the nature of our business, through scrubber processing to reduce the emissions in the air.

## Collaboration with Local Communities

We place a great deal of importance on mutual understanding and partnerships with communities adjacent to our manufacturing and business sites and promote communication by hosting regular meetings and factory tours. Also, we actively participate in community dialogue and various community events that are held by nearby residents' associations. We have implemented measures to control odors and noise resulting from our manufacturing operations, and we regularly monitor and manage them. Through mutual understanding, we strive to achieve coexistence and mutual prosperity with communities.

# Promotion of Sustainable Procurement

## Sustainable Procurement Management

The Kirin Group established the “[Kirin Group Sustainable Procurement Policy](#)” in September 2017 (revised in April 2021) to fulfill our social responsibility.

This policy outlines five important areas: 1. Steady focus on quality, 2. Ensuring regulatory and ethical compliance, 3. Respecting human rights, 4. Environmental stewardship, and 5. Coevolving relationships of mutual trust with suppliers. Through procurement activities aligned with these five themes, the Kirin Group aims to improve sustainability from global perspectives, enhance corporate value, and contribute to society.

Furthermore, in order to meet the demands and expectations of society and continue to create a variety of value through collaboration with our suppliers, who are also business partners, the “[Kirin Group Sustainable Supplier Code](#)” was established in April 2021 under the “Kirin Group Sustainable Procurement Policy.” This code outlines what we expect our suppliers to comply with.

The Kyowa Hakko Bio Group, as a member of the Kirin Group, complies with this policy and code while promoting sustainable procurement based on the characteristics of the Group’s businesses and the regions in which our sites are located. In addition, the Kyowa Hakko Bio Group as a whole promotes green purchasing, which is the purchase of products with the lowest possible environmental impact from businesses that strive to reduce their environmental impact, after careful consideration of the necessity of such purchases.

## Sustainable Procurement Initiatives

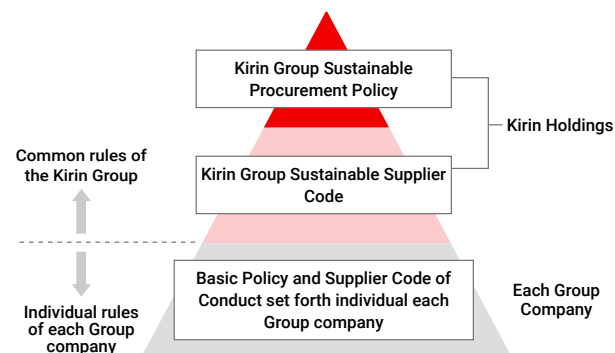
In Kyowa Hakko Bio (non-consolidated), we have initiated specific efforts toward sustainable procurement. In the future, we plan to expand these efforts to other Kyowa Hakko Bio Group companies in accordance with the characteristics of their businesses and regions.

### Supply Chain Risk Analysis

To understand the risks in raw material procurement, we utilized Sedex’s assessment tool, Radar. We conducted an analysis based on two axes: 1. Human rights risks by raw material sourcing country and 2. The degree of impact on our business. This allowed us to identify and prioritize raw materials with high human rights risks. Moving forward, we will implement the following initiatives with an awareness of the human rights risks associated with these raw materials.

- 1 Promote awareness of the “Kirin Group Sustainable Supplier Code”
- 2 Implement of Kirin Group Self-Assessment Questionnaires (SAQ)\*
- 3 Conduct interviews based on the SAQ results

\*Based on the Global Compact Network Japan (GCNJ) common SAQ with additional questions unique to the Kirin Group



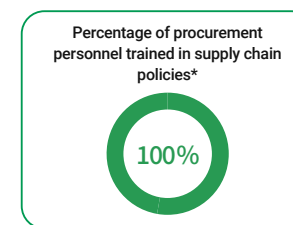
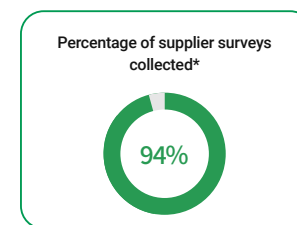
### Supplier Surveys and Improvement Activities

We regularly conduct supplier surveys (the same as the aforementioned SAQ) to assess the status of efforts related to human rights, society, environment, and more. The survey response rate for FY2023 was 94%. The results of this survey will be used to provide feedback to our suppliers in the future. Furthermore, we will conduct interviews with suppliers who didn’t meet our expectations and advise them on how to improve their efforts, so that we can work together toward sustainable procurement.

