

Having set mitigation of climate change and environmental impact, contribution to biodiversity, and contribution to a recycling-based society as materialities, Kumiai Group aims to help protect the global environment and realize a low-carbon society by fully utilizing its technologies, knowledge, and R&D capabilities. In addition, we are working to develop and promote products that contribute to both stable food production and sustainable agricultural industry by responding to the Strategy for Sustainable Food Systems, MIDORI formulated by the Ministry of Agriculture, Forestry and Fisheries.

Director, Senior Managing Executive Officer YOSHIMURA Takumi



## Initiatives for Strategy for Sustainable Food Systems, MIDORI

The Strategy for Sustainable Food Systems, MIDORI, formulated by the Ministry of Agriculture, Forestry and Fisheries in 2021 aims to achieve improved productivity in the food industry, agriculture, forestry, and fisheries as well as sustainability through reduced environmental impact. Its vision to be achieved by 2050 includes reduction in risk-weighted use of chemical pesticides and increase in organic farming.

Through technological innovation, Kumiai has contributed to reducing environmental impacts and improving safety. For example, the amount of herbicide applied for paddy rice was reduced from 3 kilograms per 10 ares to 250 grams. In order to reduce the environmental impacts and save labor for growers through higher

performance and improved functionality, we are continuing our research to create safe and secure agricultural chemicals, and are accelerating our research and development of microbial pesticides and biostimulants. In addition, a project is underway to commercialize technology for controlling emissions of greenhouse gases from farmland.

We also developed and launched MAMETSUBU® as an input for contributing to smart agriculture. MAMETSUBU® is compatible with different application methods such the use of drones, radio-controlled helicopters, and radio-controlled boats, which contributes to a stable food supply and sustainable agriculture by reducing labor for growers.

## Contribution to Biodiversity

Kumiai Group's corporate philosophy 's overriding theme is "Protecting and fostering life and nature," and the conservation of biodiversity is an important management issue closely related to the Agricultural Chemicals and Agriculture-Related Business. As a chemical manufacturer, we manage water resources and waste

appropriately and conduct business activities while taking steps to ensure we do not negatively impact biodiversity. Moreover, we are actively engaged in "nature positive" activities that will positively impact biodiversity.

### Participation in the 30by30 Alliance to Conserve Biodiversity

30by30 is an initiative led by the Ministry of the Environment to effectively conserve at least 30% of the land and sea as healthy ecosystems by 2030, thereby achieving the goals of halting biodiversity loss and restoring biodiversity. In December 2023, Kumiai joined the 30by30 Alliance, eager to contribute to the conservation of biodiversity in support of its goals.

Based on the concept of refugia, that is, places where relict populations of species are able to exist, thus avoiding extinction, as certain species did during the Ice Age for example, Kumiai has established a nature reserve in the town of Fukushima, Hokkaido, and will create another nature reserve in Kikugawa City, Shizuoka Prefecture, to conserve the biodiversity and rich natural environments of those regions.

#### 1. Environmental Conservation Activities in Kumika Refugia in Fukushima

In 1974, Kumiai purchased approximately 640 hectares of forest in the town of Fukushima, Hokkaido, and has been involved in maintaining and managing the forest. Proper management of forests maintains a rich ecosystem, including for organisms unique to the region (plants, mammals, birds, amphibians, insects, etc.).

As a measure to make effective use of wood thinned from the forests, Kumiai produces wooden pallets for transportation and uses them for Kumiai products, thereby reducing CO<sub>2</sub> emissions and the workload of workers. In satochi-satoyama areas adjacent to forested mountains, labor-saving weed control is implemented using Kumiai Group's herbicide for suppression of weed growth SHORTKEEP to maintain the landscape and discouraging bears from entering populated areas.

#### 2. Environmental Conservation Activities in Kumika Refugia in Kikugawa

Formation of a 3,030-square-meter biotope will be completed in 2025 on land adjacent to Kumiai's Life Science Research Institute in Kikugawa City, Shizuoka Prefecture, recreating a satoyama landscape in an urbanized area. The biotope will feature streams, wetlands, ponds, grasslands, and wooded areas and we will protect the rare creatures that inhabit the area (fireflies, Japanese pond turtles, etc.), thereby contributing to the conservation of biodiversity. The biotope will also be a venue for local children to learn about biodiversity and environmental conservation.



## Contribution to a Recycling-Based Society

### Basic Policy and Approach

Kumiai has established an environmental management system in accordance with ISO14001. Our environmental policy is to "reduce industrial waste and improve recycling rates" and "promote energy conservation and reduce emissions of greenhouse gases." Having launched the ESG Project in December 2021, whose aim is to create clean factories, we have been working to contribute to a recycling-based society.

