

Sustainability
Report
2021-2022



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CORPORATE COMMUNICATION TOOLS



Social and Environmental Report 2022 (Japanese Edition)



Sustainability Report 2021-2022



Corporate website



LinkedIn Takasago site

Cover Picture



Baccarat
Le Roy Soleil (Schiaparelli)
(Design by Salvador Dalí)

1945 France H 16.3

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About This Report

Issue date

31st August, 2022

Scope and Boundaries

The scope of this report is the Takasago group. This includes consolidated subsidiaries as well as non-consolidated subsidiaries defined by the equity-method.

Period Covered

Fiscal 2021: In this report, the term of "Fiscal" is as follows; From April 1, 2021 to March 31, 2022 for Japan/ From January 1, 2021 to December 31, 2022 for the others -If any data covers different period, the period is described. -Some latest information included.

External Assurance

GHG emissions were verified by a third party based on the result of activities. See the Statement

Guideline referenced

Under preparation

Takasago International Corporation

Nissay Aroma Square,
5-37-1, Kamata, Ota-ku, Tokyo 144-8721, Japan
TEL +81-3-5744-0511 FAX +81-3-5744-0512
<https://www.takasago.com/en>
Contact: Global Integration Headquarters

Message from President and CEO

Q | What were the business conditions in the fiscal year ended March 31, 2022 and what is the earnings forecast for the fiscal year ending March 31, 2023?

For the fiscal year ended March 31, 2022, the impact of the COVID-19 pandemic gradually eased, although there was a repeated cycle of the imposition and relaxation of restrictions on economic activities. While consumer spending, employment and income conditions were still weak, on the whole, it became clear that a turnaround in corporate revenue and business sentiment was occurring.

In this environment, the net sales of The Takasago Group rose 8.0% year on year, hitting a record high.

In the flavors business, sales for beverages were strong in Japan and overseas. In the fragrances business, sales for air care in the United States were solid. In the aroma ingredients business, revenue was up with strong sales of specialty items and the impact of fluctuation in foreign exchange rates. In the fine chemicals business, sales were brisk in pharmaceutical intermediates.

Operating profit also hit a record high, leaping 40.1% year on year.

For the fiscal year ending March 31, 2023, there are concerns about the rising prices of resources and the destabilization of supply chains. However, as the pandemic's impact on economic activities is weakening, the upward trend will continue.

The Takasago Group's net sales are forecast to be 172,500 million yen, up 6.2% year on year. Overseas sales will grow and demand will continue rallying in Japan as well. Meanwhile, operating profit is expected to decline due to increasing expenses for raw materials, manufacturing, logistics and other factors.



S. Masumura

Satoshi Masumura

President and
Chief Executive Officer



Q | There is growth overseas. What drives this growth?

We believe that the wide variety of technologies that we have accumulated since our foundation, our finely tuned sales and marketing activities, our establishment of structures for procurement, production, quality assurance, supply chain and business continuity plan (BCP) and our efforts to ensure sustainability have resulted in our customers being confident in us, and they help us achieve growth not only in Japan but also outside the country. In the perfumery business, sales are not the result of a single product or technology. We believe that incessant effort to increase our comprehensive capabilities to fulfill our supply responsibilities is the only way to ensure that customers choose our products.

Odor preferences vary from region to region. When we began full operations overseas, we needed to secure local personnel to establish sales, research and development, and manufacturing functions. Since we began our business in New York and in Paris in 1960, we have directly investing and cultivating local customers gradually. As a result of our persistent efforts to expand our business, overseas sales are now 58% of our Group's total sales.

Recent examples include the start of deliveries of products for bouillon in Africa and for instant noodles and snacks in Southeast Asia in the savory category of the flavors business. We understand our technological and response capabilities are

earning recognition after years of effort approaching local customers.

Sales of soap and detergent in the fragrances business were strong following increased public awareness of hygiene triggered by the pandemic in addition to a rise in sales of air refreshers and other products like candles in the air care category. Our multinational customers have been using our products for years. While continuously delivering products, we endeavor to earn their trust as a reliable supplier.

Q | What is the background behind and the purposes for your purchase of a business site announced on April 25, 2022?

On March 30, 2022, we concluded a real estate transaction agreement to purchase land in Kajiwara in Kamakura-shi, Kanagawa Prefecture from Chugai Pharmaceutical Co., Ltd. The goal of this is the relocation of our laboratory from Hiratsuka-shi in Kanagawa Prefecture to the newly acquired site. After taking over the vacant lot in the second half of 2025, we will construct a laboratory building and move the operation in 2028.

Since our foundation, we have consistently defined research and development as a core of corporate management and our goal has been to serve society using the technologies we have developed.

Today, it is necessary that perfumery products play a larger role amid the diversification of consumers' preferences and their growing health consciousness. In addition, the circumstances surrounding research and development are massively changing amid the great progress being made in artificial intelligence and other information technologies and through open innovation.

These changes in the external environment continue to expand our research and development domains. Thus, we found it necessary to create a new research and development environment.

Currently, we operate business in 28 countries and regions around the world and we have laboratories in many of these countries and regions. We concentrate the technical knowledge gained in these regions in our headquarters in Japan for the advancement of the technical knowledge, and to

share it with all of the regions. The concentration, advancement and sharing of technologies is one of our strengths.

We will also improve the communications functions at the center of our technologies for our bases around the world. This will enable us to respond to customers' needs across the globe to achieve continued growth.

Q Your New Global Plan-1 (NGP-1) medium-term management plan defines sustainability promotion as one of your basic directions. What is the progress of your actions to address this issue?

We are conducting sustainability promotion activities in accordance with the Sustainability 2030 ten-year plan launched in April 2021.

One of the issues we are addressing is global climate change. In May 2021, our Group acquired its greenhouse gas emissions reduction targets certified by the Science Based Targets initiative. These targets lay out our goals of reducing Scope 1 and 2 emissions by 27.5% and Scope 3 emissions by 13% by 2030 from their levels in 2019. To achieve these targets, we will act internally (in connection with the Scope 1 and 2 targets) to increase the use of renewable energy, reduce energy consumption and improve processes in accordance with our Group's policies in the four elements of governance, risk management, strategy, and metrics and targets that conform to the TCFD recommendations. For our supply chains (in connection with the Scope 3 target), we will strive to reduce emissions in collaboration with our suppliers of raw materials and others. Regarding business opportunities that are connected to the adaptation to climate change, we will focus on green chemistry and biochemistry and innovate to develop new products.

To reduce environmental impact, we will work to reduce water consumption, reduce waste emissions and accelerate our practice of three Rs (reduce, reuse and recycle).

Human rights are another global issue. Last year, the issue of human rights in the supply chain was heavily discussed. Beginning three years ago, our Group has been implementing human rights due diligence in accordance with The Takasago Group

Human Rights Policy. Human rights due diligence is a process aimed at preventing the infringement of human rights. The implementation in 2021 confirmed there was no infringement of human rights. In European and American countries, human rights regulations have become more strict. In Japan as well, there is movement regarding legislation. Keeping a close eye on trends in society, we will share values within the Group and also with suppliers in our supply chain regarding our business activities in a continued effort to deter human rights abuses.

Collaboration in the supply chain is necessary to further reduce CO₂ emissions and to prevent human rights violations. To carry out business activities that help achieve continuous growth and resolve social issues, our Group is responsibly procuring raw materials and services that are necessary in our businesses in accordance with the Corporate Procurement Policy. To ensure a mutual understanding and to collaborate with our business partners, we have reviewed priority human rights issues and incorporated measures to address them into The Takasago Group Supplier Code of Conduct. We will ask our business partners to comply with the code of conduct and work to ensure that our values are properly shared with our supply chain.

Cybersecurity measures and the acceleration of digitalization are essential for the continuity of our corporate activities. The establishment of robust cybersecurity is an urgent global issue and constant reinforcement is necessary. Since cyberattacks are frequent today, as tangible measures, our Group is introducing tools, device authentication, and multi-factor authentication to prevent attackers from intruding into systems. We will also use a vulnerability examination tool to enable continuous improvement.

As intangible measures, we will regularly provide a range of training programs to raise staff awareness. Regarding the advancement of digitalization, we have created a blueprint for our actions up to 2030. From a medium- and long-term perspective, the blueprint envisions what the IT platform should be as the foundation of our Group's corporate activities.

Although there are many other issues, guided by NGP-1, we will make groupwide efforts to increase sustainability.

Q | Currently, what progress has been made in the Global SAP Project that began in 2020? What developments do you expect in the future?

As a part of the measures to achieve One-Takasago, we began developing a Global Template in January 2020 for the global integration of mission-critical systems. Although the pandemic has made the development period longer we have successfully finished developing the Global Template. Now, global and local team members are working together to carry out a general user test at our Singapore base, which is the first base implementing the Global Template. The process for implementing the Template is coming into its final phase. We are convinced that it will be able to start full operation without trouble.

We will successively implement the Template at eight principal overseas bases by 2025. Then, we will implement it at the headquarters and then apply the Template to satellite systems related to safety laws and regulations.

This corporate project will continue for more than five years. The global team includes nearly 40 people selected from overseas offices and our headquarters, to play central roles. We will facilitate the progress of the project through effective use of human resources. Through this project, we will globally integrate work flows to be used as the best practices for the Group. We believe that this standardization will broaden the range of deployment of our global personnel and help enhance our BCP.

Q | Last, what is the latest earnings forecast for the fiscal year ending March 31, 2023? And what are your aspirations for the second year of NGP-1?

According to our latest consolidated earnings forecast for the current fiscal year, net sales will reach 172,500 million yen, up 6.2% year on year, and operating profit will be 5,000 million yen, down 43.3% year on year. We expect net sales to rise steadily. Our overseas business will continue to play a driving role. We also expect that demand will remain on the recovery trend, following the relaxation of COVID-19-related restrictions in Japan. However, global inflation means that the market

prices of raw materials and fuels will rise. This will lead to greater manufacturing costs. In addition, sales, general and administrative expenses will be higher following the increase of labor, distribution and other costs. Negative factors like these will put downward pressure on profit. In addition, the conflict in Ukraine and lockdowns in China will make it difficult to procure raw materials. Making the fulfillment of our duty to supply products our top priority, we will carry out a range of measures to minimize the adverse impact of these factors.

Despite this environment, we decided to purchase the site for our new laboratory to enable future growth. Our research and development expenses for the current fiscal year will be 10% higher than the previous fiscal year. Our corporate philosophy states, "Create new value through innovation rooted in *kaori* (aroma)." In line with this, we will work intensively to open up new markets. SDG-conscious development of new products and materials is one of our seven priority issues. We will actively address this issue.

Specifically, we will accelerate efforts to develop highly biodegradable aroma ingredients and technologies that can be an alternative to the separation process which involves a high amount of CO₂ emissions.

Responding to sustainability issues is a must for our continuous growth. We cannot manufacture goods if we do not consider human health and the global environment. We will seriously address every single issue to expand business and increase our presence in the market. Through this, we will fulfill our responsibilities as a member of society.

We appreciate the continuing understanding and support of all of our stakeholders.



Corporate Vision

Corporate Philosophy

**Contributing to Society
through Technology**

Corporate Mission

**Our mission is to create new value
through innovation rooted in *kaori***

(kaori: aroma in Japanese)

Vision 2040

**Care for People,
Respect the Environment**

Our vision is to be:

- 1** proud of our culture of respect,
diversity and inclusion
- 2** in harmony with nature,
enriching and bringing well-being to daily life
- 3** full of hope and ambition,
confidently taking on new challenges
- 4** eager to keep innovating,
remaining an indispensable company

Corporate Profile

Takasago International Corporation, headquartered in Tokyo, Japan, develops, manufactures and supplies flavors, fragrances, aroma ingredients and fine chemicals. Our products are in foods, cosmetics, household products and pharmaceutical intermediates for the life science industry, and functional materials for the electronics industry.

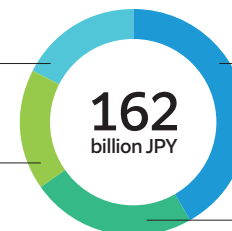
Name	TAKASAGO INTERNATIONAL CORPORATION
Headquarters	5-37-1, Kamata, Ota-ku, Tokyo, 144-8721, Japan
Founded	February 9, 1920
Capital	9.2 billion JPY
Employees worldwide	3,719

2021 Sales Turnover by Region

Asia Pacific
28 billion JPY 17%

EMEA*
28 billion JPY 17%

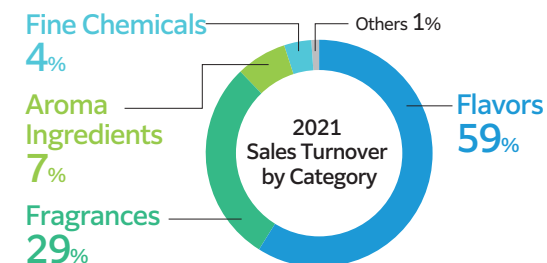
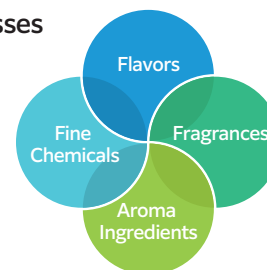
* Europe, the Middle East, and Africa



Japan
67 billion JPY 41%

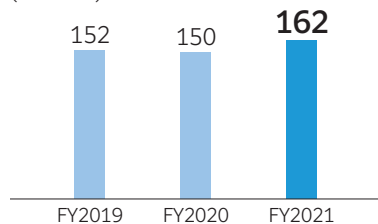
Americas
38 billion JPY 23%

Core Businesses

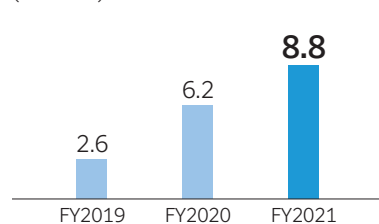


Financial highlights

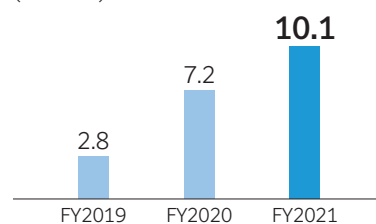
Sales Turnover (billion JPY)



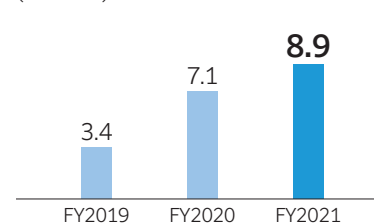
Operating Income (billion JPY)



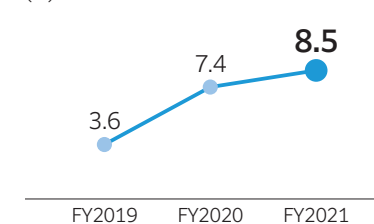
Ordinary Income (billion JPY)



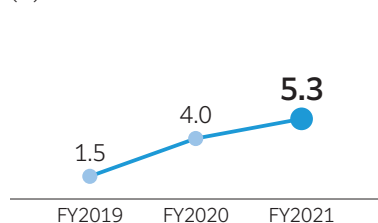
Net Income (billion JPY)



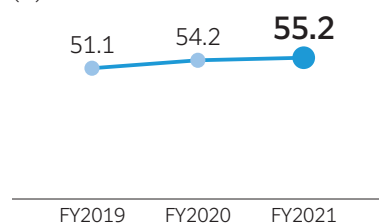
ROE (%)



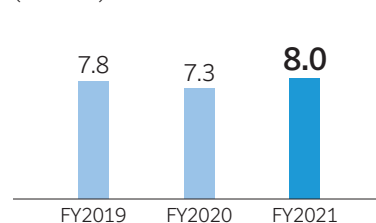
ROA (%)



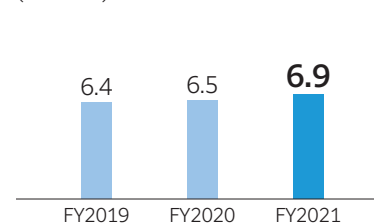
Equity Ratio (%)



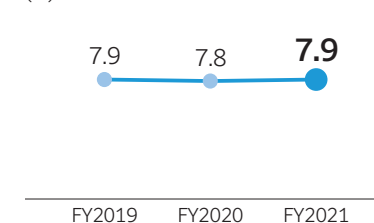
Capital Investment (billion JPY)



Depreciation Expense (billion JPY)



















































R&D Expense to Sales Turnover (%)

























Global Network

Asia/Pacific
























Japan	Takasago International Corporation	       
Singapore	Takasago International (Singapore) Pte. Ltd.	     
Philippines	Takasago International (Philippines), Inc.	
Thailand	Takasago Import and Export (Thailand) Ltd.	
Indonesia	PT. Takasago International Indonesia	    
	PT. Takasago Indonesia	
India	Takasago International (India) Pvt. Ltd.	     
Pakistan	Takasago International (Pakistan) Pvt. Ltd.	
China	Takasago International (Shanghai) Co., Ltd.	  
	Shanghai Takasago-Union Fragrances & Flavors Co., Ltd.	     
	Xiamen Hua Ri Foods Industrial Co., Ltd.	
	Takasago International (Guangzhou) Co., Ltd.	      
Korea	Takasago International Corporation (Korea)	
Malaysia	Takasago International (Malaysia) Sdn.Bhd.	















Europe/Middle East/Africa

France	Takasago Europe Perfumery Laboratory S.A.R.L.	    
Germany	Takasago Europe G.m.b.H.	    
	Takasago International (Deutschland) G.m.b.H.	
Italy	Takasago International (Italia) S.R.L.	
Spain	Takasago International Chemicals (Europe), S.A.	   
	Takasago International (España) S.L.U.	
United Kingdom	Takasago (U.K.) Ltd.	
Turkey	Takasago International Turkey Esans Ve Aroma San. TIC. A.S.	
South Africa	Takasago International Corporation South Africa (Pty) Ltd.	
Madagascar	Takasago Madagascar S.A.	
Morocco	STE Cananga S.A.R.L.	

The Americas

U.S.A.	Takasago International Corporation (U.S.A.)	        
	Centre Ingredient Technology, Inc.	 
Mexico	Takasago De Mexico S.A. De C.V.	    
Brazil	Takasago Fragrâncias E Aromas Ltda.	      