In addition to the above, we are promoting awareness of the “Kirin Group Sustainable Supplier Code” and negotiating basic trading agreements with suppliers that include clauses related to society and the environment. As of July 2023, we have concluded such agreements with 58% of our suppliers, with a target of reaching 70% by the end of the year.

### Procurement Personnel Training

Our procurement personnel have obtained the Certified Procurement Professional (CPP) qualification from the Japan Management Association (JMA). Additionally, to enhance their understanding of sustainable procurement, they regularly participate in training programs related to issues such as human rights, society, and the environment within the supply chain. In 2022, all procurement personnel attended two training sessions. We also incorporate indicators related to sustainable procurement into the evaluation of procurement personnel and reflect the achievement of targets in their evaluations.



\*Kyowa Hakko Bio (non-consolidated)

# Respect for Human Rights

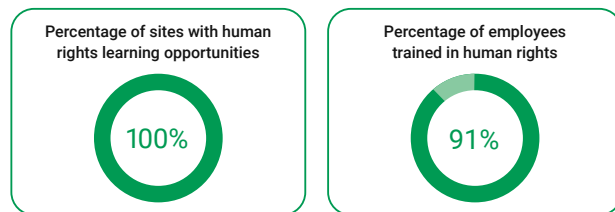
The "Kirin Group Human Rights Policy" functions as the dominant policy for all documents and codes related to initiatives that support respect for human rights within the Kyowa Hakko Bio Group's business activities. The Policy applies to all executives and employees including part-time, dispatch, and contract workers of the Kyowa Hakko Bio Group.

The "Kirin Group Human Rights Policy" upholds the practice of respecting human rights in every stage in the supply chain. It prohibits any form of discrimination and harassment, promotes responsible labor practices including a safe and healthy workplace environment, and ensures adequate working hours and a minimum wage. Moreover, it respects the freedom of association and the right to collective bargaining and lays out a commitment to conducting human rights due diligence.

Based on the "Kirin Group Human Rights Policy," the Kyowa Hakko Bio Group improves its understanding of diverse human rights issues that are generally associated with activities in individual countries and business fields, works together with business partners, and appropriately deals with such issues.

## Awareness-raising Education

- The Kirin Group sets every June as Harassment Elimination Month to further improve employees' human rights awareness, prevent harassment, and create lively and cheerful workplaces that involve all employees.
- At each business site, we conducted human rights awareness training through individual learning and group work formats. These sessions covered diversity, unconscious bias, discrimination, and harassment as topics relevant to a wide range of internal and external stakeholders.



## Prevention of Child Labor, Forced Labor and Human Trafficking

- We regularly conduct awareness-raising training to prevent child labor, forced labor, and human trafficking.
- No company in the Kyowa Hakko Bio Group employs any child under 18 years old.

## Identification of Risks in Supply Chains

- To identify actual or potential impacts in all of the Kyowa Hakko Bio Group's supply chains, we consider a human rights perspective at the time of identifying business and compliance risks. For further details, please refer to "Compliance and Corporate Ethics" (Page 7).
- Kyowa Hakko Bio (non-consolidated) conducted an analysis of risks in its supply chain. For further details, please refer to "Sustainable Procurement" (Page 13).
- We have an internal hotline for reporting human rights violations within the supply chain, as mentioned in "Compliance and Corporate Ethics" (Page 7). We also have an external hotline for opinions from people in supply chains associated with our Group. Please see "Establishment of Hotline and Promoting Awareness" on this page.