- 4 Paperless operation by eliminating the use of hard copy of performance charts, etc.
- 5 Reuse of emitted energy
- 6 Recycling of solvents used
- 7 Recovery of valuable materials from wastewater

### Examples of Initiatives

At the Shizuoka Factory, wastewater discharged from each plant is properly treated in in-house wastewater facilities before being discharged from the factory. The factory also uses a microorganism-based wastewater purification method to treat waste without the use of fossil fuels. For these purposes, the factory has formed a specialized treatment department for environmental protection, separate from the manufacturing plant. At the Tatsuno Factory, the fuel for a new plant that has started operation is carbon-neutral city gas, not conventional heavy oil A. We are also working to reduce waste by reusing or substituting manufacturing equipment cleaning materials.

### Targets

In order to realize clean factories, Kumiai targets the following items.

- 1 Reduction of energy use
- 2 Decarbonization of energy use
- 3 Change of materials used for containers for raw materials and packaging for inter-factory transfer, recycling of containers and packaging

## Greenhouse Gas (GHG) Emissions and Environmental Data

		GHG emissions (t-CO <sub>2</sub> /year)			
		FY2020	FY2021	FY2022	FY2023
Scope 1	Direct emissions by the reporting company	46,718	47,702	47,982	44,182
Scope 2	Indirect emissions from the use of electricity, heat, and steam provided by other companies	17,307	17,459	18,142	13,997
Total emissions		64,024	65,162	66,124	58,178
Scope 1+2	Emissions per net sales unit (t-CO <sub>2</sub> /millions of yen)	0.644	0.605	0.503	0.397
1. Purchased goods and services		—	—	189,859	195,898
2. Capital goods		—	—	27,470	24,880
3. Fuel- and energy-related activities not included in Scope 1 and 2		—	—	12,171	11,461
4. Upstream transportation and distribution		—	—	11,715	8,867
5. Waste generated in operations		—	—	7,676	10,902
6. Business travel		—	—	221	220
7. Employee commuting		—	—	1,003	1,007
Scope 3 category	8. Upstream leased asset	—	—	0	0
9. Downstream transportation and distribution		—	—	769	590
10. Processing of sold products		—	—	0	0
11. Use of sold products		—	—	0	0
12. End-of-life treatment of sold products		—	—	3,729	3,636
13. Downstream leased assets		—	—	66	66
14. Franchises		—	—	0	0
15. Investments		—	—	0	0
Total emissions		—	—	254,680	257,526

	Unit	FY2020	FY2021	FY2022	FY2023
Energy consumption (crude oil equivalent)	kL	32,899	33,559	33,199	31,554
Amount of purchased electricity	MWh	56,317	57,016	55,992	55,729
Amount of renewable energy	MWh	12,544	12,635	12,420	25,184
Water intake amount	Thousand m <sup>3</sup>	—	—	4,187	3,835
Amount of industrial waste	Thousand tons	—	—	8,653	11,124

\*Targets include seven Group companies, which are, KUMIAI CHEMICAL INDUSTRY, RIKENGREEN, IHARANIKKEI CHEMICAL INDUSTRY, K-I CHEMICAL INDUSTRY, Ihara Construction Industry, ONOMICHI KUMIKA INDUSTRY, and KUMIKA LOGISTICS. The ratio of the seven companies' net sales to consolidated net sales (coverage rate) is 91.1% (FY2023).

Mitigation of Climate Change and Environmental Impact (Information Disclosure in Line with TCFD Recommendations)

Climate change is a serious social issue that results in other problems such as an increase in pests due to rising temperatures, and negative impacts on agricultural production in extreme weather conditions.

Kumiai Group has positioned mitigation of climate change and environmental impacts as one of its materialities and expressed its endorsement of the Task Force on Climate-related Financial Disclosure (TCFD) recommendations for climate change mitigation and adaptation. We will promote information disclosure based on TCFD recommendations and climate change initiatives such as GHG emissions reduction.