Office	Laboratory	Factory	
 Headquarters	 Flavors	 Flavors	 Fine Chemicals
 Sales Office	 Fragrances	 Fragrances	 Food
 Representative Office	 R&D	 Arma Ingredients	 Natural Resources

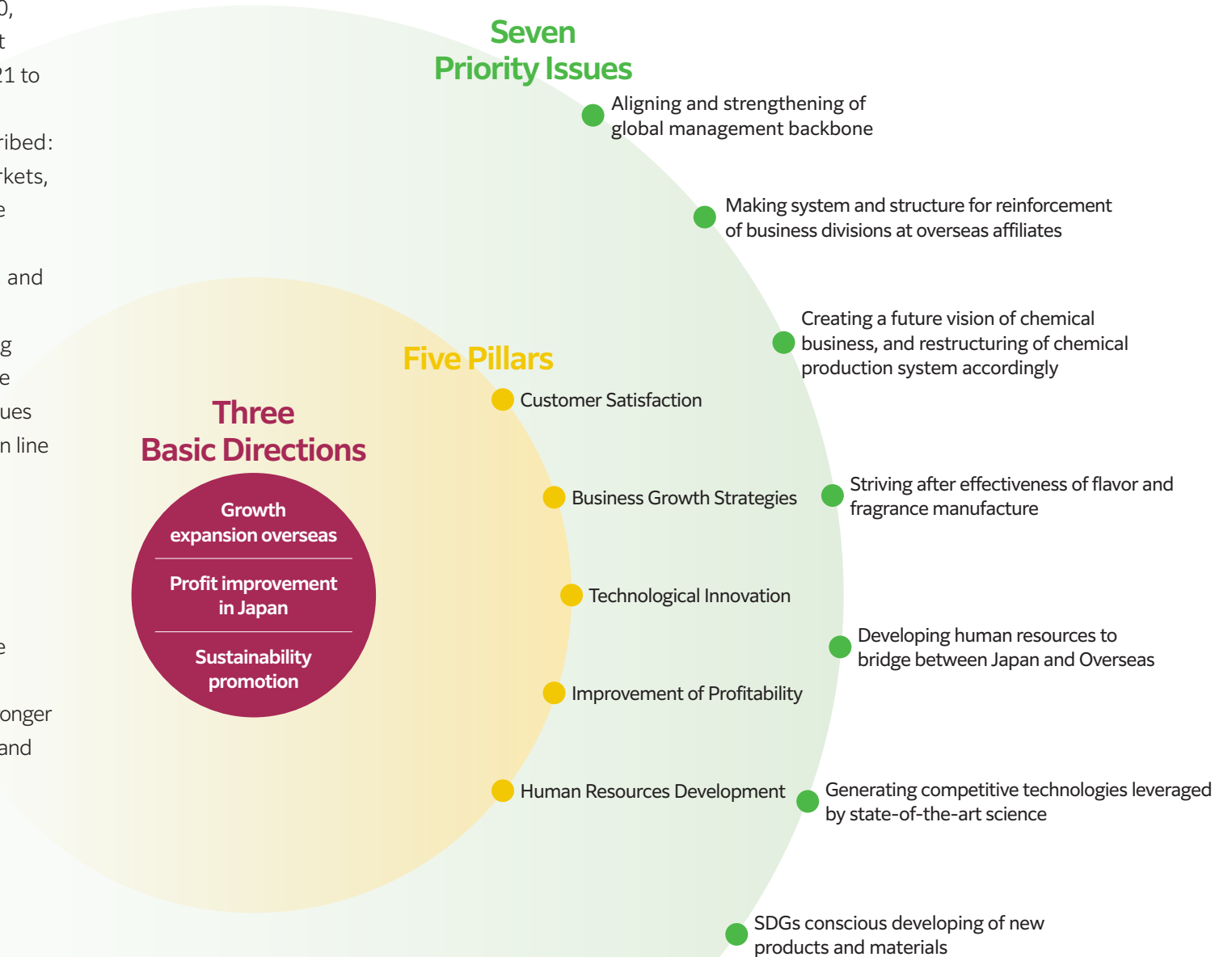
Business Strategy – New Global Plan-1

To get closer to our vision stated in Vision 2040, we will implement our Mid-Term Management Plan, New Global Plan-1 (NGP-1), from FY2021 to FY2023.

In NGP-1, three basic directions are described: (1) Achieving higher growth in overseas markets, particularly emerging markets, which are growing remarkably, (2) seeking to improve profitability in Japan, and (3) developing sustainability globally.

We position the five policies of the preceding Mid-Term Management Plan, One-T, as the five pillars in NGP-1 and have set seven priority issues that the entire Group should strive to achieve in line with the basic directions and pillars.

To achieve the seven priority issues, we will strengthen cooperation among overseas bases, increase production capacity, accelerate rationalization, and enhance the research and development function primarily in Japan. For the entire Group to share goals and pursue them as “One Takasago,” we will have leaders provide stronger leadership and enhance global communication and will thereby boost employees’ motivation.



Sustainability at Takasago

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Message to Stakeholder

In the promotion of sustainability, we believe that in the first year of NGP-1, we have generally made good progress in Sustainability 2030, our action plan for the period up to 2030. We revised our Sustainability Basic Policy¹ and added new items to Materiality 2021-2022.

In the area of climate change, after 2-3 years of preparation, in May of last year, our group's greenhouse gas reduction targets for 2030 were certified by the Science Based Targets Initiative. This has clarified the goals of The Takasago Group's basic policy in line with the TCFD recommendations.² We are currently working with the production sites in Japan and overseas to create specific reduction scenarios. As efforts across the globe are important, we are promoting the participation of all employees.

Regarding other aspects of EHS, we are actively working to reduce water use and waste, and to manage chemical substances to reduce environmental impact. Regarding occupational health and safety, in addition to operational safety, we added work-life balance to our goals, and last year we announced our Health Management Declaration³ to demonstrate the group's position, which was selected as the Health and Productivity Management Organization.

As for human rights issues, our group conducts due diligence in Japan and at its overseas offices (on a corporate basis) every year since 2019, and the latest due diligence in 2021 confirmed that no human rights violations have occurred within our group.

Human rights issues in the supply chain became a major global issue last year, and in order to realize responsible procurement in our supply chain, we share

1 Sustainability Basic Policy

Based on the "Care for People, Respect the Environment" statement in our Vision 2040, The Takasago Group respects all people's values and aims to live in coexistence with nature. Through fair and transparent corporate activities, we will continue to address social issues and contribute to sustainability in all forms.

2 TCFD

The Taskforce on Climate-related Financial Disclosures (TCFD) is a working group established by the Financial Stability Board (FSB). It has published the TCFD recommendations for voluntary climate-related financial disclosures, and they have been supported globally.

3. Health Management Declaration

The Takasago International Corporation will continue to value every employee, strive to maintain and promote good health and create a workplace environment in which employees are able to work with vitality.



Tatsuya Yamagata

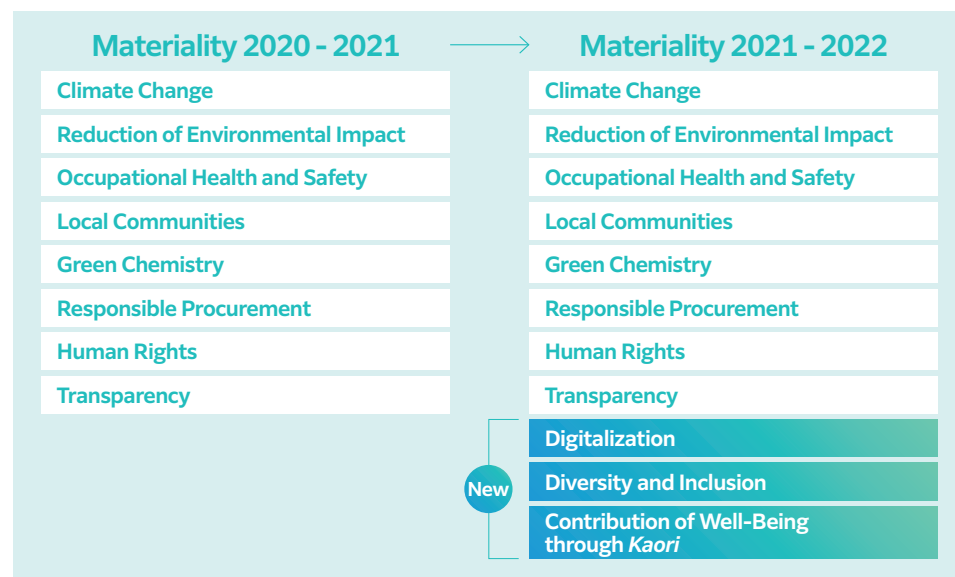
Senior Vice President
General Manager of GIHQ
(Sustainability, Global)

The Takasago Group Supplier Code of Conduct, which incorporates human rights compliance rules, with our suppliers and request their compliance. In particular, since our transactions with raw material suppliers are spread throughout the world, we effectively utilize SEDEX, a platform for checking the ethical aspects of business, to audit the ethics of our suppliers.

Every year, the Board of Directors reviews the materiality of the issues faced by the group. This year's Materiality 2021-2022 including revisions that added the following three items: diversity and inclusion, digitalization and contribution to well-being through *kaori*."

In the area of diversity and inclusion, we are preparing a global policy for the entire Group. In parallel with this, a three-year plan is being drafted for each base in accordance with the laws in each country.

As for digitalization, we have formulated an action plan for digitalization by 2030. Based on this plan, we will promote the global integration of ERP systems, the integration of satellite systems, the use of AI, automation and IoT, the establishment of paperless procedures and IT security. We are currently in the process of



implementing GSAP (the global integration of ERP systems) in Singapore, which will be the starting point for our global expansion by 2025, and we will also begin the integration of satellite systems. IT security is a pressing issue, and we are working to increase the robustness of hardware more robust along with the software.

Lastly, regarding our contribution of well-being through *kaori*, we are working on the following initiatives.

Flavors

Product categories related to well-being that require greater attention include plant-based foods, health-related products such as low-sodium and low-sugar products, and mood-related products such as products for relaxation, and we aim to contribute to product development on a global basis.

Fragrances

Focusing on the various functions of fragrances, we are contributing to a more comfortable and cleaner life by developing fragrances that focus on psychological and physiological aspects, hygienic aspects such as antibacterial effects, and the potential functions.

Aroma Ingredients

We develop bio-based flavor-fragrance materials that are nature-friendly and biodegradable. We also strive to coexist with nature through the *kaori* we use and contribute to a carbon-neutral society through the reduction of the energy that we use by actively using catalyst technology to reduce labor and waste.

In accordance with the Sustainability Basic Policy, we will continue to work toward the realization of a sustainable society by addressing various sustainability issues in society in pursuit of, "Care for People, Respect the Environment," stated in our vision.

Policy and Plans for Sustainability

The Takasago Group believes that sustainability is a vital element for our growth. Sustainability Promotion is defined as one of the three basic directions in the current mid-term management plan, NGP-1. Following the Sustainability Basic Policy developed in 2021, we will strive to accelerate related activities.



From the beginning, our business activities have been aligned with the United Nations Sustainable Development Goals (SDGs) in many aspects, such as the reduction of CO₂ emissions for Goal 13 and process-innovation for Goal 9. We will continue to enhance our business operations to help achieve the SDGs with strong commitment to addressing global challenges.

Sustainability Basic Policy

The policy has been developed as basic principles of our actions of sustainability. Based on the “Care for People, Respect the Environment” statement in our Vision 2040, The Takasago Group respects all kinds of values and aims to live in coexistence with nature. Through fair and transparent corporate activities, we will continue to address social issues and contribute to sustainability in all forms.

Materiality

Materiality is designed to describe relevant issues we need to tackle with priority. This is reviewed and discussed every year.

Sustainability 2030

Sustainability2030 includes concrete plans to achieve each objective of Materiality.

Sustainability Governance

Board of Directors

The Board of Directors is the highest governance body of The Takasago Group. It is chaired by our president and CEO. The Board of Directors discuss and make decisions on key management issues and strategies at its meetings, but sustainability matters are also included on its agenda. As part of our Group's approach to sustainability, we identify material issues every year, which are discussed and approved by the Board of Directors. In addition, the Sustainability 2030 medium-to-long-term sustainability action plan and information about individual sustainability issues (climate change, human rights, etc.) are reported to the Board of Directors for discussion and decision-making.

Executive Management Committee

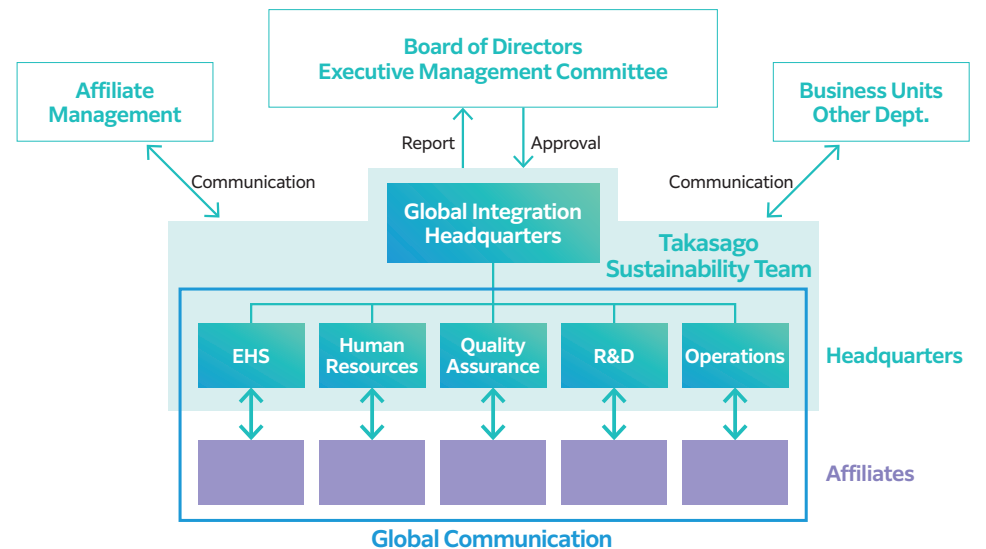
The corporate officers (senior vice presidents and vice presidents) are assigned by the board of directors to lead the divisions. Most of them are the general manager of a division reporting directly to the CEO and president. Following internal regulations, the corporate officers discuss and approve issues brought to them. Sustainability related matters are also discussed by the corporate officers and discussed at meetings of the Board of Directors if necessary.

Global Integration Headquarters

The Global Integration Headquarters is the division responsible for sustainability (strategy and planning) and leading the Sustainability Promoting Committee. The general manager of the division is responsible for taking up sustainability related matters at the meetings of both the Board of Directors and the Executive Management Committee.

Takasago Sustainability Team and Sustainability Promoting Committee

The Takasago Sustainability Team was formed in 2017 to ensure that all our activities are globally aligned with the vision and strategy and action plans are executed in a timely and appropriate manner. The team performs five key corporate functions: EHS, Human Resources, Quality Assurance, Operations, and R&D. The general manager of the Global Integration Headquarters leads the team and communicates information about key sustainability matters to the Board of Directors. Corporate officers and representatives involved in each function participate in the activities of the Sustainability Promoting Committee, which meets once every 2-3 months at Headquarters to exchange information and concerns and monitor the progress of our activities. Individual teams are responsible for communicating information about their functional areas across the globe and developing their own action plans following the corporate strategy.



Stakeholder Engagement

Takasago identified shareholders, society, suppliers, customers and employees as our key stakeholders.

We believe seeking mutually beneficial solutions and continuous engagement will develop good relationships with the stakeholders.

	Employees	Suppliers	Customers	Society	Shareholders • Investors
Why we engage	Recognizing that a diverse workforce supports us to continue creating new values. We are actively working to develop human resources and promote to create an attractive workplace. We also focus on creating a comfortable and safe workplace so that employees can work with peace of mind.	To maintain a high level of trust from society while taking the environment into consideration, we recognize the importance of a good relationship of trust with our suppliers, not only raw materials, but also in the procurement of all goods and services.	With continuous of delivering safe, reliable, and high-quality products, we shall carry our responsibility to supply product to customers. Furthermore, we aim to provide comprehensive solutions to our customers' product issues in manufacturing. We provide products with greater values by understanding the needs of our customers, identifying trends in the world, and integrating product concepts as well as technologies based on an understanding of consumers.	We actively participate in social contribution activities while maintaining good communication with local communities. As a flavor and fragrance company, we also engage in activities to familiarize people with fragrance through the introduction of fragrance culture.	We shall meet the expectations of shareholders and investors through sustainable growth achieved by sound and transparent corporate activities.
How we engage	<ul style="list-style-type: none"> • Employee awareness survey • Self-assessment system • E-Learnings • Fair personnel system • Information sharing with labor unions (labor-management councils, etc.) • Welfare and benefit programs • Internal reporting system • Internal magazine • Company recreation activities • Health and productivity management 	<ul style="list-style-type: none"> • Mutual understanding through dialogue in person or via web meeting • Development of various policies (e.g. Supplier Code of Conduct, etc.) • Distribution of Takasago Responsible Sourcing policy (TRSP) and obtain consent forms • Ensuring that sustainable procurement through periodic supplier questionnaires, Sedex SAQ, and Responsible Sourcing Questionnaires. 	<ul style="list-style-type: none"> • Responding to sustainability-related requests from customers • Receiving audits regularly • Publication of Sustainability Report (information disclosure) 	<ul style="list-style-type: none"> • Establishment of annual activity plan for social contribution • Public relations magazine (The Takasago Times) • Establishment of the Takasago Collection Gallery • Support for educational institutions 	<ul style="list-style-type: none"> • General meeting of shareholders • Briefings on financial results (twice a year) • Timely and appropriate information disclosure, such as issuing shareholder newsletters • Enhancement IR section on the website • Meetings with institutional investors
Key topics & concerns discussed	<ul style="list-style-type: none"> • Human Resource Development • Diversity & Inclusion • Well-being • Occupational Health and Safety • Human Rights 	<ul style="list-style-type: none"> • Responsible Sourcing • Traceability • Climate Change • Human Rights • Risk Management 	<ul style="list-style-type: none"> • Well-being • Customer health and safety • Responsible sourcing • Innovation • Digitalization • Quality Assurance • Sustainable Product Development 	<ul style="list-style-type: none"> • Environmental Conservation • Climate Change • Biodiversity • Human Rights • Social Contribution Activities 	<ul style="list-style-type: none"> • Governance • Transparency • Stable Profitability • Investment in the future • Climate Change • Human Rights

Materiality

The Takasago Group conducts assessments of the materiality of items, taking external opinions into consideration, and reviews its material issues every year. In our materiality matrix, the Y-axis represents "importance to stakeholders." Issues are identified based on global sustainability indexes and standards, such as the Global Reporting Initiative (GRI), the Dow Jones Sustainability Index (DJSI), and the Sustainability Accounting Standards Board (SASB) Standards. Identified issues are discussed and elucidated by the sustainability team, considering the perspectives of diverse stakeholders. The X-axis represents "influence on the group's business success." The team also discusses this aspect for each issue and plots them on the materiality matrix. The issues are then brought to the corporate officers and the Board of Directors for further discussion and decision-making. Through these actions, we address global issues and fulfill our corporate responsibilities as a member of society. This also helps increase the corporate value of the Group over the long term. The content and scope of this report are determined based on the following process.

Changes in this reporting period

Compared with the previously defined materiality, we have added 3 items, Digitalization, Diversity and Inclusion, and Contribution of Well-being through *kaori* to our Materiality for 2021-2022.

Digitalization

The Group understands that the following are important for the improvement of work efficiency: global integration of ERP systems and satellite systems, use of AI, introduction of IoT, and paperless workflows. It is also necessary to strengthen IT security as the foundation for the Group's activities.

Diversity and Inclusion

As stated in Vision 2040, respect for diversity and diverse values is important.

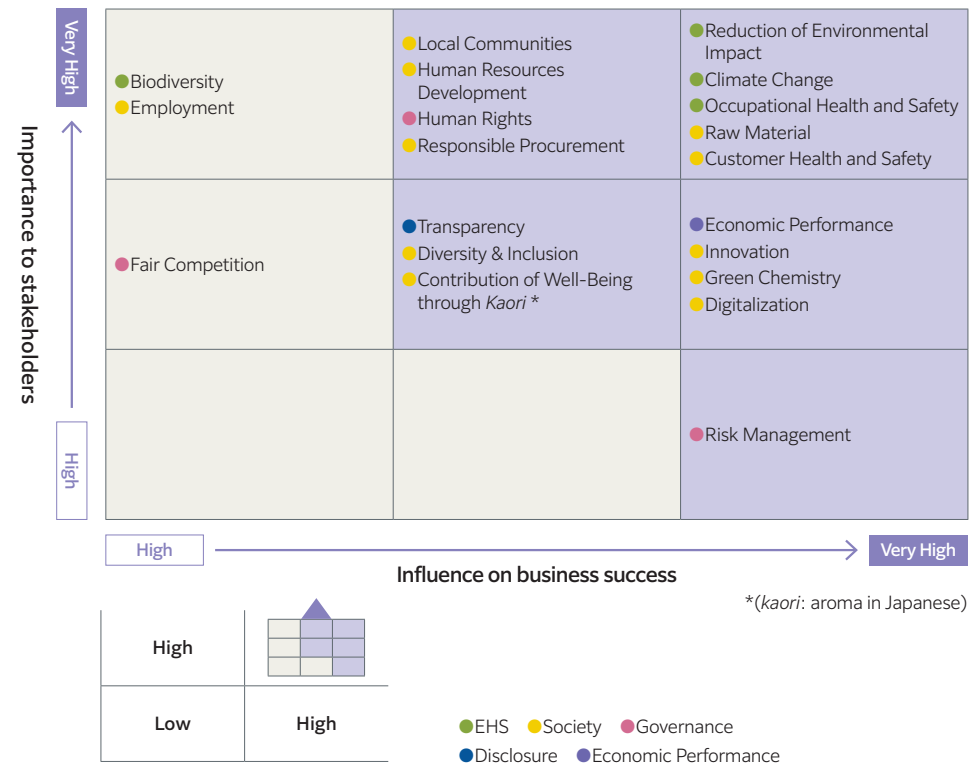
Contribution of Well-being through *kaori*

To include Takasago's uniqueness in our material items, we have added Contribution of Well-being through *kaori*. Our business of "Kaori and its surrounding related technologies" contributes to people's physical and mental health, and to society.