## Respecting Human Rights in R&D

- In order to appropriately conduct R&D activities respecting human rights, the Kyowa Hakko Bio Group conducts stringent reviews on ethical justification and scientific rationality under the control of the Kirin Holdings Institutional Review Board (IRB).
- In research involving human-derived samples and information, both the Kirin Group and the Kyowa

Hakko Bio Group, in accordance with relevant laws and research ethical guidelines, adhere to the principle of obtaining sufficient understanding from individuals (or their proxies) who provide samples or information. This is achieved by explaining the necessary details using documents and obtaining consent in writing at facilities such as universities where sample or information provision takes place. Furthermore, in clinical research, we rigorously conduct the research while prioritizing the protection of participants' human rights and personal information, ensuring safety, and maintaining a focus on their welfare.

## Hotline and Awareness Promotion

- We have an internal hotline for reporting human rights violations including discrimination and harassment issues as mentioned in "Compliance and Corporate Ethics" (Page 7). Employees are made aware of this hotline during training.
- For opinions from outside the company, we offer points of contact on Kyowa Hakko Bio's website and the Kirin Group's website. Additionally, the Kirin Group offers external contact options, such as the Supplier Hotline and the Remedy Platform of Japan Center for Engagement and Remedy on Business and Human Rights (JaCER), which can also be used by customers of the Kyowa Hakko Bio Group.

# Achieve Sustainable Growth with Diverse Human Capital

Kyowa Hakko Bio Group believes that diversity is a key driver to becoming a leading global CSV (Creating Shared Value) company. Both employees and the organization continuously grow by harnessing the strengths of diverse employees, fostering innovation from diversity, and creating new value. We are committed to creating an environment where a diverse workforce with a drive for growth can thrive, regardless of gender, disability status, age, race, or nationality, and we are working towards establishing an organizational culture that promotes a satisfying and enjoyable work experience.

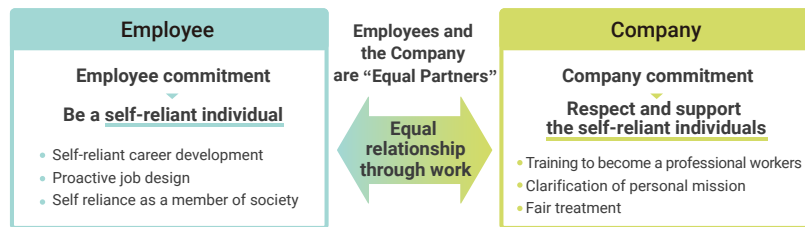
## Human Capital Strategy

In an environment where the concept of career (self-realization) is diversifying, the Kyowa Hakko Bio Group provides regular opportunities for communication regarding careers and working conditions to support each individual's drive for growth and pursuit of goals.

Furthermore, we conduct educational training to assist employee learning and skill development, enabling human capital with various expertise and skills to maintain their motivation for career development.

### Basic philosophy of human capital = "Respect for humanity"

Create a place where each and every employee can fully develop and grow with boundless potential, respecting their efforts and individuality (human nature), and proactively create a place where they can work to their fullest.



## Recruitment and Development of Diverse Human Capital

To adapt to the changing business models of the era and enhance our capacity for innovation, we actively engage in career recruitment. We cultivate new hires with a long-term perspective, expecting them to not only embody our corporate brand but also serve as valuable assets in bringing together various businesses and functions. Each company in the Kyowa Hakko Bio Group sets its own hiring criteria and conducts recruitment autonomously.

### Provision of Opportunities to Motivate Growth

- Established "KPC College" to foster the ability to think and support self-directed learning. (Kyowa Pharma Chemical)
- To promote self-reliant career development, we provide opportunities for learning, including degree acquisition support and self-improvement assistance programs. (Kyowa Hakko Bio)

## Hataraki-Gai Reforms

Within the Kyowa Hakko Bio Group, we have implemented flexible working arrangements such as flextime and remote work, tailored to job roles and assignments. We strive to create an environment that encourages communication with employees and facilitates discussions about working conditions and family support. Through these initiatives, we aim to enhance employee satisfaction and productivity, ultimately realizing a better workplace environment.