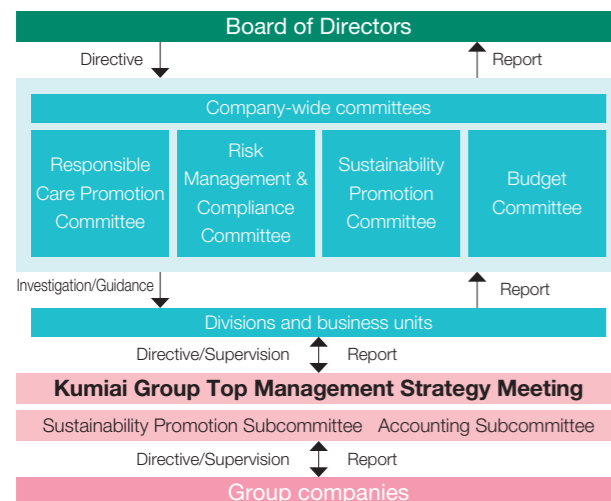


Governance and Risk Management

The Sustainability Promotion Committee chaired by the Representative Director, President, formulates strategies on ESG issues, such as "mitigation of climate change and environmental impact" and "human capital development / human capital strategy based on the idea of human capital," manages the progress of the action plan for each issue, and also formulates information disclosure strategies. Important matters discussed by the Sustainability Promotion Committee are reported to the Board of Directors for decision-making and oversight.

For risk management, we identify risks and opportunities recognized by Kumiai's divisions, and also identify issues by referring to the recommendations of external organizations such as TCFD, as well as climate-related risks and opportunities recognized by other companies in the same industry. The degree of importance of each issue identified is determined by conducting impact assessments, taking into account the financial impact. Risk issues identified are discussed once a year by the Risk Management & Compliance Committee, a company-wide committee, and measures to address the issues are determined.

Sustainability Promotion System



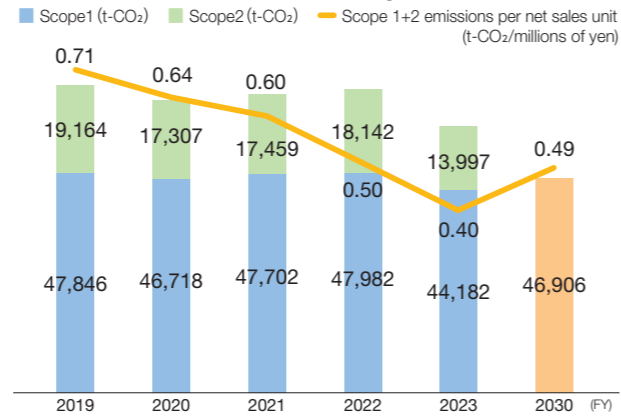
Indicators and Targets

Kumiai Group set FY2019 as the reference year, and set reducing Scope 1 and 2 GHG emissions by 30% compared to FY2019 by FY2030 as our target. (Seven key Kumiai Group companies are within the scope.)

As a specific initiative, in FY2023, we introduced CO<sub>2</sub>-free electricity at factories and research institutes step by step. By promoting fuel conversion from heavy oil to fuels with lower GHG emissions, we are continuing to reduce GHG emissions from our business activities.

Regarding the progress to date toward achieving the reduction targets, we believe that Kumiai Group is making good progress in reducing GHG emissions, because net sales for FY2023 increased by approximately 5% compared to FY2019, but our GHG emissions decreased by approximately 13% compared to FY2019. Through continuous efforts to reduce environmental impacts, we will strive to achieve the targets and disclose related information.

GHG Emissions and Reduction Targets



Note: Companies within the scope of calculation of GHG emissions (seven companies) KUMIAI CHEMICAL INDUSTRY, RIKENGREEN, IHARANIKKEI CHEMICAL INDUSTRY, K-I CHEMICAL INDUSTRY, Ihara Construction Industry, ONOMICHI KUMIKA INDUSTRY, and KUMIKA LOGISTICS

Strategy

Kumiai Group will continue its efforts to mitigate and adapt to climate change, including through the ongoing reduction of GHG emissions.

We conduct scenario analysis to identify the Kumiai Group's risks and opportunities with respect to climate change. Through scenario analysis, we have set the "safe, secure, and prosperous society" scenario (called the 1.5°C scenario) that we aim to achieve and the "unsustainable society" scenario (called the 4°C scenario) where social issues such as climate change worsen, and have evaluated the impacts of risks and opportunities on Kumiai Group. Measures for major risks and opportunities that have a large impact are being examined. The contents of these examinations are reported to the Sustainability Promotion Committee, and Management, including the Representative Director, President, then discuss climate change risks and opportunities.