Process for Defining Materiality



Materiality 2021-2022



2021 Progress Highlights of Sustainability 2030

To address our material issues, we have formulated the Sustainability 2030 medium-to-long-term sustainability action plan which was launched in April 2021. The status of the activities under this action plan is regularly reported at meetings of the Board of Directors.

The following is a summary of the progress of major activities in 2021. Please see the related pages that explain activities and future initiatives in detail. The full Sustainability 2030 plan is available here

	Item	Phase 1 (2021-2023) Targets	Actions taken in 2021	Related pages	
1	Climate Change	Obtain SBTi certification and establish an approach for the reduction of GHG emissions	Obtained SBTi certification in May 2021 Formed the Energy reduction program to promote reduction with specific plans	P.18, 29, 30	
2	Reduction of Environmental Impact	Reduction of GHG emissions	27.5% reduction of GHG emissions by 2030 vs. 2019	5.9% decrease compared with the previous year	P.18, 29, 30
		Reduction of water usage	10% reduction by 2030 vs. 2020	0.3% increase compared with the previous year due to increased water consumption at almost all manufacturing sites as a result of increased production.	P.31
		Reduction of waste generation	5% reduction by 2030 vs. 2020	The amount of waste generated increased 18.4%. — Animal and plant residues generated when manufacturing coffee extracts increased. 0.76% of the waste generated by the entire group was disposed in a landfill. (1.86% the previous year)	P.32
3	Occupational Health and Safety	Compliance	• Develop EHS compliance management • Implement an EHS compliance check	Organized items such as sources of information, target audience, means, frequency, etc.	P.33
		Chemical handling	Examine the chemical management of each site.	Considered standardized management methods in Japan and overseas	P.33
		Improve work-life balance	Provide training	Announced the Health Declaration that states that we promote health management internally and externally. Conducted self-care training as well as training to teach managers how to care for their teams.	P.38
4	Local Communities	Develop an annual social contribution activity plan for each site	Developed an annual plan for each site. Conducted many activities shown on page 55	P.58	
5	Green Chemistry	Development of eco-friendly technologies and products	Ongoing projects include the development of highly active and selective catalysis, eco-friendly process and aroma ingredients utilizing renewable resources and white biotechnology.	P.21, 51, 52	
6	Responsible Sourcing	Raw materials procurement	Implementation of the Takasago Responsible Sourcing Policy	Distributed the policy to all raw material suppliers by December 2021, and obtained confirmation letter from 2/5 of suppliers.	P.40
		All goods and services (except raw materials) procurement	Revise and disseminate The Takasago Group Supplier Code of Conduct	In March 2021, The Takasago Group Supplier Code of Conduct was revised and shared with suppliers.	P.40
7	Human Rights	Establish improvement scheme regarding human rights and working environments utilizing the knowledge of third-party organizations	Most sites have received SEDEX audit every three year. Reflect improvements to the Group as needed.	P.23	
		Conduct Human Rights Due Diligence regularly	Conducted Human Rights Due Diligence in 2021 for the entire group. In addition to confirmation following the check list, we conducted video meetings for further discussion with overseas sites.	P.23	
8	Transparency	Disclosures of non-financial information	Enhance the information disclosed	Besides the publication of Sustainability Report and Social and Environmental Report, we have disclosed our activities through Website and LinkedIn.	P.1
		Disclosures of information such as environmental impact of products	Implement LCA and Sustainability ID Scoring	• LCA: Completed a trial calculation of CO ₂ emissions for ℓ-menthol. • Sustainability ID Score: Implemented.	P.30



Climate Change

Basic Approach

Climate change has already had a global impact, and it has been confirmed that there will be rise in the air and seawater temperature, a decrease in the area of sea ice in the Arctic Ocean and other consequences. If climate change continues to worsen, the frequency of extremely hot days and heavy rains will increase, and it is expected that disasters such as droughts, floods and forest fires will be more likely to occur. As a result, crop productivity will decline, ecosystem losses will occur, and industrial impacts will be unavoidable.

The Takasago Group understands that climate change is an important issue that must be addressed from a long term global perspective and has identified it as an item of very high importance in its material issues. We will continue to work on climate-related issues in order to minimize their impact on the future.

Strategy

Addressing Climate Change Based on the TCFD recommendations

To conduct business activities in line with the Paris Agreement, the Takasago Group has formulated a strategy to address climate change based on the TCFD recommendations.¹ Our group also supports the Japan Climate Initiative and participates in a network of companies working on climate-related issues. To contribute to the establishment of a carbon-neutral society, we will strive to reduce greenhouse gas (GHG) emissions by more efficiently using energy and introducing renewable energy.

1. The Taskforce on Climate-related Financial Disclosures (TCFD) is a working group established by the Financial Stability Board (FSB). It has published the TCFD recommendations for voluntary climate-related financial disclosures, and they have been supported globally.

2021 Progress & Results

In Sustainability 2030, our medium- to long-term sustainability plan launched in April 2021, Takasago International Corporation has set the following new GHG emission reduction targets:

Scope 1 and Scope 2 27.5% reduction by FY2030 from the base year, FY 2019.

Scope 3 13.5% reduction in the same timeframe.

Scope 1. Direct emissions from the reporting company's factories, offices, vehicles, etc.

Scope 2. Indirect energy-derived emissions from electric power and other energy consumed by the reporting company.

Scope 3. Emissions from supply chain activities such as procurement, logistics, use of sold products, etc.

These science-based reduction targets have been approved by The Science Based Targets initiative (SBTi)¹ in May 2021. We promote reduction activities toward these targets.

The Takasago Group has responded to the CDP² questionnaire through its supply chain program since 2010.

It scored a B in the CDP's Climate Change program in 2021. The Group received an A- for Water Security and B for Forests (commodity: palm oil). We believe that we were recognized for our environmental stewardship. Our group will continue to strive for sustainability by reducing GHG emissions and mitigating climate-related risks.

2. The SBTi is a global partnership to encourage companies to set science-based targets for the reduction of GHG emissions.
3. The CDP (formerly the Carbon Disclosure Project) is an international non-profit organization that requests that companies and municipal governments disclose information about their efforts to protect the environment. In recent years, the CDP has expanded their programs to include environmental areas such as Water Security and Forests, in addition to climate change. The CDP measures corporate and municipal progress on climate change, forests and water security by scoring them on a scale from A to D- using their independent scoring methodology.



Future Efforts

The Takasago Group has already started an array of actions toward these reduction targets. Regarding Scope 1 and Scope 2, we are engaged in reduction activities through the more efficient use of energy, the introduction of renewable energy, process innovation, and other initiatives. Regarding Scope 3, we will promote engagement with suppliers and more efficient logistics to achieve a green transformation throughout our value chain. Our group will strive to further reduce GHG emissions toward the establishment of a carbon neutral society.



Reduction of Environmental Impact

Basic Approach

The Takasago Group (“Takasago”)’s business activities impact the environment through the consumption of raw materials, energy and water, as well as through the emission of greenhouse gases (“GHGs”) and waste. Takasago recognizes that reducing the environmental impact of its business activities and protecting the environment surrounding local communities is one of the most important tasks in the continuation of our business activities.

In addition, Takasago uses many natural resources in the production of its products, and any decrease in the availability of these natural resources, change in quality, or degradation of these resources will directly and significantly impact the quantity and quality of our products, so the sustainable use of resources and the prevention of pollution is not just a matter of protecting the global environment, but also a very important issue directly related to the sustainability of our business activities.

Strategy

Sustainable Use of Resources and Prevention of Pollution

To reduce environmental impact, Takasago has set numerical targets to increase its use of renewable energy, reduce GHG emissions, reduce water consumption, and reduce waste.

To prevent pollution, Takasago ensures compliance with the relevant laws and regulations in each country and region regarding the control of chemical substances, air pollution, wastewater, leakage, soil and groundwater contamination and odors and waste management. In addition, Takasago formulates and implements its own voluntary control rules as necessary in accordance with the characteristics of our business.

2021 Progress & Results

Takasago has established major reduction targets to reduce its environmental impact. These targets are for the entire The Takasago Group under its ISO 14001 certified Environmental Management System, including targets for the reduction of GHG emissions, water consumption and industrial waste generation. Each production site is working to achieve Takasago’s targets. Progress on the main indicators for FY2021 is as follows.

Target	2020	2021	From Previous year
Reduction of Scope 1 & 2 emission (Metric ton)	65,418	61,579	-5.9%
Reduction of absolute water usage (ML)	3,164,486	3,173,578	+0.3%
Reduction of waste generation per metric ton production (Metric ton)	0.231	0.274	+18.4%

In addition, in FY2021, Takasago identified issues to be addressed to achieve each reduction target.

Regarding the prevention of pollution, Takasago has started activities to establish voluntary control rules, such as the determination of policies for the management of chemical substances and the prevention of off-site runoff from rainwater systems, in addition to continuing efforts to thoroughly manage pollution in accordance with laws and regulations.

Future Efforts

Regarding the reduction of environmental impact, in FY2022, Takasago will analyze the issues identified in FY2021 with the aim of developing a more specific plan to achieve the targets.

Regarding the prevention of pollution, Takasago aims to establish voluntary management rules, including a policy for the management of chemical substances and the prevention of off-site runoff from rainwater systems. Takasago maintains the ISO 14001 certification of its major production sites, including affiliated companies in Japan and overseas, as well as for its R&D headquarters in Japan. The implementation and progress management of its activities to realize the sustainable use of resources and prevention of pollution are incorporated into the ISO activities. The specific action plans for these activities are also involved in the PDCA cycle that is a part of our plan for the improvement of the operation of our environmental management system.



Occupational Health and Safety

Basic Approach

The Takasago Group (“Takasago”) believes that ensuring the safety and health of our employees is the foundation of the Takasago’s sustainable growth. Takasago will continue its efforts to create a safe and secure workplace so that all of its employees can concentrate on their work without anxiety.

Takasago also recognizes the importance of safe operations in light of incidents that have occurred and occupational hazards that have existed in the past, and it is determined to practice its safety first policy.

Strategy Promotion of Occupational Health and Safety

Takasago has established the Global EHS Committee (“GEC”) to promote the standardization of EHS activities and appropriately implement the plan globally utilizing the ISO 45001-certified occupational health and safety management system. The GEC aims to create a safe, healthy and comfortable workplace environment by promoting preventive activities through risk assessment, compliance with laws and regulations, appropriate chemical substance management and work management, implementing highly effective recurrence prevention measures through the analysis of the causes of incidents, and prioritizing safety activities through the analysis of trends based on the results of an array of verifications.

2021 Progress & Results

In FY2021, there were 14 incidents (work-related injuries)¹ at domestic sites (including one lost-time injury). At overseas sites, there were 35 incidents (work-related injuries).²

In the event of an occupational incident, Takasago systematically identifies underlying factors, particularly from the perspectives of the employees and organizations, eliminates dangerous operations and work and implements machinery and management safety measures.

The results of cause analyses and countermeasures are reviewed by the EHS Headquarters, and countermeasures are shared throughout Takasago to prevent similar occupational incidents.

In FY2020, Takasago’s domestic production sites acquired the ISO45001, occupational health and safety management system, integrally with the ISO 14001, environmental management system, that has already been acquired, and in FY2021, the Takasago domestic R&D headquarters and eight overseas production sites also obtained the ISO45001 in a same way.

Takasago will continue to increase the number of certified overseas production sites and promote occupational health and safety initiatives using a globally integrated management system.

Takasago’s EHS headquarters conducted compliance inspections at five manufacturing sites and its R&D headquarters in Japan to ensure compliance with occupational health and safety-related laws and regulations. Due to the COVID-19 pandemic, the EHS headquarters conducted remote inspections instead of visiting overseas sites.

Takasago believes that the leadership and commitment of the top managers at each site, including but not limited to their awareness, responsiveness, active support and feedback, are very important matters for the promotion of occupational health and safety activities.

The EHS headquarters has provided education for top managers of each site in Japan to reconfirm their role in ensuring safety and managing the necessary resources.

1. Incidents Based on Common Reporting Rules for Domestic Bases (work related injuries)
2. Incidents Based on the Common Reporting Rules for Overseas Bases (work related injuries)

Future Efforts

Takasago has set an ultimate goal of zero serious incidents, and is working on horizontally sharing the lessons learned from incidents (work-related injuries) within Takasago and developing countermeasures, focusing on risk assessment.

Takasago reviews its lockout/tagout (“LOTO”) rules to prevent incidents that could lead to serious incidents (work-related injuries), pinch point incidents involving machinery, and hazardous materials spills.

Takasago has appointed EHS managers at each production site in Japan and overseas and promotes safety and health activities according to the conditions of each country and each production base.

Takasago will continue to improve the occupational safety and health system and promote risk reduction initiatives by regularly evaluating occupational safety and health activities at each site and the status of occupational incidents.

Material
Item

4

Green Chemistry

Basic Approach

Based on our corporate mission, “Create new value through innovation rooted in *kaori* (*kaori*: aroma in Japanese); our R&D has set “Generating competitive technologies leveraged by state of the art science” and “SDGs conscious developing of new materials and products” as priority issues in the NGP-1 period, and green chemistry plays a vital role in solving these issues.

We are working to design new processes that take environmental load reduction and energy efficiency into consideration, and working to develop unique materials and products utilizing renewable raw materials or unused resources in line with the SDGs. Through these eco-friendly R&D activities, we are advancing green chemistry aiming to achieve Vision 2040, “Care for People, Respect the Environment.”

Strategy

Promotion of Eco-Friendly R&D Guided by the Twelve Principles of Green Chemistry

We facilitate the efficient use of water and the reduction of greenhouse gas emission to reduce environmental load by utilizing our unique catalytic technology, introducing white biotechnology and designing eco-friendly processes. At the same time, to efficiently use limited natural resources, we are also actively working to explore and utilize renewable raw materials, reduce the use of natural raw materials by developing and switching to alternative materials, and utilize unused resources. We contribute to the realization of a sustainable society through these eco-friendly R&D activities.

2021 Progress & Results

In the development of aroma ingredients, we have been promoting a conversion from petroleum-derived raw materials to renewable raw materials such as BIOSWITCH®. We focus on bio-based and biodegradable flavor and fragrance materials developed from renewable raw materials, and we also believe the introduction and utilization of biotechnology is one of the important means for the practice of green chemistry. We are pushing forward with the introduction of leading-edge technology through open innovation.

In the field of data science, we received a poster award at the 2021 annual meeting of the Chem-Bio Informatics Society as a result of open innovation.

In the field of organic synthesis, in 2022, a new R&D facility, a process research laboratory in the Iwata factory, began full-scale operation. This enables the continuing improvement of process efficiency using catalyst technology and continuing contribution to the reduction of environmental load through the reduction of waste and energy consumption. And an early paper on asymmetric hydrogenation published in 1987 which Takasago was involved in was recently awarded the American Chemical Society's Citation for Chemical Breakthrough Award, a first for an Asian institution. Thus, our catalyst technology is used all over the world to contribute to green chemistry.

Future Efforts

Based on our strategy based on Vision 2040, “Care for People, Respect the Environment,” we will continue to push forward with eco-friendly R&D activities with a focus on green chemistry to solve priority Issues during the NGP-1 period.





Responsible Sourcing

Basic Approach

As you are aware, the diverse challenges that we face globally, which include environmental concerns such as the exhaustion of resources and global warming and social issues including the prevention of workplace accidents and human-rights issues, are increasing and becoming more serious. This requires that companies act with agility in their responsible sourcing activities to ensure the sustainability of their procurement is based on strong and reciprocal relationships with partners and transparent transactions. It is only when we cooperate with our business partners throughout the supply chain that we can implement the necessary action plans for the optimization of sustainable supply chains via the assessment of risks and the conducting of *kaizen* or continuous improvement.

Strategy Implementation of the Takasago Responsible Sourcing Policy

We have established the Takasago Responsible Sourcing Policy and are requesting that our business partners and their sub-contractors share and understand this policy and the underlying concept by distributing and submitting agreement forms.

In addition, in order to confirm the status of compliance, we ask our suppliers to respond the Takasago Responsible Sourcing Policy self-assessment questionnaire or the Sedex questionnaire, in order to investigate the risks and the potential impact of procurement activities in the fields of human rights, labor, environment and anti-corruption. If the possibility of an adverse effect on the supply chain is confirmed, we will immediately make an improvement plan and take corrective measures in cooperation with our stakeholders such as suppliers.

2021 Progress & Results

In fiscal 2021, we started publishing the Takasago Responsible Sourcing Policy on the Internet and distributing it to raw material suppliers. By December, we distributed this policy to all of The Takasago Group's raw materials suppliers and obtained agreement forms from approximately 500 (40%) of the around 1,200 suppliers. We also asked the suppliers who have submitted the agreement form to join Sedex or respond the self-assessment questionnaire established by our policy to check the status of their compliance. Approximately 200 suppliers are linked with The Takasago Group on the Sedex platform, including suppliers who had already established links with The Takasago Group.

Future Efforts

In 2022, we will continue to obtain the agreement forms for the Takasago Responsible Sourcing Policy from our suppliers. We request that the suppliers who have submitted the agreement form join Sedex or respond to the self-assessment questionnaire established by our policy. We will provide feedback to the suppliers who respond, and if there is a need for improvement, we will work together with the supplier to improve. At the same time, we plan to study CSR auditing methods and focus areas, and to promote auditing in high-risk areas.





Human Rights

Basic Approach

The Takasago Group is committed to respecting human rights in its business activities.

To further clarify our stance on this area, we developed The Takasago Group Human Rights Policy in 2019. In addition, we established a procedure for human rights due diligence* referring to guidance published by the Japan Business Federation. In 2021, we summarized a wide range of human rights issues as Priority Human Rights Issues and added them to the Policy. We also incorporated them into The Takasago Group Supplier Code of Conduct in order to strengthen human rights initiatives throughout our supply chain. We explain the Code of Conduct to our suppliers from whom we procure not only raw materials but also all goods and services and ask them to comply with the Code of Conduct in order to promote human rights protection throughout the entire supply chain.

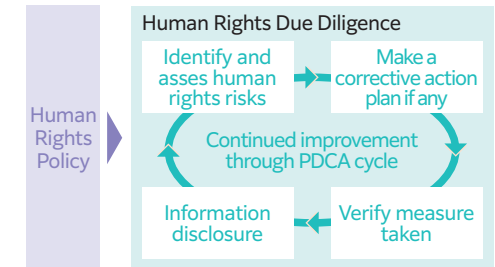
*Human rights due diligence: a process starting with identifying human rights risks, responding to issues, and disclosing information.

Strategy Regularly Conducting Human Rights Due Diligence

In 2019, we established a procedure for conducting human rights due diligence referring to guidance published by the Japan Business Federation. We identified each division related to our five stakeholders*, such as Human Resources & General Affairs, Procurement, Production, Logistics, EHS, Quality Assurance, etc., and made a check list consisting of items per divisions. This checklist is updated annually taking our business activities and global trends into account. Secondly, we conduct interviews with relevant divisions at all sites (per company unit) using the checklist every year. After the interviews are conducted, the results are summarized and verified at Headquarters. The results are then reported to the Board of Directors and are disclosed on the website and in the Sustainability Reports.

In addition, the scope for identifying risks has been expanded at sites in Japan and overseas. In fiscal 2021, no human rights violations were reported at Group companies.