### Encouraging Employees to Take Childcare Leave

We encourage taking parental leave as one of the measures for creating a work environment that supports work-life balance. To promote an environment that is conducive to raising awareness of the importance of such leave, we share case studies of employees taking parental leave and regularly provide information to workplace leaders. In recent years, the number of men taking parental leave has also increased.



Obtained the "Kurumin Certification" from the Ministry of Health, Labor and Welfare. (Kyowa Pharma Chemical)

### Promotion of Women's Activities

- Participated as a founding sponsor (Silver) of "Women In Nutraceuticals." (Kyowa Hakko U.S.A.) [For details >](#)
- Obtained the "Eruboshi Certification" from the Ministry of Health, Labour and Welfare, as a company promoting women's activities. (Kyowa Hakko Bio, Kyowa Pharma Chemical)



## Employee Engagement Surveys

The Kyowa Hakko Bio Group conducts an annual engagement survey for part-time, contract, and full-time employees at all sites. We identify issues related to the awareness and behavior of employees in each organization, their engagement, and the organizational culture. We then incorporate these into the plans and measures of each company and organization to address them and strive to create a better workplace. Over the years, improvements have been observed in many categories, and based on these results, we will continue to conduct training to enhance the work environment and work on resolving areas with low scores.



# Ensuring Occupational Health and Safety

Related Article: Kirin Holdings "Ensuring Occupational Health and Safety" >

The Kyowa Hakko Bio Group applies its Occupational Health and Safety Policy to all executives and employees who constitute the workplace environment, including part-time, contract and temporary employees. We harmonize top-down management with bottom-up activities and promote business with careful attention to health and safety and also security and disaster prevention through the development of assessment-based activities.

## Promotion of Occupational Health and Safety Management

The Kyowa Hakko Bio Group set forth the Kyowa Hakko Bio Group Occupational Health and Safety Policy and conducts global occupational health and safety activities based on it.

In compliance with the Ministry of Health, Labour and Welfare notification on "Guidelines on Occupational Safety and Health Management Systems," the Kyowa Hakko Bio Group is actively working on raising employee safety awareness and fostering a culture of safety through the PDCA cycle. Through these management systems, we share identified risks with all global sites and swiftly conduct investigations, checks and improvements to mitigate them.

### Kyowa Hakko Bio Group Occupational Health and Safety Policy

To contribute to the health and prosperity of people around the world, we strive to realize lively and comfortable workplace environments where occupational health and safety has first priority.

#### Activity Policy

Based on the Three Reality Principle, which emphasizes "going to the actual place," "knowing the actual situation" and "being realistic," we practice the following action guidelines to protect mental and physical health.

1. We will respect and observe occupational health and safety rules.
2. We will conduct risk assessments and risk predictions that must be understood by all people involved, before taking action.
3. We will communicate with each other as "One Team" and protect colleagues to work together against risks.
4. We will prevent similar accidents from occurring through improvements after an accident and lessons learned from the past and other sites.
5. We will continuously improve working environments, promote essential safety of equipment and facilities, and guarantee the safety of communities.

January 1, 2022  
Yuki Kanzaki

## Risk Prediction and Countermeasures

The Kyowa Hakko Bio Group has established an Environmental and Safety Committee and conducts annual risk assessments at all manufacturing sites within the Group. Risks identified through these assessments and issues that have arisen are shared across all manufacturing sites, and measures to mitigate these risks are established and implemented. Additionally, we regularly conduct inspections of safety equipment and internal audits to drive continual improvement.

## Cultivation of Safety Awareness

The following training is autonomously conducted at all manufacturing sites. The methods and results are shared within the Group to foster continuous improvement in our educational practices.

- We conduct repeated training of risk prediction activities and risk assessments. VR-based sensory education is conducted at some sites.
- We provide protective gear and instruction on their proper use. Practical procedures pertaining to the handling of chemical and hazardous substances are provided in the Code of Conduct. We also conduct training on how to handle these substances.