Scenario	Overview	Reference scenario
"Safe, secure, and prosperous society" scenario (1.5°C scenario)	In this scenario, temperature increase is limited to 1.5°C compared to pre-industrial levels. As society transitions toward decarbonization, environmental protection demands will increase, stricter laws and regulations will be implemented, and there will be large-scale environmental investment.	"Net Zero Emissions by 2050 (NZE2050)" by the International Energy Agency (IEA), etc.
"Unsustainable society" scenario (4°C scenario)	In this scenario, temperature increases by at least 4°C compared to pre-industrial levels. If progress toward a decarbonized society is stifled, greenhouse gas emissions will increase, resulting in increasing extreme weather events such as floods and typhoons.	"RCP8.5" by the United Nations Intergovernmental Panel on Climate Change (IPCC), etc.

Classification	Major risks & opportunities	Impact on business	Response	Impact* (2030)	
"Safe, secure, and prosperous society" scenario	Risk	Stricter regulations on greenhouse gas emissions	<ul style="list-style-type: none"> <li>Financial burden may increase such as due to implementation of a carbon tax.</li> <li>Compared to other chemical companies, the impact will be limited since energy consumption is relatively low.</li> </ul>	<ul style="list-style-type: none"> <li>Setting long-term targets for reducing greenhouse gas emissions</li> <li>Promoting implementation of energy-saving equipment and renewable energy</li> </ul>	Small
		Increased energy costs	<ul style="list-style-type: none"> <li>Energy costs may increase due to changes in energy policies as society moves toward decarbonization.</li> <li>Compared to other chemical companies, the impact will be limited since energy consumption is relatively low.</li> </ul>	<ul style="list-style-type: none"> <li>Same as above</li> </ul>	Small
	Opportunity	Decrease in demand for agricultural chemicals due to stricter regulations on agricultural chemicals	<ul style="list-style-type: none"> <li>Sales may decrease if certain products become subject to regulation.</li> </ul>	<ul style="list-style-type: none"> <li>Development of chemical and biological control agents with less risk to humans and the environment</li> </ul>	Medium
		Higher evaluation of ESG investment	<ul style="list-style-type: none"> <li>Evaluation by investors may improve as efforts for sustainability are highly evaluated.</li> </ul>	<ul style="list-style-type: none"> <li>Proactive disclosure of ESG information</li> </ul>	Medium
		Higher evaluation by customers	<ul style="list-style-type: none"> <li>Evaluations from customers and sales partners may improve due to proactive measures against climate change and for open information disclosure.</li> </ul>	<ul style="list-style-type: none"> <li>Same as above</li> </ul>	Small
		Greater demand for environmentally-friendly products	<ul style="list-style-type: none"> <li>Demand for environmentally-friendly products will likely increase as people demand greater consideration for the environment.</li> </ul>	<ul style="list-style-type: none"> <li>Development of environmentally-friendly products</li> </ul>	Medium
"Unsustainable society" scenario	Risk	Higher demand for our products due to stricter regulations on agricultural chemicals	<ul style="list-style-type: none"> <li>Since our products have less risks, their competitiveness may increase.</li> </ul>	<ul style="list-style-type: none"> <li>Development of chemical and biological pesticides with less risk to humans and the environment</li> </ul>	Large
		Higher demand for pesticides and physical pest control	<ul style="list-style-type: none"> <li>Sales may increase for newly developed products such as biostimulants, GMO crops, and smart agriculture technologies (such as application of MAMETSUBU® by drones).</li> </ul>	<ul style="list-style-type: none"> <li>Spread and sales of pesticides for smart agriculture increases</li> </ul>	Small
Common scenario	Risk	Loss of business due to increased damage from storms and floods	<ul style="list-style-type: none"> <li>Flooding and high tides cause damage to offices and supply chains, which may have a negative impact on business.</li> </ul>	<ul style="list-style-type: none"> <li>Installing rainwater gates and drainage pumps, and formulating BCP</li> </ul>	Medium
		Lower demand due to a decrease in farmland	<ul style="list-style-type: none"> <li>Land usage for agriculture may decrease along with demand for agricultural chemicals due to factors such as worsening droughts as a result of climate change causing more damage from storms and floods.</li> </ul>	<ul style="list-style-type: none"> <li>Development and distribution of agricultural inputs that help improve agricultural productivity</li> </ul>	Large
Common scenario	Opportunity	Higher demand due to population growth and increased agricultural production	<ul style="list-style-type: none"> <li>Demand and production of agricultural products will increase as the global population grows, which may increase the demand for agricultural chemicals needed to produce higher yields.</li> </ul>	<ul style="list-style-type: none"> <li>Same as above</li> </ul>	Large

\*The "impact" is the financial impact on profit and expenses of an eventuality, and is evaluated based on the following criteria: "Large": more than three billion yen, "Medium": one to three billion yen, and "Small": less than one billion yen.