*Five stakeholders: shareholders, investors, customers, suppliers, employees and local communities



Development of a Scheme to Review Human Rights and Labor Standards in our Business Flows

The Takasago Group uses Sedex, an online platform that enables companies to manage and improve working conditions in their supply chains. Companies are audited and respond to the questionnaires, and the results can be viewed by their own company and their customers. To review our own work environment regularly, our manufacturing sites are audited once every three years, and we proactively make improvements based on the results of the audits in cooperation with the relevant departments. While as a buyer company, we also check the results of the audits of and questionnaires filled out by our suppliers who are linked to Sedex. This enables us to use Sedex for the management of human rights and labor environments within our supply chain and communicate with suppliers when necessary. Through this scheme, we regularly monitor and evaluate the human rights and labor environments in the supply chain.

Future Efforts

We will continue to conduct human rights due diligence while making improvements.

In addition, we will conduct periodic training and internal awareness activities to deepen understanding of human rights issues, reduce risks and prevent problems from occurring.

Establishment of a Reporting and Consulting Hotline

We established a compliance hotline at each site which covers human rights matters as well and have regularly reviewed the hotline system since 2020 to standardize and improve the hotline system. We will continue to monitor and verify the system to ensure improvements are implemented.



Contribution of Well-being through *Kaori*

Basic Approach

We believe that well-being enabling people to be physically, mentally, and socially sound will be an increasingly important keyword in the creation of better living. As well-being is closely tied to the field of foods and daily necessities in which we are deeply involved, we continue exploring what we can contribute in this area.

Furthermore, technologies and functions utilizing the characteristics of *kaori*, aroma in Japanese, have been attracting attentions as a solution to social issues impacting health, sanitation, interpersonal relationships, and other facets of life in recent years. We strive to contribute to people's physical and mental health, and contribute to the sustainability of society through *kaori*.

Initiatives within Each Division

Flavors



Product categories related to well-being that are remarkable now and in the future are plant-based foods, health-related products such as low-sodium and low-sugar products and mood-related products for relaxation or invigoration.

We aim to continue using our technology to be a part of the improvement of everyone's well-being.

Technologies that can contribute to products globally include INTENSATES® flavors, which are effective in masking and elevating the flavor of highly processed foods, and the Vivid Flavors®/VIVID® series that contribute to authentic tastes through the recreation of vibrant true-to-nature flavors.

<https://www.takasago.com/en/flavors/latest/well-being.html>



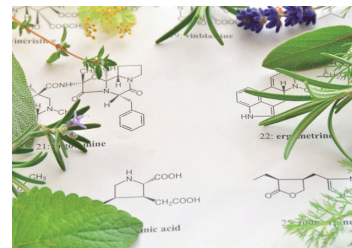
Fragrances



We develop fragrances with a focus on psychological and physiological aspects as well as hygienic aspects such as antibacterial effects, which contributes to a more comfortable and cleaner life. These contributions are not only for people. The fragrances we make by using our bio-based raw materials that are biodegradable and nature-friendly allow us to coexist with nature and supports to build a sustainable society. We strongly believe that the possibilities of fragrance will continue to expand in the future. The Fragrance Division will continue to develop human- and environment-friendly fragrances by combining our technological expertise and creativity to explore all possibilities.

<https://www.takasago.com/en/fragrances/innovation/wellbeing.html>

Aroma Ingredients



We provide aroma ingredients for perfumes, fine fragrances, home care products, toiletries, and other products. We contribute widely to the production of fragrances and flavors by harmonizing our aroma molecules with natural ingredients to express a sensitivity to nature. These products enrich people lives and to maintain a sense of hygiene and well-being. Our cooling and warming materials impart a pleasant sensation to enable people to feel comfortable in their environment. We are committed to contributing to a carbon-neutral society through the reduction of energy usage. By switching to biobased raw materials, using our proprietary catalyst and reducing waste, we aim to become more sustainable.

<https://www.takasago.com/en/aromaingredients>



Digitalization

Basic Approach

The Takasago Group promotes digitalization on a global scale.

The scope of this digitalization includes the integration of ERP systems, the automation of manufacturing, the digitalization of business systems including the use of artificial intelligence (AI) and the ongoing enhancement of IT security to respond to increasingly diverse and sophisticated cyber-attacks. In the process of promoting digitalization, we are also working to standardize business flows throughout group, which we believe will further strengthen “One Takasago.”

Plans — ongoing and future

Global Integration of ERP Systems

Scope Operations, Finance and Accounting and Quality Assurance.

Implementation the system will be deployed at major sites, including HQ in Japan, over the next several years.

The goal is to standardize, streamline and improve the quality of operations by standardizing business flows that had varied from site to site. In addition, we are also working on visualizing data on a global scale aiming to accelerate decision-making and promptly respond to issues.

Functional expansion of the ERP system

Global integration of satellite systems, such as safety & regulatory affairs, CRM, and R&D.

Use of artificial intelligence (AI) in the development of flavors and materials

Takasago is implementing a next-generation R&D system that makes the most of the strengths of both human and artificial intelligence — rich creativity and complex modeling capabilities. A technology platform using an artificial intelligence with the ability to learn, reason, and make decisions in cooperation with our creative and R&D members has been established. Our Ai-T-Aroma™ artificial intelligence system integrates deep learning algorithms and it will make it possible to achieve unprecedented levels of R&D.

Automation Manufacturing

The Takasago Group believes that the combination of AI-based automatic recognition technology with industrial robots and conveyors has the potential to transform the traditional human-dependent production process of compounding flavors and fragrances.

Furthermore, by linking these automated facilities with a globally integrated ERP system, we aim to achieve a high level of safety, productivity and product quality.

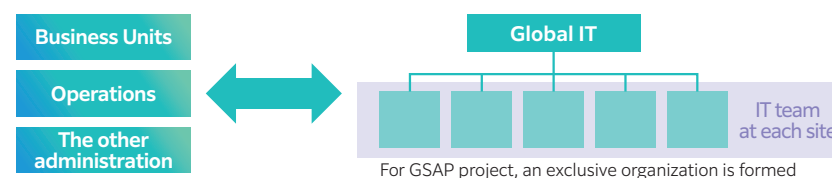
Paperless

A paperless working environment will make working from home a lot easier. Concurrently, we review our current business processes to move toward work standardization and the improvement of efficiency.

Information Security Measures

The improvement of information security measures is positioned as one of the most important initiatives. Technical measures that we are planning include the global introduction of multi-factor authentication and vulnerability assessment tool, and the establishment of a dedicated global security team. On the software side, The Takasago Group is strengthening its awareness-raising activities by regularly reviewing internal rules and making ongoing e-learning programs available to employees.

Scope



Human Resources Development

In response to the shortage of human resources due to the enhancement of digitalization, we have been working hard to recruit fresh graduates and mid-career workers who are interested in ICT, and also to best utilize and train the human resources we already have internally.

For example, we try to optimize local human talent globally for global projects, and this has become an opportunity for the human resource development of the entire group. The GSAP project consists of teams of various members, ranging from people in senior positions to people engaged where the rubber meets the road. We also actively support the participation of younger people, including for training purposes, and are systematically developing human resources with an eye toward the future.


















Initiatives Related to the SDGs

The SDGs provide an opportunity for companies to create value for both their business and society. We have considered how our key initiatives contribute to achieving the 17 goals of the SDGs. By steadily proceeding each initiative, we strive to contribute a sustainable society.

Initiatives Related to the SDGs Highlights

	Contribution of well-being through <i>Kaori</i> , Occupational health and safety		Energy reduction program
	Developing of new products and materials with SDGs in mind		Human rights, Diversity and Inclusion
	Disclosure TCFD recommendations, SBTi certification		Responsible sourcing

Relation to the SDGs Overview

																			
EHS	Climate Change			●			●					●		●					
	Reduction of Environmental Impact			●			●	●		●		●	●		●				
	Occupational Health and Safety			●			●		●		●								
Social Aspects	Raw Material												●						●
	Responsible Procurement												●						●
	Customer Health and Safety			●									●				●		
	Innovation		●	●						●					●		●		
	Green Chemistry						●	●					●	●					
	Local Communities								●								●		
	Human Resources Development					●			●										
	Diversity and Inclusion					●						●						●	
Contribution of Well-being through <i>Kaori</i>			●										●						
Digitalization										●									
Governance	Human Rights					●			●		●							●	●
	Economic Performance								●										
	Risk management								●										
Disclosure	Transparency												●					●	



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Takasago Safety Day 2021

Global EHS Management

EHS headquarters (“EHS HQ”) defines The Takasago Group (“Takasago”) EHS Mission as follows:

“EHS Mission”

To build a sustainable EHS culture, Takasago will:

- Fulfill legal requirements, the requirements of our stakeholders, and other requirements applicable to our operations.
- Identify and control the risks inherent in our activities to avoid incidents, illnesses and negatively impacting the environment.
- Imagine and realize initiatives for the conservation of natural resources, prevention of pollution and reduction of our carbon footprint.
- Incorporate environmental protection, safety and occupational health in our business plan and decision-making.

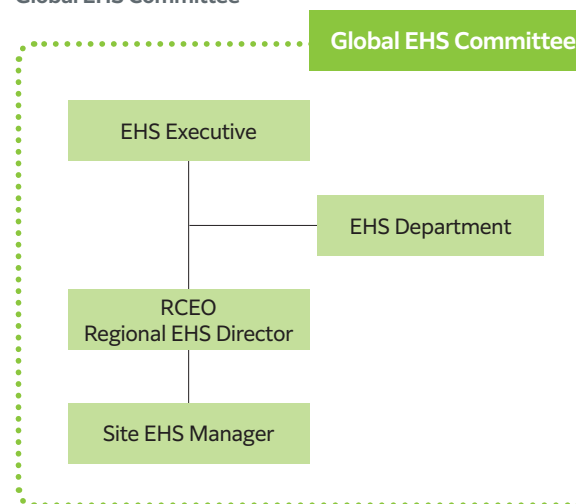
Sustainability 2030, a 10 year plan for sustainability promotion activities from FY2021 to FY2030, has also been launched alongside the EHS Mission.

In Sustainability 2030, EHS HQ set goals related to EHS activities, including, but not limited to, climate change (reduction of greenhouse gas (“GHG”) emissions), reduction of environmental impact (sustainable use of resources and prevention of pollution) and occupational health and safety (promotion of occupational safety and health).

At the end of the first 10-year plan, the goals of the EHS activities have been successfully achieved.

To promote the standardization of EHS activities and implement the plan globally through the operation of the above management system, Takasago has organized the Global EHS Committee (“GEC”). The GEC, chaired by the EHS Executive, Tatsuya Yamagata, is composed of officers in charge of the EHS activities of global production sites.

Global EHS Committee



EHS Statement

Takasago has established the EHS Statement as one part of the foundation of the management of the entire group.

This EHS Statement is written in 11 languages to share the vision and values for EHS activities with all of Takasago’s employees in the 28 countries it operates in.

The EHS Statement states that EHS has the highest priority in all business activities.



Approach to Climate Change

Formulation of a climate change strategy and disclosure in line with the TCFD recommendations

The Takasago Group expressed our support for the TCFD recommendations in November 2019, and we disclose our principles and strategy to address climate change based on the recommendations. The TCFD recommendations set 4 pillars (governance, strategy, risk management, and metrics & targets) for disclosure, and require companies to disclose policies and measures of each pillar, especially climate-related risks and opportunities. We will continue to contribute to the realization of a more sustainable society by expanding information disclosure in line with the TCFD recommendations.

Governance

In order to establish management that earns high praise and the trust of all our stakeholders, The Takasago group strives to reinforce its corporate governance. We recognize that climate change is the most important issue in our materiality assessment and discusses policies and measures regularly at the meetings of the board of directors. Regarding the concrete issues of energy consumption and GHG emissions, the Global EHS Committee discusses detailed measures.

Strategy

The Takasago Group recognizes that the various climate-related risks and opportunities are important business strategic perspectives.

Our sustainability team conducted scenario analyses and identified long-term risks and opportunities beyond 2030. Among climate-related risks, the impact of disasters such as heavy rains and floods on direct operations and the supply chain was identified as being particularly material. As our operations have already been affected by these disasters, we are working hard to reduce their impact by formulating BCPs^{*1} and strengthening the business continuity management of our sites.

*1 Business Continuity Plan

On the other hand, We identified climate-related opportunities such as operational improvements including the increase of energy efficiency through the process of mitigating climate change. We believe that we can benefit from these efforts, including the improvement of operating income through the reduction of energy costs, the improvement of energy security and resilience, and the promotion of process innovation. The Takasago group also understands that innovative products and technologies addressing climate change are opportunities, so we are working diligently to develop low-carbon products and technologies. Our company is also involved in the practice of green chemistry through the development of catalysts and continuous flow processing, which contribute to the reduction of energy use and waste.

Risk Management

The Takasago Group regularly assesses important business risks and strives to prevent or mitigate their impact to ensure the stability of its business activities. The impact of climate-related risks on business are discussed, analyzed, and evaluated by the Risk Management Committee to enable the Board of Directors to evaluate and determine countermeasures. Climate change risks have been discussed by the Risk Management Committee composed of general managers of key Headquarters divisions, and these risks are reported at meetings of the Board of Directors for further review.

In addition, we have obtained global ISO 14001 certification to help monitor and manage environmental risks across all of our sites, including R&D center and manufacture sites.

Metrics and Targets

In our Sustainability 2030 medium- to long-term sustainability plan launched in April 2021, Takasago International Corporation has set the following new GHG emission reduction targets:

- Scope 1 and Scope 2: 27.5% by FY2030 from a FY2019 base year.
- Scope 3: 13.5% within the same timeframe.

These reduction targets have been approved as science-based targets by The Science Based Targets initiative (SBTi) in May 2021. Working toward the achievement of these targets, we are promoting reduction activities such as the more efficient use of energy, the introduction of renewable energy, engagement activities with suppliers, and other activities.

Environment

Energy and Emissions

At Takasago, most of the energy used is electricity purchased for use in production sites and offices.

Takasago has been working through various methods to reduce its use of energy related to CO₂ emissions, such as by adopting energy-saving and resource-saving equipment and processes and by controlling air conditioning temperature settings properly. To further reduce CO₂ emissions, Takasago is proactively considering switching to energy sources with lower CO₂ emissions such as renewable energy through an analysis of the conditions and situation of each site as well as business and stakeholder needs.

2021 Result

Scope 1 and 2 emissions

In 2021, due to the steady growth of business activities, Takasago's total energy consumption increased 0.2% compared to the previous year. Despite this, CO₂ emissions in 2021 decreased 5.9% compared to 2020 by converting to fuels with lower GHG emissions.

Scope 3 emissions

The Takasago Group calculates supply chain emissions using industry-related average data, LCA information collected from our stakeholders and suppliers, and other sources. GHG emissions were verified by a third party based on the result of activities. As a result of this verification, EHS HQ was able to identify that the largest amount of emissions was from Category 1 (procurement activities). We have immediately started the activities to reduce these emissions. To achieve reduction of Category 1, we will promote the following climate change measures

- Further collection of LCA information from suppliers
- Promoting dialogue and partnership with suppliers and other stakeholders
- Evaluate and select suppliers based on their climate change initiatives.

For reduction of Scope3, we also have action plans to improve logistics efficiency, reduce waste amount, and so on.

Energy consumption within the organization

	2020	2021	Changes in %
Direct Energy (GJ)			
Town Gas	377,993	411,700	8.9%
LP Gas	5,630	7,145	26.9%
LNG	135,210	70,713	-47.7%
Natural gas	14,544	5,651	-61.1%
Residual Fuel Oil	34,482	33,768	-2.1%
Gas/Diesel Oil	6,103	7,061	15.7%
Kerosene	225	263	17.1%
Gasoline	7,444	7,801	4.8%
Waste Oil	48,475	50,518	4.2%
Total Direct Energy	630,106	594,621	-5.6%
Indirect Energy (GJ)			
Electricity purchased	657,172	677,365	3.1%
Steam purchased	32,267	50,031	55.1%
Total Indirect Energy	689,439	727,396	5.5%
Renewable Energy (GJ)			
Biomass incinerated	39,432	43,338	9.9%
Electricity purchased	14,442	11,272	-22.0%
Electricity generated	270	259	-4.0%
Total Renewable Energy	54,144	54,869	1.3%
Total Energy	1,373,689	1,376,887	0.2%

Energy Intensity

	2020	2021
Energy intensity (GJ per MT production)	18.86	17.83

Greenhouse gas (GHG) Emissions (scope 1 + 2)

* Gases included in the calculation of Scope 1 ; CO₂, CH₄, N₂O, HFCs, and SF₆, NF₃, or all.

	2020 (Restated)	2021	Changes in %
GHG emissions (MT)			
Scope 1*	32,457	30,076	-7.3%
Scope 2	32,961	31,503	-4.4%
Total (Scope 1 + 2)	65,418	61,579	-5.9%

GHG Emissions Intensity (scope 1 + 2)

	2020 (Restated)	2021	Changes in %
Total (Scope 1 + 2)	0.90	0.80	-11.2%

Other Indirect Greenhouse Gas (GHG) Emissions (scope 3)

	CO ₂ emission (MT)	Ratio to GHG total Ratio to the gross volumes
cat 1 Purchased goods and services	831,002	86.16%
cat 2 Capital goods	22,706	2.35%
cat 3 Fuel- and-energy-related activities	12,843	1.33%
cat 4 Upstream transportation and distribution	22,323	2.31%
cat 5 Waste generated in operations	6,564	0.68%
cat 6 Business travel	488	0.05%
cat 7 Employee commuting	4,326	0.45%
cat 8 Upstream leased assets	N/A	N/A
cat 9 Downstream transportation and distribution	N/A	N/A
cat 10 Processing of sold products	N/A	N/A
cat 11 Use of sold products	N/A	N/A
cat 12 End-of-life treatment of sold products	2,635	0.27%
cat 13 Downstream leased assets	67	0.01%
cat 14 Franchises	N/A	N/A
cat 15 Investments	N/A	N/A
Scope 3	902,954	93.62%
Scope 1	30,076	3.12%
Scope 2	31,503	3.27%
GHG total amount	964,533	

* Concerns period is for 01 April 2021 to 31 March 2022
* See the Statement

Water and Effluents

As a chemical products manufacturer, Takasago requires sufficient quantity and quality of water. Therefore, we recognize the importance of securing a sufficient quantity and quality of water for the group's operations.

Though currently Takasago production sites have secured a sufficient quantity and quality of water, Takasago has to anticipate a decrease in the available quantity and quality of water due to changes in situations such as the climate. Takasago manages water resources appropriately and is promoting the reduction of water usage throughout the entire group.

EHS HQ continuously collects and monitors data regarding the total water withdrawal of the entire group using T-ReCS®, a data management system.

Total Water Withdrawal by Source

water withdrawal (ML)	2020		2021	
	All areas	Areas with water stress	All areas	Areas with water stress
Third Party				
Municipal Water	607	102	680	109
Industrial Water	446	0	438	0
Surface Water	0	0	0	0
Ground Water	2,111	0	2,056	0
Total Water Withdrawal	3,164	102	3,174	109

Some production sites located in areas with abundant resources withdraw a licensed amount of groundwater for production purposes and EHS HQ monitors the impact on the environment.

Water Discharge by Destination

water discharge (ML)	2020		2021	
	All areas	Areas with water stress	All areas	Areas with water stress
Surface Water	2,611	19	2,518	8
Ground Water	0	0	0	0
Third Party	384	67	451	87
Total Water Discharge	2,995	86	2,969	95

Takasago discharges wastewater into rivers after biologically treating the wastewater.

Water Consumption

Water Consumption (ML)	2020		2021	
	All areas	Areas with water stress	All areas	Areas with water stress
Total Water Consumption	169	16	205	13

Water Security

Water Stewardship Guideline

The Takasago Group believes that water resources are extremely important for our business. The water environment is associated with an array of environmental issues and social issues such as water rights (proprietary rights to water, the distribution of water resources, etc.). Recognizing these water-related issues and its need to contribute to solving them, The Takasago Group has formulated the Water Stewardship Guideline in reference to the Global Compact CEO Mandate and the WWF Stewardship Guidelines. Following the guidelines, we will address water-related issues.