## Certification/External Assessments



Recognized as 2023 Certified Health & Productivity Management Outstanding Organizations by the Ministry of Economy, Trade and Industry and the Nippon Kenko Kaigi. (Kyowa Hakko Bio, Kyowa Pharma Chemical)



Recognized for achieving the labor-related standards set forth by the Shanghai Municipal Human Resources and Social Security Bureau in 2022. (Shanghai Kyowa Amino Acid)

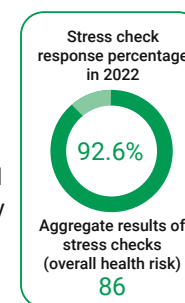
## Initiatives for Health Management

The Kyowa Hakko Bio Group considers the health of employees and their families to be its first priority and implements health management in accordance with the Kirin Group's health management policy and the Kirin health declaration. We accumulate data such as employees' health check-up results, stress check results, and work-related information, and we provide support tailored to the individual circumstances of each employee, rather than a one-size-fits-all approach.

## Conducting Employee Stress Checks

Kyowa Hakko Bio (non-consolidated) has conducted stress checks since 2016 and utilizes the results for mental healthcare purposes.

Employees identified as experiencing high levels of stress based on their response results are individually contacted to arrange an interview with an industrial physician. For workplaces with a high health risk based on the results, we conduct a detailed analysis to drive workplace improvements.



## Establishing an Environment That Reflects Employee Opinions

The Kyowa Hakko Bio Group recognizes the freedom to form labor unions and provides opportunities for dialogue with employees. At sites in Japan, we exchange opinions on occupational health and safety issues through joint occupational health and safety committees and other activities involving both labor and management.

# Community Engagement

## CSR-DIW Continuous Award (Thai Kyowa Biotechnologies)

We were awarded the CSR-DIW Continuous Award for the second time since 2021 for our participation in the CSR promotion program led by the Department of Industrial Works, Ministry of Industry of the Royal Thai Government.



## She Day & TK Open House Activities 2022 (Thai Kyowa Biotechnologies)

We invited approximately 120 people from the neighboring community, government offices, and industrial park to introduce our environmental and safety initiatives.



In addition, Thai Kyowa Biotechnologies is actively involved in exchanges with local communities. For example, the company purchases soil conditioners made partly from its dewatered sludge from a vendor, ensures that there is no contamination risks, and then distributes them free of charge to local farmers. The company also offers videos to explain the soil conditioners and their usage.

## Women In Nutraceuticals (WIN) (Kyowa Hakko U.S.A.)

Joined as a Founding Silver Sponsor. Karen Todd, Vice President of Global Brand Marketing, was appointed the first Chairperson at Women in Nutraceuticals (WIN).

[For details >](#)



## Coastal Cleanup Activities

At Kyowa Hakko Bio's Yamaguchi Production Center, employees carry out cleanup activities around the Hyakuma harbor facility, where chemical solutions, glucose solutions, and other products are unloaded. Kyowa Pharma Chemical also conducts cleaning and weeding of the roads around the plant as part of their environmental preservation activities to protect the beautiful Toyama Bay.



## Charity Marathon (Kyowa Hakko Bio Singapore)

Kyowa Hakko Bio Singapore's employees participated in the Singtel-Singapore Cancer Society Race Against Cancer 2022, a charity marathon held in Singapore.



# Third-Party Evaluations

Related article: Kirin Holdings "Third-Party Evaluations" >

The Kyowa Hakko Bio Group has undergone the following third-party evaluations and announced its support and participation to the following third-party stakeholders.



The Kyowa Hakko Bio Group was awarded a bronze medal in the 2022 EcoVadis sustainability assessment.



The Kyowa Hakko Bio Group participates in SEDEX as an AB Member (Buyer/Supplier Member).

SMETA Audited Sites

- Yamaguchi Production Center, Kyowa Hakko Bio (2019, plans for update)
- BioKyowa (2022)
- Shanghai Kyowa Amino Acid (2022)
- Thai Kyowa Biotechnologies (2022)

## Kirin Holdings Third-Party Evaluations

Kirin Holdings has undergone the following third-party evaluations and announced its support and participation to the following third-party stakeholders. In these, Kyowa Hakko Bio Group is included as a member of the Kirin Group.

### Third-Party Evaluations



CDP CLIMATE A-LIST  
(fourth consecutive year)  
CDP Water Security A List  
(seventh consecutive year)



CDP SUPPLIER  
ENGAGEMENT LEADER  
Received the highest rating  
for the fifth consecutive  
year (Feb, 2023)

### External Signatory and Participation



Since September 2005, the Kirin Group has been committed to the UN Global Compact corporate responsibility initiative and its ten principles in the areas of human rights, labor, environment, and anti-corruption.

# Kyowa Hakko Bio Group's Sustainability Data

## Profile

		2019	2020	2021	2022
Sales revenue (¥100 million)	Kyowa Hakko Bio	749	573	530	511
Number of employees*1	Consolidated	1,949	1,999	2,015	2,041
	Japan	1,212	1,201	1,187	1,125
	Overseas	737	798	828	916

\*1 The figures are as of the end of each fiscal year. They include employees loaned from other companies but not to other companies. Due to this calculation method, the number of employees may not be consistent with figures in other reports such as the Kirin Holdings' report.

## The Environment

This table includes data from the following companies.

Japan: Kyowa Hakko Bio, Kyowa Pharma Chemical

Overseas: BioKyowa, Shanghai Kyowa Amino Acid, and Thai Kyowa Biotechnologies

		2019	2020	2021	2022
Water resources	Water use volumes (thousand m <sup>3</sup> )	38,465	28,520	23,743	23,963
	Japan	28,669	18,832	13,972	13,746
	Overseas	9,796	9,688	9,771	10,217
	Total recycled water use volumes in plants and offices (thousand m <sup>3</sup> )	95,542	81,329	76,287	57,561
Wastewater	Volume of wastewater (thousand m <sup>3</sup> )	43,512	31,670	28,035	25,993
	COD (t)	792	534	540	799
	Japan	202	74	96	94
	Overseas	590	460	444	705
	Nitrogen (t)	793	605	546	788
	Japan	208	89	102	97
	Overseas	585	516	444	691
	Phosphorus (t)	8	21	27	17
	Japan	8	7	8	6
	Overseas	0.09	14	19	11

Environmental management	Number of companies that conducted an environmental audit	8	0	2	2
	Manufacturing sites that acquired ISO14001 certification	Kyowa Hakko Bio, Kyowa Pharma Chemical, and Thai Kyowa Biotechnologies (as of July 2023)			

		2019	2020	2021	2022
Climate change	GHG emissions (thousand tCO <sub>2</sub> e)	481	403	386	359
	Scope 1 and 2	243	219	201	170
	Scope 1 (direct emissions)	47	44	41	40
	Scope 2 (indirect emissions from energy use)	196	175	161	131
	Scope 3 (other indirect emissions)	239	184	185	189
	GHG emissions intensity per unit of sales (tCO <sub>2</sub> e / million yen)	—	—	7.3	7.0
	Use of energy (TJ)	2,735	2,552	2,480	2,355
Waste	Amount of waste generated (thousand t)	55	43	39	39
	Amount of waste disposed on site (thousand t)	2	2	2	0
	Amount of recycled waste (thousand t)	52	40	36	38
	Final disposal volume (thousand t)	0.7	0.6	0.6	1.1
	Recycling rate (%)	98.7	98.7	98.5	97.1
	Air pollutants	Amount of NOX emissions (t)	18	15	17
	Amount of SOX emissions (t)	4.9	1.4	2.8	0.6
VOC*2	Methanol (t)	183	144	232	255
	Acetone (t)	8	6	4	5
	Substances subject to PRTR Act (t)	49	35	47	40
	Ethyl acetate, etc. (t)	74	57	110	85
	Total (t)	314	242	393	385

\*2 The item covers manufacturing sites in Japan (Kyowa Hakko Bio and Kyowa Pharma Chemical).