Water-related Risks

The Takasago Group is focused on addressing water-related risks. The world's focus has fallen on water-related risks due to climate change. We assess water-related risks which may affect our business and manage them appropriately. Specifically, we evaluate the water-related risks faced by each affiliate using the WWF-DEG's Water Risk Filter and establish business continuity plans (BCPs).

Disclosure on Water Security

The Takasago Group discloses water-related information through the CDP Supply Chain Program every year. The results of the CDP Water Security evaluation in 2021 was an A- score. We believe that we received this high evaluation for our efforts toward water resources. We will continue to strive to strengthen our management of the water environment and pursue the sustainable development of society.

Waste

Takasago continually challenges itself to reduce the total amount of waste it generates (“Waste”) by promoting the entire group’s proper sorting of Waste to recover valuable resources, recycling some Waste to avoid disposal in landfills, and improving product designs and production processes. In addition, Takasago properly manages contracted Waste disposal companies to prevent the inappropriate disposal of Waste, such as illegal dumping.

Waste by Type and Disposal Method

Hazardous waste (tonnes)	Onsite	Offsite	Total
Recycling	0	1,234	1,234
Incineration	0	254	254
Landfill	0	95	95
Total hazardous waste	0	1,583	1,583

Non-hazardous waste (tonnes)	Onsite	Offsite	Total
Recycling	1,931	15,376	17,308
Incineration	10,376	3,998	14,374
Landfill	0	168	168
Total non-hazardous waste	13,307	19,544	32,851

In 2021, 0.8% of the waste generated by the entire group was disposed in landfills.

Environmental Compliance

Compliance is one of the most important management issues.

Environmental compliance is managed based on the processes of the ISO 14001 environmental management system (“EMS”), which clearly defines applicable items, applicable standards, measurement standards, and application requirements.

Takasago has put in place a process for obtaining the latest information about EHS, safety, disaster response, legal and regulatory requirements, the needs of society, and other trends.

Occupational Health & Safety (OHS)

Occupational Health and Safety Management System (“OHSMS”)

Takasago is globally advancing its acquisition of the ISO 45001 certification of its occupational health and safety management system (“OHSMS”), in addition to the ISO 14001 certification. In 2020, Takasago production sites in Japan acquired ISO 45001 certification and the Corporate Research & Development Division in Japan and 8 overseas production sites acquired the certification in 2021.

Takasago will continue to expand its overseas production bases’ acquisition of this certification and promote occupational safety and health initiatives through a globally unified management system.

Incident Reporting Rule and Incident Investigation

EHS HQ established the reporting rule for incidents (including occupational accidents) in 2020. This has enabled the entire group to receive and share incident information in a timely manner in accordance with this rule.

Investigating the cause of incidents is very important from the perspective of preventing incidents that are the same or similar. Once EHS HQ receives an incident report from the site where an incident occurred, EHS HQ reviews the incident’s description, causes and corrective actions to ensure the accuracy of the investigation conducted at the site.

Hazard Identification, Risk Assessment

In Takasago, the Occupational Health and Safety Risk Assessment (“OHS RA”) Rules apply at all production sites, unless there are more strict relevant local legal requirements. Takasago evaluates the occupational health and safety risks impacting all employees involving workplace hazards based on this rule. The EHS HQ is currently working on building supplementary procedures for OHS Rules to globally enhance the OHS RA.

OHS Communication & Inspection

Global EHS Meetings are held at least four times a year to share information related to EHS.

EHS HQ conducts EHS inspections at several production sites every year. To date, EHS HQ has inspected sites in the US, India and Singapore. During these inspections, EHS HQ introduced information about the EHS requirements, checked progress, discussed EHS issues and shared best practices. Due to COVID-19, these site inspections have been suspended since early 2020, but in their place EHS HQ has developed a remote EHS inspection method and inspected production sites in Mexico successfully. EHS HQ will continue to perform EHS inspections remotely until this situation is resolved and ensure that EHS activities are being conducted at sites globally.



Global EHS Meeting

Employee Occupational Health and Safety Training

Takasago shared the result of risk assessments conducted by each site and each site has eliminated similar hazards and reduced risks related to these incidents.

In accordance with the OHS objectives of Takasago in 2021, each site conducted the drills specified for emergency situations at each site at least twice a year to ensure the effectiveness of the procedures.

Occupational Injuries (Work-related Injuries)

EHS HQ is preparing to aggregate the OHS data, including information about occupational injuries and illnesses using T-ReCS®.

In 2021, there were 14 work-related injuries in Japan, 21 in EMEA, 7 in Asia-Pacific, and 7 in Americas. “Occupational Injury Frequency Rate” was 5.48, and “Severity Rate” was 0.07. The main type of work-related injury was contact with chemical substances. There were no fatal work-related injuries in the same period.

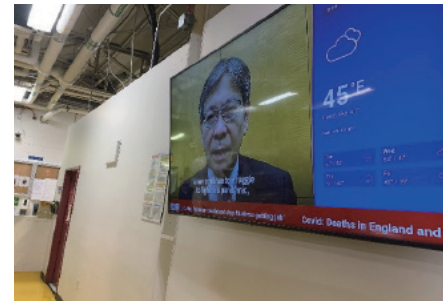
Takasago Safety Day 2021

We are now in the second year of the COVID-19 pandemic, and on April 10, 2021, “Safety Day” was held, reaffirming the vow that “the fire accident that occurred in 2013 will never happen again” for the 8th time.

Guided by this year’s theme, “Emergency Response and its verification”, with infection prevention as our first priority, we conducted education and training in order to share the significance of “Safety Day” to increase awareness of safety and increase the knowledge of all of The Takasago Group companies around the world.

At each site, individual employees, small groups, and departments watched the video of the CEO’s message and the video about the core time program using all appropriate methods including web conference systems, and education and training were implemented. This made it a very meaningful “Safety Day”.

Although it remains difficult to see the end of the COVID-19 pandemic, it was a day in which everyone had a strong awareness of safety to ensure the lessons learned from the accident do not fade.



U.S.A



Mexico



India



China

Social Aspects

35 Our People

40 Our Supply Chain

Responsible Sourcing

TaSuKI Update

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Innovation

Green Chemistry

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57 Shareholders and Investors

57 Local Communities

Our People

Basic Approach

— Reform of Work Practices and Enhancement of Workplace Environments —
 Realize work practices that improve the capability of employees and that respect their diversity, character, and background. Also, provide safe and healthy working environments.

- Establish a human resources development program in which individuals can fully exercise their capabilities.
- Promote equal employment opportunities within the workplace and prohibit any discrimination due to nationality, religion, sex, age, race, creed and/or other related social status as it relates to employment decisions.
- Promote reform of work practices including breaks and leaves, ensuring work-life balance.
- Respect each employee's individuality and support his or her efforts to develop skills and a career.
- Develop and maintain an appropriate working environment to realize the employees' safety and health maintenance and enhancement

Extracted from The Takasago Group Charter of Corporate Behavior and Code of Conduct

Human Resources Development Statement

Takasago recognizes that our employees are a critical component for success. The organization supports an environment that empowers and challenges employees to reach their full potential. We focus on the combination of employee aspirations for career growth and opportunities to enhance skills by offering on-the-job and external training opportunities. We earn the trust of our customers by providing pioneering technology and exceptional service resulting from the solid teamwork of The Takasago Group's employees. To maintain this trust, we continually invest in

educational development and enrichment opportunities, resulting in confident employees that embrace challenges, learn from failures as an avenue for growth and successful and innovative improvement. Lastly, the organization inspires teamwork by engaging in a diverse array of professional skills, fully equipped to meet a range of challenges. Roles and responsibilities are aligned across affiliates, ensuring skills sets and requirements are comprehensive, utilizing local talent in a global manner.

Quoted from The Takasago Group Human Resources Development Statement

Employment Status

Takasago's workforce is in 28 countries and regions around the world engaged in a variety of contracts and types of work.

Employees including temporary staff

Region	Employees	Male	Female	%Male	%Female
Japan	1,873	1,472	401	79%	21%
Asia Pacific	910	455	455	50%	50%
Europe	849	469	380	55%	45%
Americas	641	330	311	51%	49%
Total	4,273	2,726	1,547	59%	41%

Permanent employees by age group

Region	<30		30-50		>50		Total
	Male	Female	Male	Female	Male	Female	Female
Japan	238	64	790	213	411	116	1,832
Asia Pacific	87	76	290	301	66	52	872
Europe	54	65	281	179	117	65	761
Americas	34	54	183	164	113	90	638
Total	413	259	1,544	857	707	323	4,103

Training and Education

The global business environment has been changing over the years. The landscape surrounding businesses now is increasingly competitive and complex. The digital revolution is reshaping the employee mix. The changes have unavoidably contributed to persistent uncertainty, the establishment of a multigenerational workforce, and the shortening of the shelf life of knowledge, and they have placed a premium on reskilling and upskilling.

The Takasago Group, a company that is built upon capable people whose learning is fueled by their foresight and innovation. We have developed the Educational Programs concept to contribute to the upskilling of our employees, increase our employees' creativity and elevate our employees to new heights.

Educational Programs



Takasago Educational Program consists of above 5 pillars

Number of training programs employees participated in

Category	Employees applies to the trainings(approx.)	Employees participated in	Ratio
Compliance (anti-corruption, anti-bribery, etc.)	4,000	1,824	45.6%
Preventions of against discrimination and the violation of human rights		1,964	49.1%
Professional Development		1,633	40.8%
IT Security		3,884	97.1%

One of the site-specific programs that has been established is Takasago International Corporation (TIC)'s Takasago College, an in-house institution that has been operating since 2009 to provide our employees with an environment that enables them to acquire experience and increase their skills in a broad range of areas.




Basic Course

Participants are Junior employees. To deeply understand each other's business operations, they make a presentation about the flow of their own operations. This activity is expected to strengthen their performance and communication capabilities.

Advanced Course

Takasago provides a program to enhance participants' knowledge and skills. To increase their flexibility to enable them to take on new challenges, participants learn about communication skills, logical thinking, and other skills. The program is not just about learning skills. It is also focused on ways to utilize these skills on the job.

Current learning & development programs at Singapore

<p>eLearning Platform</p>		<p>Takasago International Singapore (TIS) has made available a platform with more than 15,000 online learning programs developed by industry experts, these courses are made available in many languages including English, Spanish, German, French and Japanese. We leverage the eLearning platform to enable self-directed online learning and development. It has been especially critical for thriving through knowledge during the pandemic.</p> <p>HR constantly creates new learning paths on the eLearning platform, uploading company specific training content (i.e., safety videos) and recommends courses via email to all employees and to specific departments to encourage a culture of self-directed learning within the company. The platform is accessible through laptops and personal mobile devices making it accessible to employees everywhere. Employees can download training content to their mobile device and learn on the go.</p>
<p>Present with Impact</p>		<p>Building a strong and confident presentation style helps all businesses sustain themselves. TIS has created an extra ordinary presentation skills training program designed to enable:</p> <ul style="list-style-type: none"> - Meeting with managers for pre-training analysis - 1-on-1 coaching for each trainee - Employees taking the course can meet with trainers regarding presentation preparation for one year following the end of the training program
<p>Critical Thinking</p>		<p>Creative problem solving and decision making is important for people in all divisions, from managers to executives. Takasago has designed a training program that focuses on enabling employees to think critically in every situation and on methodologies for identifying creative solutions to every problem.</p>
<p>Key Account Management</p>		<p>Understanding effective ways of to manage key accounts is a fundamental part of enabling businesses to grow stronger. TIS has created a key account management training program with the intent of improving our teams' skills in these areas:</p> <ul style="list-style-type: none"> - Effective account business planning - General businesses and developing businesses - Measuring effectiveness of your relationship with customer - Fine tuning strategy
<p>Compliance Training</p>		<p>Constantly improving The Takasago Group's compliance training is critical for ensuring The Takasago Group is a safe place for its employees and clients.</p> <p>In 2022, HR will pro-actively roll out a compliance training program to ensure that all of our employees are equipped with the right knowledge about safety and compliance when engaged in their work.</p>

Diversity and Inclusion

Diversity is a core value of The Takasago Group. We are committed to cultivating a globally diverse, equitable and inclusive culture. As part of this, we support efforts to increase female managers and foreign national employees while promoting the benefits of diversity and inclusion. Takasago values the contributions of all its employees and believe that the broad perspective provided by a diverse workforce adds value to all our products and operations on a global scale.

Current programs with these goals at U.S.A include:

- Diverse recruiting initiatives and partnerships with local high schools, universities and community outreach programs to enhance talent acquisition efforts.
- Cross-cultural awareness training for employees and managers to understand and embrace differences and increase awareness of unconscious biases.
- Observation of holidays that recognize and celebrate diversity and inclusion
- Flexible employee policies and programs.
- Performance-based recognition across all levels, regardless of background.

Round-down salary scheme at Takasago Europe Perfumery Laboratory S.A.R.L. (TEPL) The idea is to collect monthly donations from employees and contributions from the company to support associations with sustainable, social and inclusive activities.

Around 25% of employees donate each month (the program began in February).

The concept is to propose that all employees round down their monthly salary to the euro and give the rounded-down cents plus an extra donation (up to €15/month) to support two associations selected by TEPL (HR/Sustainability steering committee). TEPL contributes by doubling the cents donated by employees. 100% of the funds are given to non-profit associations and, as per French law, donations are tax-deductible.

Work-life Balance

Takasago strives to create a good working environment as we believe it helps improve our productivity and make our employees' lives more fulfilling. One of the targets in our new medium- to long-term sustainability plan, Sustainability 2030, is the improvement of our employees' work-life balance. Enormous efforts have been made at each site and we will continue to care for employees working in many different situations.

Local efforts also provide customized initiatives. In Brazil, for example, they have the following programs:

- Training for managers to support employees using specific tools and to look for problems such as burnout or overwork. Additionally, training to improve their coaching skills and to enable managers to offer specific benefits to employees who are struggling, such as therapy or coaching from external professionals.
- The creation of a family-friendly work environment, where children and family can visit the company during special Events like Mother's Day and also participate in specific races. This is incentivized and sponsored by Takasago Fragrâncias E Aromas Ltda. (TBR)
- The encouragement of employees to join our sponsorship of a local organizations that supports children in vulnerable situations, especially during holidays like Easter, Christmas, Children's Day, etc. Participating in these events provide employees time away from the office and an ability to volunteer which provides a sense of purpose and gives back to the community.

Good Health and Well-being

We believe that supporting the mental and physical health of employees is an important part of reinforcing our human resources and achieving sustainable corporate growth.

Well-being is a state of calm, stability, connection and satisfaction achieved by a worker who is part of a company. It is reflected in the physical, social, and economic well-being of employees.

Case Study from Mexico

Takasago De Mexico S.A. De C.V. (TDM) has adopted measures focused on taking care of small details that contribute to the improvement of the motivation and productivity of our collaborators.

Current programs at TDM are as follows:

- We have flexible permits and schedules, there is a Youth in Action program in which the high school and university students who are the children of our employees collaborate with TDM part-time during the summer.
- All our collaborators always present on special days during the year, we organize sports tournaments, we promote traditions uniting our people and relieving stress.
- We provide a 50% subsidized dining room service and seek to provide competitive salaries and benefits.

Case Study from Spain

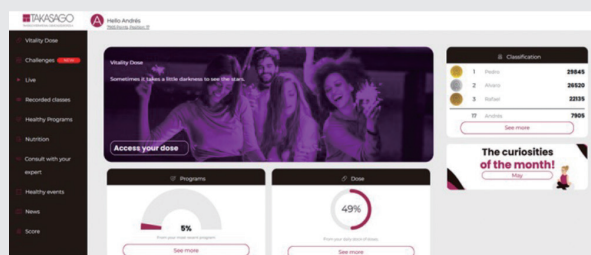
Takasago International Chemicals (Europe), S.A. (TICSA) prioritizes health and safety at work. It could be no other way But the company wants to go farther and ensure the well-being of all staff by developing healthy programs that enable staff to be healthier and happier. At the same time, TICSA aims to include the most up-to-date well-being practices in its activities.

For that purpose and in addition to the activities that we have been doing for several years such as vaccination programs, specific training for our people about safety, etc., we have wanted to implement a new wellness and health platform.

This platform will make challenges and video tips about memory, visual acuity, good posture, nutrition, financial health and many more topics available. Also, Live exercise classes and a channel with all the recorded classes, including classes about mindfulness, yoga, toning, fitness, etc., are available on the platform so that employees can access them where and when they want.

Health programs can be accessed reflecting the objectives of the users, including programs focused on physical health, stretching, gymnastics for pregnant women, back care and many other subjects. Employees can follow diets that best suit their personal objectives. And there is also the possibility to contact with a health professional through a chat to answer all the questions our employees have.

In summary, we believe that the company has to be the leader of this transformation with the goal of increasing the well-being of all our employees using the practices we have mentioned to improve the company and the lives of our staff.



Labor-management Relations

The Takasago Group respects the freedom of association and the right to collective bargaining. Businesses face many uncertainties in this rapidly changing global market. Establishing genuine dialogue with the representatives that the workers have freely chosen enables both workers and employers to understand each other's problems better and find ways to resolve them. The freedom of association and collective bargaining provide opportunities for constructive rather than confrontational dialogue. There are many examples of activities in this area, but here is a small selection from Japan and Germany.

In Japan, TIC works with a workers' union council under a union shop agreement. TIC has endeavored to build upon the amiable labor-management relations, in which employees and management proactively conduct activities such as the reporting of business conditions and the exchange of opinions about working environments at labor-management meetings. Generally, TIC is involved in labor-management meetings twice a year. TIC's health and safety committee meets once a year, and its welfare committee meets once a year.

Furthermore, to listen its employees' voices, TIC has implemented the Window for Tomorrow reporting system which all employees can use. By improving systems and benefits through discussions between labor and management, we continue to reform of work practices and improve workplace environments.

The election meeting of the works council of Takasago Europe GmbH (TEG) took place on August 12, 2021. Nine colleagues were elected to the works council by the employees. One member of the works council is released from their work while the other eight perform their works council duties on a voluntary basis in addition to their work at TEG. The term of office is 4 years, after which new elections take place.

In addition to many duties, the works council has a variety of rights, ranging from the right to be provided information by the employer to genuine co-determination. For example, issues relating to working hours can only be implemented by the employer if the works council has agreed to these measures. Furthermore, the works council has an important say in matters such as the equality of men and women in the company, the promotion of the integration of severely disabled people and the integration of foreign employees.

Our Supply Chain

Responsible Sourcing

Takasago values sustainability in its business activities. It is essential that we source the raw materials used by our business units in a responsible way and in alignment with the need and aspirations of customers and society. We use approximately 14,000 different raw materials sourced from more than 1,000 suppliers all over the world. Of these, about 5,000 raw materials are natural ingredients derived from natural sources such as fruits, vegetables, plant roots, leaves and flowers. The other 9,000 raw materials are aroma ingredients produced using sophisticated chemical technologies. Some of them are derived from natural gas or naphtha while others are derived from natural sources such as pine trees. They can provide a unique sensory profile that does not exist in nature, and can be alternatives to precious ingredients derived from animals such as musk, ambergris, etc. To punctually supply appropriately priced high-quality raw materials to our facilities around the world, our global procurement team communicates through our global network to enhance our procurement activities.

In June 2017, Takasago signed the UN Global Compact (UNGC) and we continue our efforts to align with the UN Global Compact's Ten Principles in the areas of human rights, labor, the environment and anti-corruption. We are also striving to achieve procurement that is as sustainable as possible while also focusing on compliance with the laws in each country, respect for human rights, environmental conservation, fair business practices and involvement and development in local communities.

In order to build fair and trusting relationships with worldwide business partners to enable responsible sourcing, we have established the Corporate Procurement Policy, the Corporate Procurement Guidelines, the Takasago Group Supplier Code of Conduct, and the Takasago Responsible Sourcing Policy.