## Social

This table includes data from the following companies.

Japan: Kyowa Hakko Bio, Kyowa Pharma Chemical

Overseas: BioKyowa, Shanghai Kyowa Amino Acid, Thai Kyowa Biotechnologies,

Kyowa Hakko U.S.A., Kyowa Hakko Europe, Kyowa Hakko Bio Italia, Kyowa Hakko Bio Singapore, Kyowa Hakko (Guangdong) Pharmaceutical

(As of July 2023)

Quality Assurance	Manufacturing sites certified under the FSSC22000 certification	Kyowa Hakko Bio, BioKyowa, Thai Kyowa Biotechnologies
	Manufacturing sites certificated for compliance with pharmaceutical Good Manufacturing Practice (GMP) standards which are set by regulatory authorities in each country	Kyowa Hakko Bio, Kyowa Pharma Chemical, Shanghai Kyowa Amino Acid

		Indicator	2019	2020	2021	2022
Sustainable Procurement		Percentage of procurement personnel trained in supply chain policies (%) <sup>*1</sup>	—	—	100	100
		Reported number of incidents of child labor on supply chain	0	0	0	0
		Reported number of incidents of forced labor on supply chain	0	0	0	0
Engagement		Employee Engagement Score (%) <sup>*2</sup>	—	68	70	72
	Development	Percentage of employees receiving regular performance and career development reviews (%) <sup>*3</sup>	100	100	100	100
Mobility		Average length of service (years/employee) <sup>*4</sup>	16.0	14.5	14.3	13.5
		Japan	19.5	19.7	19.7	19.1
		Overseas	6.8	6.9	6.9	6.4
		Male	16.3	14.9	14.7	13.9
		Female	14.9	13.1	13.0	11.9
		Turnover rate of employees (%) <sup>*5</sup>	6.4	8.2	10.5	10.9
		Japan	4.0	7.5	8.3	8.7
		Overseas	10.4	9.2	13.6	13.6
Employees		Percentage of female executives at Kyowa Hakko Bio (%)	0.0	0.0	0.0	20.0
		Percentage of female directors (%) <sup>*3</sup>	16.2	18.0	18.0	17.8
		Japan	8.4	10.5	10.9	12.1
		Overseas	30.5	30.2	29.6	31.4
		Percentage of female employees (%) <sup>*3</sup>	23.9	24.0	23.9	24.1
		Japan	23.4	23.0	22.7	22.3
		Overseas	24.8	25.5	25.7	26.4
		Percentage of female employees among new hires (%) <sup>*3</sup>	27.5	23.0	23.6	27.1
		Japan	37.1	34.5	39.2	36.2
		Overseas	24.6	18.4	18.6	25.3
		Percentage of employees by age group (%) <sup>*3</sup>				
		Under 30 (%)	18.6	19.3	19.8	19.9
	30 to 49 years old (%)	54.0	54.5	54.1	54.0	
	50 years old and over (%)	27.4	26.2	26.0	26.1	
	Percentage of employees with disabilities (%) <sup>*3</sup>	1.6	1.6	1.6	1.4	
	Japan	2.2	2.3	2.4	2.2	
	Overseas	0.5	0.5	0.5	0.4	

		Indicator	2019	2020	2021	2022
Employees	Health and Safety	Return to work after maternity/parental leave (%) <sup>*6</sup>	100	100	100	95.5
		Male	100	100	100	100
		Female	100	100	100	91.9
		Percentage of employees covered by occupational health and safety policy (%)	100	100	100	100
		Occupational accident severity rate (%)	0.011	0.017	0.015	0.031
		Lost time injury frequency rate (LTIR) (number/million hours) <sup>*7</sup>	1.07	1.01	1.82	1.50
		Japan	0.51	0.92	2.02	0.56
		Overseas	1.67	1.12	1.55	2.57
		Number of employee fatalities due to occupational accidents <sup>*7</sup>	0	0	0	0
		Percentage of employees covered by medical coverage (%) <sup>*3</sup>	100	100	100	100
		Percentage of employees taking periodic health checkups (%)	96.4	96.4	96.8	96.1
		Japan	100	100	100	100
		Overseas	90.4	90.9	92.1	91.2
		Stress check response percentage <sup>*1</sup>	90.0	89.8	90.6	92.6
		Aggregate results of stress checks (overall health risk) <sup>*1</sup>	95	88	86	86

Unless otherwise stated on this page (and in the indicator data of the same name on other pages), calculations are based on full-time employees.

<sup>\*1</sup> Scope includes only Kyowa Hakko Bio (non-consolidated).

<sup>\*2</sup> Scores from employee engagement surveys (including full-time employees, part-time employees, and dispatch and contract workers) are calculated as a weighted average based on the number of respondents.

<sup>\*3</sup> Kyowa Hakko Bio Singapore included from 2020.

<sup>\*4</sup> Shanghai Kyowa Amino Acid included from 2020. Kyowa Hakko Bio Singapore included from 2021.

<sup>\*5</sup> Number of permanent employees who left their jobs during the year / Number of permanent employees at the end of the year (resignations include voluntary resignations, company-initiated resignations, retirements, and deaths during employment).

<sup>\*6</sup> Kyowa Hakko Bio Singapore included from 2020. Shanghai Kyowa Amino Acid included from 2021.

<sup>\*7</sup> Scope includes all production sites of the Kyowa Hakko Bio Group.

		Indicator	2019	2020	2021	2022
Employees	Labor Practices	Percentage of employees covered by collective bargaining agreements (%) *1	70.6	70.7	71.5	72.0
		Japan	74.7	74.4	73.7	72.4
		Overseas	63.7	64.9	68.3	71.5
		Percentage of employees covered by human rights policy (%)	100	100	100	100
		Percentage of employees trained in human rights (%) *1	96.9	70.5	94.5	91.3
		Percentage of sites that provided opportunities for learning about human rights (%) *1	100	100	100	100
		Percentage of compliance training participants	—	—	—	93.0
		Percentage of sites conducting compliance risk assessments (%)	—	—	—	100
		Number of grievances related to labor practices or human rights impacts that were filed, addressed, and resolved through formal grievance mechanisms *1	2	6	4	3

Unless otherwise stated on this page (and in the indicator data of the same name on other pages), calculations are based on full-time employees.

\*1 Kyowa Hakko Bio Singapore included from 2020.

## Definition of Disclosed Data

Unless otherwise indicated, the disclosed data is rounded to the appropriate number of digits. Since each item is rounded, the total may not match the sum of the breakdown.

## Environmental Data Calculation Methods

### Usage Factors

#### Energy Use Conversion Factors

	Japan/overseas
Fuel	"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
Steam	Theoretical calorific value (1 MJ/MJ) on the consumption side.

#### Emission Factors for GHG Emissions

	Japan	Overseas
Fuel, steam	Emission factors from Greenhouse Gas Emissions Calculation and Reporting Manual (Ministry of Environment/Ministry of Economy, Trade & Industry)	"Act on the Rational Use of Energy" Factors
Electricity	Emission factors published by individual power companies → If none published: Emission factors by country from IEA's Emission Factors for the year in question	
Scope3	IDEA (Inventory Database for Environmental Analysis: LCA database provided by the National Institute of Advanced Industrial Science and Technology (AIST)) is used to the extent possible in calculations after 2019 (Using IDEA versions 2.3, 3.1 and 3.2). In addition, literature values such as the Ministry of the Environment's emissions intensity database and LCA reports for each industry are used. Additionally, we used literature values such as the Ministry of the Environment's emission factor database and LCA reports from various industries.	

### Calculation Method

The Kyowa Hakko Bio Group's GHG emissions are calculated in accordance with the GHG Protocol. In doing so, retroactive adjustments have been made to prior years' data to exclude Kyowa Hakko Bio's alcohol business (which was transferred to Mercian in 2020).