Corporate Procurement Policy

Takasago is working towards improving its responsible procurement of raw materials and services for sustainable economic growth and the mitigation of social issues. As part of these activities, we revised our corporate procurement policy in 2020 to clarify the scope of responsible procurement.

The full statement is available at <https://www.takasago.com/en/sustainability/visitor/procurement.html>

Corporate Procurement Guidelines

The Corporate Procurement Guidelines embody the Corporate Procurement Policy. The Guidelines cover fundamental subjects such as compliance, fair trade, anti-corruption, human rights and environmental protection that must be aligned with the concept of responsible sourcing. In 2021, the headquarters procurement working group updated the Guidelines to align them with changing world trends including the increased importance of sustainability.

The Takasago Group Supplier Code of Conduct

To ensure that we maintain the high level of trust that society has in us, we respect and value our business partners who are focused on environmental and social responsibility. We established The Takasago Group Supplier Code of Conduct to encourage our business partners to understand our policies and expectations. As stated previously, we revised The Takasago Group Supplier Code of Conduct to clearly state the things that we hope to share with our business partners. This was followed by our Responsible Sourcing Policy which states our ambitions, objectives, and commitment to responsible sourcing. The Takasago Responsible Sourcing Policy has been verified and recognized by Ecocert Expert Consulting (ECOCERT Group) as being in line with the global standards such as the practices of ISO 26000 and the Sedex Members Ethical Trade Audit (SMETA) principles.*

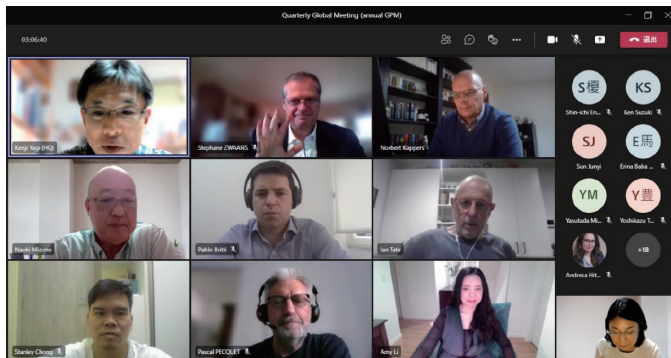
To ensure its implementation, Global Procurement Training includes sessions on Corporate Procurement Guidelines as well as other basic corporate policies.

* An auditing methodology providing a compilation of best practices for ethical auditing techniques

Procurement Management Promotion Organization

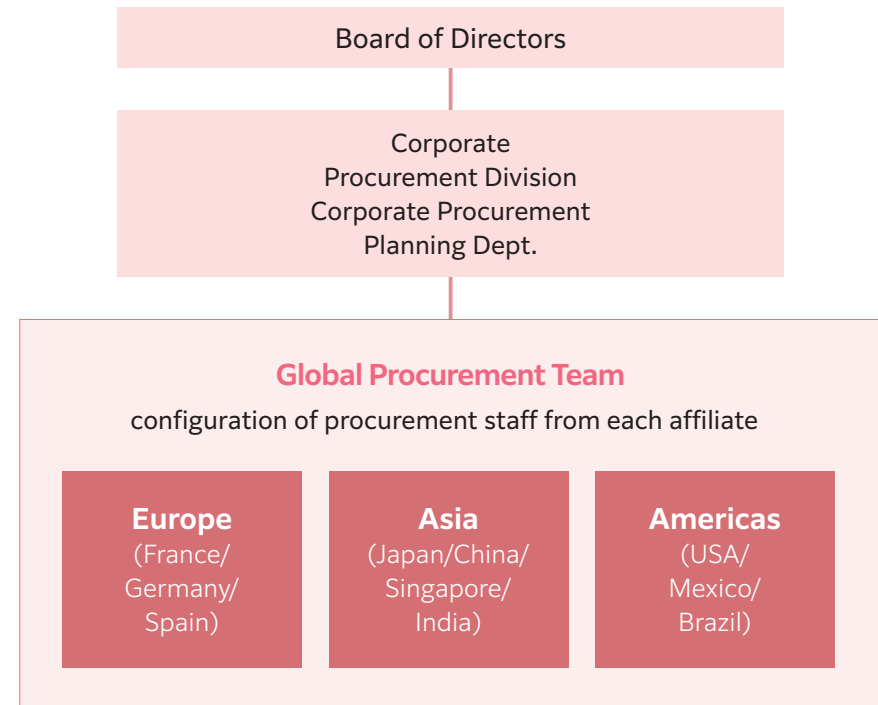
We have defined our Corporate Procurement Policy which clearly states our basic understanding and requirements for procurement activities in accordance with our corporate vision and mission. Also, to ensure the appropriateness of business procedures in accordance with the Corporate Procurement Policy, we have established our Corporate Procurement Guidelines. In addition to this policy and these guidelines, to promote sustainable procurement activities that take into consideration human rights, labor, health and safety and the environment, we have established the Takasago Responsible Sourcing Policy that is aligned with the ISO 26000 standard as well as the SMETA principles and supports the UN's 17 Sustainable Development Goals. Our Sustainability Promoting Committee, business divisions, other related divisions and overseas affiliates communicate to ensure that all employees are aware of and thoroughly adhere to these policies.

Teamwork is one of things most valued by Takasago, alongside technology and trust. This is particularly the case in procurement. We created the Global Procurement Team which includes delegates from 11 global production sites to align with the concept described in the Corporate Procurement Policy and to optimize operational processes. We schedule an annual meeting at the headquarters, various workshops, regional meetings, on-site visits, and training via a matrix-like structure by region, global ingredient category management, and other global strategic corporate initiatives. To adapt to the COVID-19 pandemic, we have been conducting regular and extraordinary online meetings as well.



Annual global procurement meeting in Nov. 2021

The organization of Takasago Global Procurement



The Role of Procurement in the Future

Takasago Global Procurement ensures the timely supply of quality raw materials while ensuring security, safety and economic appropriateness in order to effectively operate our global production sites around the world. To achieve this mission, it is crucial for us to fairly and reliably develop and maintain business partnerships for the long term, for the procurement of raw materials and also other services. We believe we should share values such as respect for the global environment with our partners, including every upstream stakeholder in our supply chains, to ensure that we are a well-regarded and trustworthy company.

As we all are aware, our global challenges, which vary from environmental concerns such as the exhaustion of resources and global warming to social issues

including workplace accidents or human-rights issues, are increasing, and becoming more serious. These require that companies take agile actions in responsible sourcing to ensure their sustainable procurement is based on strong and reciprocal relationships with partners through transparent transactions.

Toward a brighter future society, we will design an innovative supply chain model in which every stakeholder shares values such as coexistence, co-prosperity and *kyousei* (共存、共栄、共生) to realize an environment of empathy, sympathy and collaboration (共感、共鳴、共働).

Global Procurement Training

Due to the COVID-19 pandemic, we started to provide training for procurement staff through an e-training program in 2020 to share corporate policies, strategies and guidelines. In 2021, the online training program evolved into the Procurement Academy and new programs were established to leverage the knowledge of experienced staffs accumulated over long years, share information about raw materials feedstock diagrams and introduce organizations to staffs. The aim is not only to deepen the Team's understanding of the corporate medium-term management plan, policies and guidelines but also to share valuable knowledge regarding procurement, intergroup networking, and team building.

Voices



Juan Antonio Pérez,
TAKASAGO INTERNATIONAL CHEMICALS (EUROPE),
S.A. (Spain)

The world has changed so much since I joined Takasago 14 years ago. It has become more complex and unpredictable. We see structural changes with long-term consequences, and challenges ahead that we can only overcome if we are able to adapt fast enough.

As a Procurement Academy trainer I tried to identify intangible assets, especially human capital, that would be the main source of a company's competitive advantage. People skills, experience, flexibility and entrepreneurship are keys for success.

This training program gives us the opportunity to share knowledge and experience, increasing human capital, because people make the real difference.



Kyo Cho (Qiang Zhang),
Takasago International Corporation (Japan)

As a foreign employee in Takasago's Tokyo headquarters, I have been trying to develop my cross-cultural communication in my work and constantly exploring efficient procurement methods. The Procurement Academy explores opportunities and challenges in the current situation from the macro level and provides a refresher on Takasago's global procurement systems such as the FR GCC process flow, FL Harmonization and *TaSuKI*. Before joining Takasago, I didn't have any experience in procurement, but through the Procurement Academy, I received a lot of useful advice regarding different procurement approaches from my colleagues at affiliates around the world. "Keep an open mind, know your tools and be innovative as a professional buyer", Hopefully I can apply these tips in my daily work.

Strengthening Global Partnerships

The Takasago Group conducts international procurement activities utilizing its global organization with the Procurement Department inside headquarters at their center. Through the activities, we strive to contribute not only to our customers' successes but also to all stakeholders by ensuring the stable supply of high quality, safe and sustainable products. For this purpose, we engage in dialogue with suppliers in person and online, implement an array of policies, questionnaires, and Requests for Quotation (RFQs) to manage relationships with suppliers.

At the end of 2021, we shared the Takasago Responsible Sourcing Policy with our all suppliers. The main objective is to ensure they understand and are aligned with the policy. We support them using the Self-Assessment Questionnaire (SAQ) and encourage them to become members of Sedex.¹ This strategy aims to further assess sourcing and ESG risks and take any necessary mitigation actions.

¹ An online platform for sharing information on ethical and responsible practices.

Sustainable Procurement Activities

We are investigating the risks and potential impact of our procurement activities in the fields of human rights, labor, the environment and anti-corruption based on the Takasago Responsible Sourcing Policy and using our or Sedex SAQ. If the possibility that negatively impact to our supply chains is identified, we will promptly plan improvement and take collective actions with suppliers and other stakeholders.

As of April 2022, 42% of suppliers have signed onto the Takasago Responsible Sourcing Policy, and now we have started to ask suppliers to become members of Sedex or respond to our SAQ. We continue to ensure that our all suppliers understand the policy and cooperate for the realization of a sustainable society.

Collaboration with a Third Party

In order to further respond regarding its responsible sourcing aspirations, The Takasago Group has joined social organizations promoting sustainable and ethical sourcing. On October 2020, the Ministry of Foreign Affairs announced a national action plan (NAP) on business and human rights. Following the direction of the NAP, we are planning to conduct human rights due diligence in the supply chain to proactively manage any potential or actual adverse human rights impact of our supply chains.

We also have been a member of the Roundtable on Sustainable Palm Oil (RSPO)² and the Japan Sustainable Palm Oil Network (JaSPON)³ to promote a sustainable palm supply chain. Our affiliate in France received RSPO Mass Balance certification and has provided certified products to our customers who request it since 2019. Our fragrance affiliate in the U.S., in Harriman, NY, became RSPO-MB certified in January 2021. Our affiliate in Singapore received its first RSPO certificate in 2022 for the manufacture and sale of fragrance compounds using the RSPO-MB supply chain model. Being the first RSPO certified site in Singapore, the affiliate trained the staff on RSPO matters for the sustainable management of the system. Further, they are also working towards a similar certification for flavors as well.

In early 2016, we joined Sedex (AB membership) facilitating the assessment of suppliers in the areas of work environment, health and safety, environmental management and ethical business practices. Using the world's largest collaborative platform for sharing supply chain data globally along with a separate supplier questionnaire, we ensure an ethical supply chain. As mentioned in the Strengthening global partnerships section, we have started to ask suppliers to become Sedex members or respond our SAQ so that we can monitor suppliers' compliance with the Takasago Responsible Sourcing Policy. As a result, 204 Sedex members have established links with The Takasago Group. We will continue to encourage new business partners to become Sedex members when starting transactions and promote activities that prioritize existing suppliers joining Sedex for sustainable relationships.

² A social organization trying to transform the palm oil industry to ensure its sustainability and reduce its impact on the environment.

³ A platform for the sustainable procurement and consumption of palm oil in Japan.

TaSuKI update

1. Overview

2021/2022 was another successful year for Takasago Sustainability Key Initiatives, *TaSuKI*.

While we still suffered from supply chains chaos and severe travel restrictions, a few key milestones were set for existing initiatives, and new promising sourcing opportunities were identified.

This feeds the pipeline for strategic ingredients directly procured “from source” by Takasago and confirms that *TaSuKI* is fully aligned with its clients and consumers’ aspirations for supply continuity, traceability and sustainability.

2. Ongoing Projects

France Lavandin Grosso

Pioneering 10 Years «Farm to Fragrance» Lavandin Agreement- “*TaSuKI* Originals, Care and Comply



2021/2022 is the second year of our 10-year sustainable and ethical sourcing agreement with the Cooperative Corporation of Perfume Plants of Provence (SCA3P) for the purchase of Lavandin Grosso essential oil.

It is time for a first review. We are proud to confirm that achievements have by far exceeded expectations:

- Contract implementation was flawless and despite unprecedented logistics headwinds, supply was smooth. For the first two years of the contract, all Takasago affiliates were served on time in full and quality was 100% compliant.
- The most remarkable achievement was on the sustainability front. As we anticipated, the lavandin grosso essential oil market price collapsed. While most

farmers had to sell below soaring (production and carry) costs, Takasago fulfilled all price and quantity commitments. We bought from SCA3P farmer’s cooperative at pre-agreed fair and equitable cost + price, not at market price.

The experiences made during 2021/2022 (and most likely continuing in 2022/2023) are living proof that long-term commitments such as our 10-year cost + arrangement with SCA3P are mutually beneficial. As opposed to the usual yearly spot negotiations, this helps the farmers who supply Takasago survive this disastrous situation and ensures that Takasago is able to secure supply when the market turns short (and given circumstances, it will).

Florida Grapefruit

Sustainable Grapefruit: New Groves Plantation – *TaSuKI* Originals, Care and Comply

The long-term Sustainable Grapefruit project is on track. The agreement signed back in 2019 continues at a good pace creating new groves during the first 7 years of execution. The new groves commitment is resulting in a strong partnership with the citrus industry.

The entire value chain has been integrated and is aligned in the same direction. In 2022, we expect to have more than 55% of the trees projected under this agreement in the orchards. The remaining 45% will be planted in the next 4 years, up to 2026. Trees already planted will start producing grapefruit within the next 3 years. We are anticipating the resulting sustainable grapefruit oil and have already developed unique grapefruit oil grades for both our Flavors and Fragrances Creation Teams.



Madagascar Vanilla

News from Takasago Madagascar - *TaSuKi* Originals, Care and Comply

The 2021-2022 period was quite intense for Takasago Madagascar and vanilla. As shared in our previous Sustainability Report release, Takasago began the process of obtaining the Fair For Life certification of its vanilla from Madagascar. In full alignment with the *TaSuKi* Comply principles, we are therefore very proud to confirm that on Feb 25th Takasago Madagascar obtained FFL certification from Ecocert.

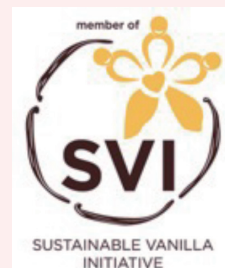


This is the accomplishment of a major milestone towards meeting Takasago's sustainability objectives, particularly the ESG compliance of *TaSuKi*'s strategic ingredient supply chains.

Like France lavandin grosso and Florida grapefruit, it fully aligns with clients and consumers aspirations, as, according to Takasago's 2021 Vanilla Study:

- About 73% of consumers agree that their beloved vanilla should be sourced sustainably
- Consumers, especially in Europe, believe that the best quality vanilla is produced in Madagascar which supplies about 80% of the world's high-quality vanilla beans.

A second critical milestone was achieved in 2022. On April 4th, Takasago officially became a member of the Sustainable Vanilla Initiative (SVI).



The Sustainable Vanilla Initiative (SVI) is an industry membership forum for companies committed to work on sustainable production in the vanilla industry, with an initial focus on Madagascar, the world's largest vanilla producing country.

SVI aims to:

- Grow the supply and market for sustainable / traceable vanilla
- Improve and sustain vanilla households' incomes / livelihoods
- Improve quality by significantly reducing early harvesting of green vanilla
- Address the concerns about child labor in vanilla production

The initiative currently has 28 members ranging from major consumer goods manufacturers and global flavors and fragrances companies to international vanilla bean traders and cooperatives selling vanilla extracts. Collectively, members represent over 70% of worldwide vanilla bean purchases.

<https://www.idhsustainabletrade.com/sustainable-vanilla-initiative-svi/>

The initial priorities of the Sustainable Vanilla Initiative strategy will be to contribute to the above 4 goals by supporting companies to scale successful supply chain partnership programs, where needed to invest in pre-competitive programs that complement the company led programs, and to improve sector governance, bringing a clear and organized industry voice and support to Madagascar to work in public-private cooperation.

The rationale behind Takasago's becoming a member was a desire to share our 10 years of vanilla expertise in Madagascar, a need to ensure alignment with Industry sustainability best practices and a desire to join forces to help move the vanilla sourcing sustainability agenda forward.

Production

Our Production Model at a Glance

The main objectives of Production are: (1) to manufacture products with a consistent Takasago excellent Quality at all affiliates around the world with zero incompatibilities, (2) to align CSR activities globally to contribute to the creation of a sustainable society actively, and (3) to cooperate with QA/QC and EHS to establish Takasago's best practices.

Development of standardization based on Corporate Production Policy

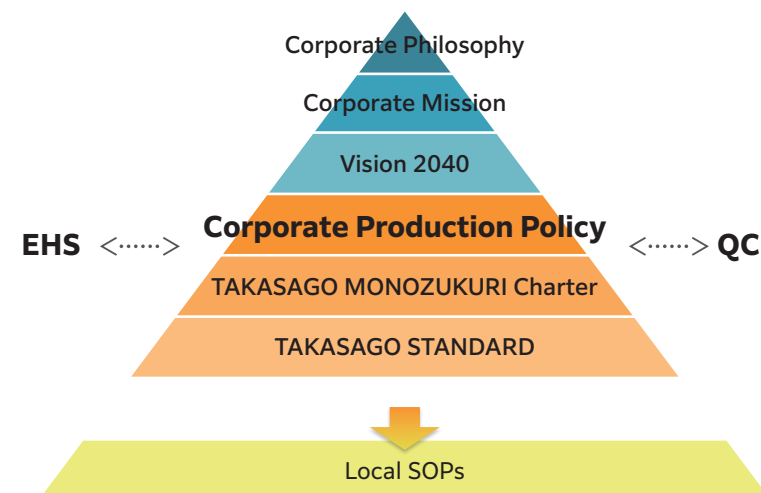
The Takasago Group developed its Corporate Production Policy (below) to implement activities for production and sustainability with a clearly defined purpose in the global functional area. By utilizing the characteristics of each affiliate and promoting a sense of unity in global production practices, Takasago aims to create a product supply system that is trusted by customers around the globe.

Corporate Production Policy

We practice the following in our production activities:

- Continuously striving to provide the highest level of customer service while maintaining safety in the workplace, the stability of supply and quality assurance in all of our production activities.
- Constantly pursuing excellence in our production practices and manufacturing systems.
- Vigilantly observing all relevant laws and regulations, respecting human rights, being fair, and preserving the environment.

Furthermore, with the aim of creating an effective document system, we developed the TAKASAGO MONOZUKURI Charter in January 2022 and are working to establish the TAKASAGO STANDARD standardizing operating procedures (SOPs) to link the Corporate Production Policy to local SOPs.



Global Meetings

Takasago holds a variety of international meetings such as Global Operations Directors Meeting, Global Supply Chain Management Committee Meeting, and Global Plant Managers Meeting on a regular basis.

Through these meetings, we promote effective global collaboration, ensuring that our goals are aligned and so that we can move forward as The Takasago Group.



Global Supply Chain Management Meeting

Environmental Risk Initiatives

Takasago understands the potential of climate change and natural disasters as risks for production activities and believes that an approach that considers environmental risks is an essential part of sustaining growth. As a result, Takasago has promoted water risk initiatives in parallel with its reduction of environmental impact. The Takasago Group evaluated the water risks faced by each of our affiliates using the WWF-DEG's Water Risk Filter. In addition, headquarters delivered a report on responses to recent natural disasters in Japan at the Global Operations Directors Meeting.

Zero-Accident Activities

Zero-Accident Activities are programs where all employees practice precautionary measures relating to industrial safety and health with a "Safety First" philosophy. They are implemented at all factories in Japan. On top of the activities prescribed by EHS, Takasago aims to promote activities that encourage employees to take ownership of workplace safety, ideas for handling situations that are not clearly covered by rules, and the continuous improvement of safer production practices. Specifically, Japanese affiliates have held hazard prediction workshops where employees examine potential real-life scenarios for ways to improve safety. Also, they have established the practice of "pointing and calling" to build a culture of safe habits. These practices promote the development of leaders who support future health and safety initiatives and embody the "Safety First" spirit while considering the safety of their colleagues.



Left: Hazard prediction workshops / Right: Pointing and calling

Logistics

Corporate Logistics Policy

The Takasago Group has established the Corporate Logistics Policy as its principles for logistics in accordance with the Charter of Corporate Behavior which includes consideration of the environment and local communities.

We practice the following in our logistics activities:

- Continuously striving to provide the highest level of customer service while providing a safe and stable source of supply.
- Constantly pursuing excellence in our logistics operations, systems and processes.
- Persisting in the observance of all relevant laws and regulations, respect for human rights, being fair, and considering environmental preservation.

Reducing Environmental Impact of Logistics

Our logistics team is improving its operations to reduce CO2 emissions during upstream transportation and distribution. In some regions, we arrange cooperative transportation from factories to product warehouses and are making efforts to reduce the number of trucks through the adjustment of collection dates and the improvement of load efficiency.

As a part of our long-term commitment to sustainability, we work to optimize our logistics network, including the adjustment of distribution bases to shorten transportation and distribution distances, and accordingly, to push forward with the reduction of emissions during logistics activities.

Recycled/Renewable Materials and Packages

For The Takasago Group, the percentage of raw materials used in 2021 that were renewable was 45.4% (44.7% in 2020).¹

We do not use recycled materials for the containers that come in contact with our products due to safety regulations. Due to this, only recycled pallets are used in some storage areas. We use recycled materials (waste paper and steel materials) for cardboard packaging and steel drums. We are also reusing intermediate bulk containers (IBC), steel drums and pallets as long as there are no potential safety risks. For example, in 2021, Takasago Fragrâncias E Aromas Ltda. (TBR) avoided using 1460 new 200 L plastic bottles by using IBCs in the sale of finished products in the Fragrances business. Packaging materials unfit for reuse are collected, sorted and recycled by authorized recycling contractors. Thus, we promote the utilization of materials and packages that can be recycled in reasonable ways while we ensure the safety of the packages and materials. This enables us to reduce environmental impact.

¹ Renewable raw material: A renewable resource is a natural resource which can replenish itself by an amount exceeding human consumption through biological reproduction, naturally recurring processes or other positive actions. We calculated the percentage of raw materials used that are renewable based on the guidelines in the Japanese version of the GRI Standards.

Research & Development

R&D Strategies and Activities

Based on our corporate philosophy "Contributing to Society through Technology" sublimated from corporate mission, new corporate mission "Create new value through innovation rooted in *Kaori* (*kaori*: aroma in Japanese)" and Vision 2040 "Care for People, Respect the Environment" which includes the milestone of our 100th anniversary, R&D plays an important role in the improvement of quality of life (QoL) by developing unique and superior technologies and products through the organic and functional integration of three types of innovation (concept innovation, product innovation and process innovation) and open innovation in active collaboration with external partners.

To solve issues globally recognized through the SDGs, we promote eco-friendly R&D with green chemistry always in mind, and to reduce environmental load, we utilize our unique catalytic technology, introduce white biotechnology and design eco-friendly processes so that we can facilitate the efficient use of water and the reduction of energy usage and greenhouse gas emissions. In addition, to make efficient use of limited natural resources, we are also actively working to explore and utilize renewable raw materials and reduce the use of natural raw materials by developing and switching to alternative materials and utilizing unused resources.

R&D Framework

Our basic R&D division is working closely with overseas flavor and fragrance R&D centers and actively advancing R&D activities to meet global needs. We continue to work together with overseas R&D centers and steadily proceed with the overseas expansion of our technologies and products to, for example, modify the flavor profile of low salt/sugar/fat consumer products and plant-based food and to respond to demand for natural and environmentally friendly flavor and fragrance materials.

Innovation

Flavor development for alternative protein foods

-Toward the establishment of a human and environmentally friendly society

From the perspective of our flavor development, we always keep in mind how our products can be satisfying and environmentally friendly for everyone.

Since 2020, the COVID-19 pandemic has globally influenced psychological distress in the society, and conversely it is increasing the demand for the improvement of quality of life, for more comfortable and healthy living. In order to meet these health-conscious needs, we are developing various value-added flavor solutions for food products that support sugar reduction, salt reduction, fat reduction, and are allergen-free, animal protein-free, etc.

Recently, the expansion of concept of the SDGs to reduce environmental risks and the increase of health-conscious veganism are influencing consumers eating habits around the world, the use of animal protein has been avoided and the demand for foods made with plant-based protein is increasing. We are providing our flavors as various solutions to fill the gap between plant-based protein and animal-origin protein to improve the plant-based protein foods. To meet various market needs, Takasago is developing products in collaboration with the R&D efforts being made in different markets. We made flavors that can mask off-flavor components by utilizing analysis technology, odor and taste receptor assay technology, application evaluation technology, etc.

Takasago offers a variety of INTENSATES® flavors (taste modulators) which are tailor made to specific customer applications, bringing multi-dimensional holistic facets to taste perception, such as the masking of undesired attributes and improving fattiness and umami quality. For example, the FAT TASTE Modulator can deliver the perception of animal fat in a plant-based protein system with a limited nutritional environment. It can provide a perception of marbled fat and meat flavors with a small dosage.

In addition, the taste modulator with leveraged our thermal process technology with a strong cooking profile can provide Koku, an Japanese term for an attribute that translates as complexity, lastingness and mouth-fullness, for both taste and aroma with small dosages. By imparting plant-based foods with Koku, it can be expected that the something lacking in the flavor, a common issue with plant-based protein foods, can be achieved and deliciousness enhanced.

Through utilizations such as this or the combination of building blocks and technologies, Takasago is able to provide complete flavor systems according to customer needs. We offer excellent flavor to all people, aiming to create customers products that can contribute to improving QoL.

Novel Nursing Care Odor Control Fragrances Utilizing Olfactory Receptor Technology

- Supporting the reduction of odor stress in nursing care

The world's population has been aging rapidly, and because of improved hygiene and nutrition, as well as the development of medical technology, people live longer. Thus, the number of aged people who needs nursing care has increased accordingly and they must be cared for in their homes or assisted living facilities. In many cases, there is a characteristic malodor in nursing care settings which is very stressful for both caregivers and care-receivers and that reduces QoL. The nursing care odor is a complex odor composed of strong odors such as fecal odor and body odor.

We have succeeded in developing novel deodorant fragrances to address it that can significantly reduce discomfort by combining Olfactory Receptor (OR) and TRANSODOR™ technologies. OR technology has attracted huge attention as the latest malodor masking technology. OR assays allow not only high-throughput screening for effective masking agents, but also strategies to reduce specific odors by blocking the olfactory receptors with antagonists. TRANSODOR™ technology is also a masking technology that harmonizes malodor components and changes them into pleasant fragrances.

First, for the first time a specific OR was found to be the receptor responding to the key components of fecal odor and then its antagonists were discovered in

fragrance materials. The antagonist fragrance materials clearly suppressed the strong odor of the key components of fecal odor in the sensory evaluation. Next, to utilize TRANSODOR™ technology that can change malodors into pleasant odors, we searched for essential oils with a high harmonizing effect with the fecal odor through a sensory evaluation. Finally, it was demonstrated the combination of the technologies could greatly reduce the discomfort caused by the nursing care odor by significantly reducing the key components of it and harmonizing the malodor as a whole. It can be expected that the deodorant fragrances developed through this study relieve stress felt by both caregivers and care-receivers by reducing the discomfort caused by the nursing care odor to make them healthier physically and mentally, leading to the improvement of QoL.

BIOSWITCH® Aroma Ingredients

- Development of bio-based and biodegradable aroma ingredients.

Takasago's history with aroma ingredients began in 1920 and "Symbiosis with nature" is a part of Takasago's heritage. In 1983, we established the asymmetric synthetic method and applied it in the industrial production of *l*-menthol.

From the 1990's, our main focus was to expand its asymmetric technology to manufacture optically active aroma ingredients using CHIRAL SWITCH for Takasago's CHIRAROMA® products. Now we have a diverse CHIRAROMA® ingredients palette.

Recently, we have been investigating R&D utilizing renewable/bio-based materials to displace the need for non-renewable petroleum-based chemicals under the BIOSWITCH® branding.

In 2014, Takasago became the first in the industry to disclose the bio-based % of its aroma ingredients, and now it includes each status for CHIRAROMA®, Biodegradability, ISO16128 and Nature identical. In 2021, several ingredients were additionally certified under the United States Department of Agriculture's BioPreferred® Program.

By developing and pursuing BIOSWITCH® R&D, Takasago truly contributes to a sustainable society through technology.



Odor compounds design based on computer-aided aroma and drug discovery technologies

- Improving the efficiency of aroma development

Takasago has developed technologies for designing odor molecules by combining both the techniques of Takasago's computer-aided aroma design and Tokyo Institute of Technology's computer-aided drug discovery, using data about olfactory receptors.

Humans recognize odors through many types of olfactory receptors present in the nasal passages. Considering this complicated odor recognition mechanism, it's very difficult to develop a new odor molecule, and it takes a huge amount of time and the development costs are high. Therefore, improving the efficiency of odor molecule design, which is the starting point of development, has been a long-standing issue.

In this research, a variety of data about physical, chemical, and biological properties related to odor molecules is collected, and each model has been made using TAKASAGO's data science technology, Tokyo Institute of Technology's computer science technology and deep learning technology, and the computational resources of the TSUBAME 3.0 supercomputer. We worked on the development of various models capable of the learning, reasoning, judgments, etc. necessary for odor molecule design. By using these models to select candidate molecules and conducting evaluations, we confirmed the performance of the model and demonstrated the practicality of the odor molecule design system. One of these efforts was presented at CBI Annual Meeting 2021 and won the excellent poster award.

We will further develop this basic technology for the future, aiming to offer new fragrances and flavors that contribute to the cosmetics and food industries, as well as aspects of society such as life, health and welfare.

Green Chemistry

Process Innovation

- Approach promoting energy saving and waste reduction

Our R&D activities and manufacturing are oriented toward Green Chemistry, based on the well-known 12 principles. One of the key activities is fully utilizing continuous flow processing, realizing safer operations that use less energy. The viewpoints of chemical engineers include safety and energy saving, which are key components of green chemistry. At the process research laboratory, reaction data is collected using special instruments recording thermodynamic data for both safety assessment and energy control. This data and its interpretations are promptly fed back to the Hiratsuka Fine Chemical and Aroma Ingredients R&D team, helping them optimize reaction conditions, minimize the use of raw materials and reduce the amount of waste and the amount of energy consumed. In these circumstances, the development period of the processes has been reasonably shortened through the consideration of green chemistry.

The new R&D infrastructure at Iwata started partial operations in April 2021. Then in November of the same year, all equipment was relocated from the old facility. We then started full-scale operations at the new R&D facility. Furthermore, we introduced LC-MS/MS and 400 MHz NMR to enhance our analytical capabilities. The above approach coupled with the introduction of new catalysts and natural aromas will further enhance Takasago's ability to contribute to the realization of a greener world.



Development of Special Catalysts

- Efforts to reduce environmental impact

Catalysis, which is one of the embodiments of the 12 principles of Green Chemistry, enables the reduction of raw materials used, waste generated and energy consumed, and the use of safer and even harmless reagents. Since the establishment of the *l*-menthol process in 1983, we have worked to develop catalysts for various transformations and leveraged them in commercial manufacturing. One of the early papers on asymmetric hydrogenation, which was published by Nagoya University, Institute for Molecular Science and Takasago International Corporation, was recently recognized with a Citation for Chemical Breakthrough Award from the American Chemical Society, a first for an Asian research institution. The Award is given to chemical papers that have made historic breakthroughs in chemistry since the late 18th century. The catalyst technology is used by companies around the world to contribute to green chemistry.

One of our recent developments reduces sugars to sugar alcohols. Sugar alcohols are used for a variety of purposes, including as sweeteners, food additives, and pharmaceutical intermediates. Current processes commonly use heterogeneous Raney nickel, but it is potentially pyrophoric and demands special care in handling. Also, it requires high catalyst loading (several wt%) and sometimes suffers due to the generation of byproducts, which increases waste. We identified that the homogeneous Ru-MACHO[®] catalyst can solve these issues by achieving high catalyst activity and selectivity (*Org. Process. Res. Dev.* **2022**, 26, 1442–1449.). For examples, D-glucose is converted to D-sorbitol with 99.3% selectivity using Ru-MACHO[®] at a catalyst loading as low as a 1/30,000 molar ratio to the substrate. This protocol has wide substrate generality, enabling its use with a variety of sugar alcohols.

Aroma Ingredients R&D by White Biotechnology

Takasago has been studying the production of aroma through fermentation for more than 50 years, and we have built a Takasago microbial library consisting of about 2,000 useful microorganisms over the years. This library is greatly utilized by Takasago's White Biotechnology. Centre Ingredient Technology Inc., which joined The Takasago Group in 2016, manufactures natural aroma ingredients using a highly efficient fermentation process and heat-saving energy aroma recovery technology, and is a major Takasago manufacturing base that uses biotechnology. In addition, Takasago is enhancing its technology by participating in Japanese government projects, collaborating with universities, and utilizing the latest biotechnology. We will accelerate R&D through innovation to realize a decarbonized society and contribute to a circular economy and a sustainable bio-economy.

Our R&D is devoted to environmentally friendly activities based on the Sustainable Developing Goals (SDGs) and Green Chemistry, which are included in our current medium-term management plan, NGP-1. We recently celebrated our 100th anniversary. We will accelerate R&D through innovation for the realization of a decarbonized society and to contribute to a circular economy and sustainable bio-economy by introducing the slogan, "Symbiosis with Nature."

Quality Assurance

Takasago is a committed valuable partner of our customers, meeting all their product quality and safety requirements.

The mission of the Corporate Quality Assurance Headquarters (QAHQ) is to ensure that Takasago supplies safe, whole some and reliable fragrances, flavors, aroma ingredients, and fine chemicals that comply with the safety and regulatory requirements of local jurisdiction, customers and trade associations. To achieve this mission, we promise to pursue “no complaints, no non-conformities” and “no defects, no errors.”

Quality Assurance Organization

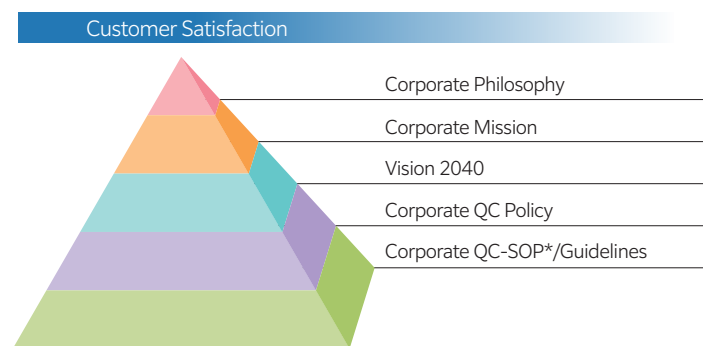
Takasago QAHQ strives to ensure that Takasago consistently delivers high-quality products and ensures that our customers’ needs are met. QAHQ is an independent organization within Takasago composed of quality assurance departments around the world that operate under the One Takasago Quality Assurance Concept. QAHQ includes four centers: the Global Flavor QC Center (FLQC), the Global Fragrance QC Center (GFQC), the Global Flavor Regulatory Center (GFRC) and the Global Fragrance Safety and Regulatory Affairs Center (GFSARA) which operate globally and closely with local affiliates. These four centers are responsible for the development and implementation of global policies and guidelines under a globally standardized operation process.

Both Flavor and Fragrance QC Center strive to standardize, maintain and enhance the QC testing skills of the local QC team by conducting sensory evaluation, physicochemical testing and microbiological testing proficiency tests. Both QC Centers supports the standardization and the quality of raw materials which are used globally to provide the same quality products in collaboration with the procurement department. We believe that these activities will contribute to the reduction of waste and energy consumed in the production process, which in turn will actively contribute to sustainable production.

Aside from the global recognized regulations, as the local regulations for flavors/ fragrances is dependent on the specific country, both GFRC and GFSARA communicate with specific national trade associations and working groups to learn about the latest regulatory information and changes within the countries within their area of operations. This information is shared and discussed with the team members of all affiliates. The latest information alerts enable all team members at all affiliates to use the latest regulatory information for product labeling, customer support and informative purposes. This has allowed the local affiliates to consistently provide the support that our customers need.

The global regulatory team has been also very effective in developing new functionality to prepare for new regulatory requirements. This includes the development of new auto-generated forms to address new regulatory requirement and support new customer requirements. By identifying and tracking the commonly arising issues, the global team can more effectively develop proactive policies and procedures to reduce non-conformity across the globe.

Thus, we are able to provide the highest quality products to meet or exceed all of our customers’ expectations worldwide.



* SOP: Standard Operating Procedure

QC Policy, SOP and Guideline

Takasago's Corporate QC Policy was developed based on our Corporate Philosophy, Corporate Mission and Charter of Corporate Behavior. The policies allow us to have globally consistent quality mindset and systems that not only meet our customer's expectations, but also ensure appropriate and timely improvement. In line with the Corporate QC Policy, global QC Standard Operating Procedures (SOPs) and guidelines were established to standardize detailed QC procedures across all business units and affiliates. These guidelines are also incorporated in the local quality management procedures and practices to ensure the global alignment of QC management.

Training Programs

To enhance and maintain the highest level of quality and service, all Takasago Flavor and Fragrance QC teams participate annually in global training sessions provided by the Global QC Centers. The Global QC Centers are technical support groups underneath Takasago HQ that build globally aligned QC systems and train the local QC teams of all Takasago affiliates. The technical supervisors of the Global QC Centers coordinate regular training programs. This globally coordinated and operated system is the key to ensuring that the same high quality service is being offered and that our products consistently meet or exceed all of our customer's requirements. Our flavor affiliates produce flavors distinct to their region. Recent flavor QC training conducted by flavor technical supervisors has included training on organoleptic evaluation, gas chromatography methods, maintenance procedures, technical laboratory best practices and quality systems designed to provide the same high-quality services to all customers around the world. These training programs are also designed to respond to local needs to improve and enhance specific analytical areas.

Our proactive activities will help align and streamline QC best practices, and in turn encourage the identification of issues and improvement of the efficiency of procedures, resulting in less waste and greater consistency across all our affiliates. Additionally, we conduct proficiency testing globally based on Takasago's ISO/IEC 17025 accreditation certification. This helps to confirm and standardize QC testing skills and maintain highest level of proficiency as well as motivating the QC staff members. As for Takasago fragrance affiliates, representatives of the QC teams attended olfactive intensive training at the Fragrance QC Center. The training consists of smelling natural raw ingredients and finished products to understand their complex nature and characteristics.

The training also includes discussions sharing the expected raw material and finished product quality. After the training, attendees who were Technical representative support certified lead daily olfactive training at their site and serve as sensory contact for the key site Global Fragrance QC center. All training results are shared with global and local management to ensure that the lessons and skills learned are effectively reflected and utilized as part of all local QC teams' daily activities as well as continuous improvement plans. This is a crucial part of Takasago's efforts to continuously supply the highest quality products to our customers anywhere in the world. These global training programs contribute to the standardization of the quality of Takasago products and improve the teamwork of all of the QC teams as One TAKASAGO.



Compliance with laws and regulations related to chemical substances

It is Takasago's global policy to comply with the latest laws and regulations. Takasago fully supports the objective of the chemical legislation around the world to improve safe and sustainable use of chemicals, the quality of life of all citizens of the world and the environment. To conduct our business globally, The Takasago Group complies with laws, regulations, and relevant standards on product quality and safety, the environment, and chemical substances as well as on accounting, taxes, labor and transactions in each country and region. This includes compliance with laws and regulation related to chemical substances, and The Takasago Group considers this to be one of its top priority issues. We continuously monitor and complete regulatory activities to ensure that we meet local regulatory requirements around the globe. This applies to the four business pillars of The Takasago Group, the Fragrance, Flavor, Aroma Ingredients and Fine Chemicals divisions.

To comply with the regulations of various regulatory bodies, The Takasago Group works as a global team to ensure that registration activities around the globe are conducted efficiently, minimizing redundancy in testing and expediting registration. As we look towards 2022 and beyond, there are number of new chemical laws that are currently being written and may require The Takasago Group to conduct additional registration activities. These laws include UK REACH, K-REACH, new chemical legislation in Australia and China, Turkey-REACH and other laws. As these new chemical regulatory laws are enacted, The Takasago Group will be ready to work proactively to meet new compliance requirements.

The GFSARA Center continuously monitors ever-changing global regulations, customer requirements, standards and guidelines by communicating with trade organizations such as IFRA¹, RIFM², ACI³, PCPC⁴, FCA⁵ and many other trade associations. Information is shared promptly with each affiliate around the world, guaranteeing that Takasago can provide safe and reliable products all over the world in a consistent manner.

1 IFRA: International Fragrance Association
2 RIFM: The Research Institute for Fragrance Materials
3 ACI: American Cleaning Institute
4 PCPC: Personal Care Products Council
5 FCA: Fragrance Creators Association

Certifications

Takasago promotes the acquisition of quality management system certifications such as ISO 9001, FSSC 22000/ISO 22000, the GFSI and other internationally recognized quality and safety standards that are appropriate for the products we manufacture. A new flavor and fragrance facility was built in Indonesia and obtained ISO 9001 and FSSC 22000 food safety certifications specifically for flavor facilities in March of 2020. Introducing these international standard system are a key element for globalization rather than a part of local activities across all of Takasago. We are confident that these internal standards drive us to promote better quality services and increase customer satisfaction. To continue moving forward, Takasago is in the process of implementing a program designed to integrate systems from the FSSC 22000 viewpoint of hazard analysis.

On-Site Audits

To further strengthen the group's quality management, global QC centers routinely conduct on-site audits of all manufacturing sites to ensure their systems are consistently improving as well as meeting or exceeding all established requirements and standards, and that they are aligned with Takasago's business plan, objectives and quality control policy. Customer Health and Safety Takasago develops and manufactures a wide range of products across four its business pillars: Fragrances, Flavors, Aroma Ingredients and Fine Chemicals.

As an integral part of the creation and production processes, Takasago continually evaluates all products for their health and safety compliance. This approach is applied from the research and development stages up to the manufacturing and delivery stages of our products. During the reporting period, Takasago has not identified any instances of non-compliance with regulations or voluntarily adopted rules.

Marketing and Labeling

All of Takasago's sales are through business-to-business channels. None of its products are sold directly to end-consumers. Our fragrances and flavors are sold to companies manufacturing consumer goods, who incorporate them into their products that are sold to the general public. Our aroma ingredients are sold to other flavor and fragrance companies for use in the creation and manufacture of their own compounds. Takasago fine chemicals are generally used as intermediates for the manufacturing of pharmaceuticals and chemicals. When supplying our products to our customers, Takasago provides the product information of all of the products we manufacture as required by regulations and/or the customer. This typically includes one or more of the following:

- Sourcing of the raw materials used in the manufacturing of our products
- Composition of our products (dependent on disclosures)
- Safety data sheets (which highlight components that may have a health or environmental impact)
- Information on the safe use of our products

During the reporting period, Takasago has not identified any incidences of non-compliance regarding product information or labeling.

Response to Kosher and Halal Needs

Takasago respects local cultures and customs, and actively creates products that reflect our values. Some local cultures and customs requires strict adherence to religious precepts, and we are working to expand our products that comply with these precepts, so they can be consumed with peace of mind. Well-known religious precepts include the Jewish kosher dietary regulations and the Islamic halal regulations. Both have the meaning of "forgiveness" and are strictly adhered to as a fundamental part of each religious person's life based on their religious beliefs. Takasago's kosher products are primarily supplied from factories in the United States. Our halal products are primarily supplied from our factories in Singapore and Malaysia. Our factories in Japan supply products and manufacture intermediate products for customers in the United States and Southeast Asia and have traditionally supplied synthetic flavors and food flavors that are kosher. In addition, our flagship product, *ℓ*-Menthol, is also halal. Moving forward, Takasago will continue to increase the number of products that are kosher and halal, and will further enhance the manufacturing and supply of products that are friendly to the global environment and compatible with local cultures and customs.

Shareholders and Investors

We strive to appropriately return profits to shareholders by realizing sustainable growth through sound and transparent corporate management. At the same time, we work hard to further strengthen communication with shareholders and investors both in and outside Japan.

Takasago discloses corporate information in a timely and adequate manner to shareholders and investors.

As part of our efforts to improve our IR activities, we publish the Newsletter to Shareholders twice a year while also disclosing related documents and press releases on the IR section of our website to expand the investor community and enable shareholders and investors to deepen their understanding of our business activities.

In addition, we hold financial result briefings twice a year (May and November), and our president and officers directly communicate with investors and analysts. Due to the COVID-19 pandemic, meetings were held as web conferences in 2021.

The details of the briefings are also disclosed on our IR site. Furthermore, the Investor Relations/Public Relations Department handles reporting related to IR and visits investors.

When it comes to shareholder returns, Takasago embraces shareholder-favoring business operations and aims to establish a corporate foundation which enables profit to increase and continuous, stable dividends while taking into account business performance.



Local Communities

Basic Approach

As stated in The Takasago Group Charter of Corporate Behavior and Code of Conduct, The Takasago Group respects the global environment and local communities and believes its relationships with local communities are a fundamental part of its business. For a long time, we have been engaged in a variety of activities, such as the holding of cultural events, the provision of educational programs, donations and other support for community activities. We will continue these activities and strive to be a partner that is trusted by local communities.



Germany —

More than 100,000 euros: Takasago helps flood victims

The flood disaster in July 2021 emotionally significantly impacted all of us. Some of our employees were directly affected, in some cases to a terrible extent. Those affected were granted additional special leave days. We also gave time off to people who wanted to help on a private, voluntary basis. We offered our employees the opportunity to talk to a crisis intervention coach. Through donations totaling 62,000 euros, we were able to support 19 people personally affected by the flood. This includes donations collected from our workforce that were then doubled by Takasago Europe GmbH and donations from sister companies and a business partner. In addition, Takasago International Corporation has donated a total of 40,000 euros to charitable organizations as a sign of compassion and solidarity. Together, we have been able to help donate over 100,000 euros.



France —

Obsolete IT Equipment Recycling

We donate obsolete IT equipment to ISTPT association annually. The devices are repaired and have a second life with people who need them. This year we donated 18



printers, ten screens, a Juniper switch, Neoware, two laptops, three Lenovo desktops, and a CCTV system.

 **Spain —**
World Environment Day gift for employees

On the occasion of the World Environment Day, Takasago International Chemicals (Europe), S.A. gifted its employees a potted plant to remind them of the importance of taking care of the environment.



 **Singapore**

To aid the local tourism industry, Takasago International (Singapore) Pte. Ltd. has sponsored Rediscover Singapore. Through this program that has been running since 2020, our staff are able to receive a limited budget to visit local tourism spots. The theme of this year's photo competition is Fun and Creative.



 **India**

Takasago International (India) Pvt. Ltd. has established a relationship with the Government school in Manambadhi and visited their higher secondary school. During the visit, they provided lights and ceiling fans for more than 17 classrooms for the students.

 **U.S.A**

The month of May is Mental Health Awareness Month. Takasago believes it is important to increase public awareness of mental health issues and fight the stigma associated with mental health. Therefore, on Tuesday, May 17th, employees wore something green to help raise awareness of the importance of Mental Health in today's world. The color green signifies new life, new growth and new beginnings.



 **Japan**

In response to a local high school's request, we have participated in a program presenting interactive classes. In the classes, our staff present information about the workflow of our business. (Iwata Factory)



Takasago Coffee provided soil made from coffee grounds to nearby elementary schools



Governance

60 Corporate Governance

Our Approach to Corporate Governance

Evaluations of Board of Director Effectiveness

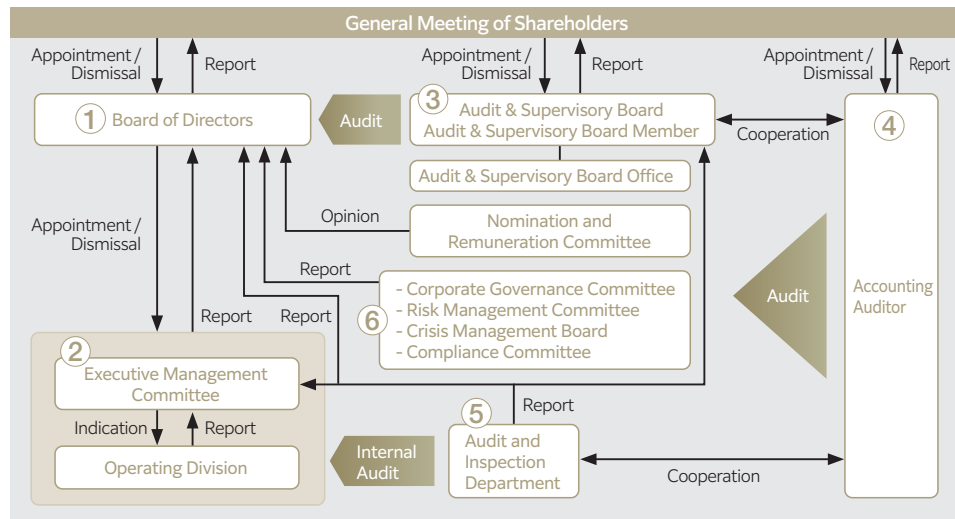
62 Risk Management

65 Compliance

Corporate Governance

Our Approach to Corporate Governance

The Takasago Group strives to enhance the appropriateness of its management decisions, its checks on the management process and the transparency of its management through the disclosure of information to ensure the appropriateness of corporate governance. Aiming to achieve sustainable growth and enhance corporate value over the medium and long term, we have established the Basic Corporate Governance Policy by resolution of the Board of Directors. It is available on the Group's website.



1 2 Board of Directors and Executive Officers System

In principle, the Board of Directors meets once a month, and extraordinary meetings are held as necessary.

Directors ensure the fairness and transparency of management by supervising management, and make the best possible decisions through the development of management strategies and plans and decisions regarding important investment projects and other business operations. At the same time, by setting the term of office of directors to be one year, we ensure sufficient opportunities for earning the confidence of the general meeting of shareholders, clarifying management responsibilities, and strengthening functions for sustainable management.

We have introduced an executive officer system to ensure the efficiency of management decision-making by the directors and the speedy execution of business operations, and are working to differentiate the corporate governance function of the Board of Directors from the executive officers' execution of business operations. In general, the Executive Management Committee meets once a month to discuss important management issues. Executive officers from the overseas offices attend once a quarter. The Group positions the committee as a place for sharing information and discussing global matters.

3 4 5 Board of Auditors, Corporate Auditors, Internal Audit

In principle, the Board of Corporate Auditors meets once a month, and extraordinary meetings are held as necessary.

The corporate auditors cooperate closely with the accounting auditor and exchange opinions and information. The Internal Audit Department reports the results of internal audits to the Corporate Auditors, and the Corporate Auditors may utilize the Internal Audit Department as necessary. In addition, the Corporate Auditors' Office has been established to assist the Corporate Auditors in their duties. The Board of Corporate Auditors functions more effectively by ensuring that the Corporate Auditors utilize their experience to audit management from a fair and neutral standpoint, working closely with the Internal Auditing Department and the Accounting Auditors.

⑥ Committee, etc.

Corporate Governance Committee	The committee is chaired by the President and is composed of seven directors, executive officers, and other members. The committee deliberates on important matters related to corporate governance with the aim of continuously enhancing corporate value.
Risk Management Committee	The committee is chaired by the President and is composed of the general managers of each division. To enable the Board of Directors to comprehensively identify and assess risks that could impact the Group we have strengthened our management system and are continuously deliberating and formulating measures to prevent these risks from impacting the group or mitigating their impact.
Crisis Management Board	We have established a system that enables headquarters and affiliates to respond promptly to emergencies, should one occur. We regularly review the reporting and instruction routes linking the Crisis Management Board (located at headquarters) and affiliates to ensure the smooth transmission of important orders and guidance. In addition, to prepare for large-scale disasters and emergencies, The Takasago Group has developed and formulated standardized BCP (Business Continuity Plan) procedures.
Compliance Committee	The committee is chaired by the President and composed of nine directors and full-time corporate auditors. The committee deliberates and promotes important matters for the establishment and thorough implementation of a compliance system.

Evaluations of Board of Director Effectiveness

The Takasago Group conducts periodic evaluations of the effectiveness of its Board of Directors with the aim of enhancing its effectiveness and enhancing corporate value.

A summary of the results of these evaluations is disclosed on our website.

Evaluation Method

A questionnaire is distributed to all directors and corporate auditors regarding the effectiveness of the Board of Directors, in which they are asked to rate the effectiveness of the Board of Directors on a step-by-step basis and to provide comments. The Board of Directors deliberated on the results of the questionnaire, which are analyzed and discussed at the Board of Directors' meeting. The major items in the questionnaire are as follows.

- Composition of the Board of Directors
- Operation of the Board of Directors
- Roles and Responsibilities of the Board of Directors
- Performance of Directors and Corporate Auditors as Individuals
- Structure supporting the Board of Directors
- Relationship with Stakeholders

Summary of FY2021 Evaluation Results

As a whole, the Board of Directors is effective and functioning properly. Since this is the first year of the new medium-term management plan, the Board of Directors oversaw efforts to put each plan into action and discussed the Group's overall strategy for achieving its goals, including responses to environmental changes such as the global increase of raw materials prices. In addition, the Board of Directors acted appropriately on issues to be handled by the Board of Directors, including the establishment of the Sustainability Basic Policy.

Efforts to Improve Effectiveness

The Board of Directors confirmed that the promotion of constructive discussion regarding the direction of The Takasago Group, including its corporate strategy, and the exercise of effective supervisory functions will continue to be an issue for the Board of Directors and that the continued enhancement of its functionality is necessary in the future. Based on the results of this evaluation, the Board of Directors will continue to sufficiently discuss and resolve issues to enhance its effectiveness and improve corporate value.

Risk Management

Approach to Risk Management

The Takasago Group values the environment, society and the sustainability of its business. To fulfill our responsibilities to every stakeholder, we regularly monitor and identify risks that could potentially affect the stability of our business while striving to maximize stakeholder value. Our Risk Management Committee, consisting of general managers, identifies potential risks that may hinder business continuity and formulates and reviews preventive measures for those risks. The identified risks are reported at Board of Directors Meetings for further review. We will continually develop and implement measures to mitigate each of the risks listed below in the best possible way.

Risk Management Structure



Promoting Risk Assessment and Management

We identify and evaluate the risks that could affect our financial position and operations after the Risk Management Committee weighs their impact. Since our products are used in many final products as raw materials and our production stopping would impact the supply of many final products, we consider the issues that may affect the continuity of production to be major risks. Therefore, we consider countermeasures for each identified risk and review them periodically. For example, we have been managing our inventories for several months to maintain a safe zone where supply will not be stopped, using production management items such as inventory volume and delivery lead-time as indicators.

Identified Risks

Climate Change

The Takasago Group's financial performance could be significantly impacted by climate change caused by greenhouse gas emissions, such as unexpected fluctuations in the weather, extreme weather events or irregular, unseasonable weather. For example, as the group sources and uses a variety of natural raw materials, shortages and price increases of these natural raw materials caused by climate change could restrict our operations. Also, unseasonable weather in summer could affect the sales of our flavor products in the beverage market, which is one of our main categories.

Exchange Rate

The Takasago Group develops, manufactures, and supplies products on a global scale, taking advantage of its 11 overseas consolidated subsidiaries. Due to fluctuations of exchange rates, the non-consolidated financial statements, when converted to Japanese yen, could potentially affect the financial condition of the consolidated financial statements. In foreign currency transactions, significant fluctuations of the exchange rate could impact the group's business results and financial condition.

Globalization

The Takasago Group conducts business globally. The disruption of politics, the economy, society or many other factors caused by emergent situations such as terrorism, war, pandemic, etc., could significantly affect the group's business performance and financial condition.

Procurement/Sales

The Takasago Group sources raw materials and supplies its products around the world. Natural disasters, changes in consumer preferences, changes in international and local regulations and other significant changes are factors that influence our procurement and sales activities. These factors can significantly affect our business performance and financial condition.

Accidents/Disaster

Natural disasters or accidents that occur in areas where our production sites are located could damage production facilities and disrupt procurement, distribution and sales. Consequently, accidents and disasters can negatively affect Takasago's business performance and financial condition.

New Products Research and Development

The Takasago Group continues to research and develop new products well ahead of the potential needs of the market. However, the delay of development or unforeseen changes in consumer's preferences could negatively affect the results of investments in research and development.

Information Security

The Takasago Group handles confidential information related to research and development, production, marketing and sales, as well as the personal information of many customers. The Takasago Group's business performance and financial condition could be affected by a leak of confidential or personal information held by the group caused by an attack on its servers, the illegal access of its systems, a computer virus, or other factors that are out of our control.

Economic Conditions

A future recession or economic downturn of our main markets, both in and outside Japan, could affect our sales performance. They could also lead to a change in consumer demand, causing consumers to hold off on purchases of household products, foods and other products in a stagnant economic situation. A decline in consumer demand in the Takasago Group's main markets could impact our business performance and financial condition.

Compliance

To conduct our business globally, the group complies with laws, regulations and relevant standards on product quality and safety, the environment, chemical substances, accounting, tax, labor and transactions in each country and region. When new laws, regulations, or relevant standards are put into effect, it is possible that they significantly impact our business performance, hindering the group's business activities and forcing additional investment to address the situation.

Human Resources

The Takasago Group is expanding its business all over the world. There is the risk that the group could fail to sufficiently secure and develop human resources, which could affect our business performance and financial condition.

Product Quality

The Takasago Group is expanding its business around the world. As we manufacture and sell a variety of products, there is the risk of financial loss due to customer complaints, recalls or the loss of the trust of our stakeholders due to the willful contamination of products, products being damaged during transportation, and the internal rejection of quality products due to human error.

Crisis Management

Takasago has established its crisis management system, including a business continuity plan (BCP) which enables the group to take necessary precautions to address possible disasters and emergency situations.

All of the procedures are to help effectively minimize the impact of a crisis when it occurs and immediately restore normal operations. The Crisis Management Board has been established within the Corporate Headquarters in Tokyo. In the event of a crisis, no matter where it arises, the Crisis Management Board organizes meetings to manage the situation and provide instructions.

Information Security

Amid frequently occurring cyber-attacks, our group is strengthening its IT security across the globe. In terms of physical measures, we have introduced tools and device authentication with the goal of preventing the intrusions of attackers. On the non-physical side, we are continually increasing employee awareness through training and notifications. 3,884 employees (97% of all employees) received IT e-training in 2021.

Additionally, the following necessary digital tools and systems for connecting to the company's systems are in place for our employees working from home:

- Secure connection through a cloud system when accessing the company systems from home via the Internet.
- Security patches and automatic updates to an anti-virus system that protects employees working from home.
- Updated detailed rules for the use of applications and digital tools that consider the work-from-home environment.

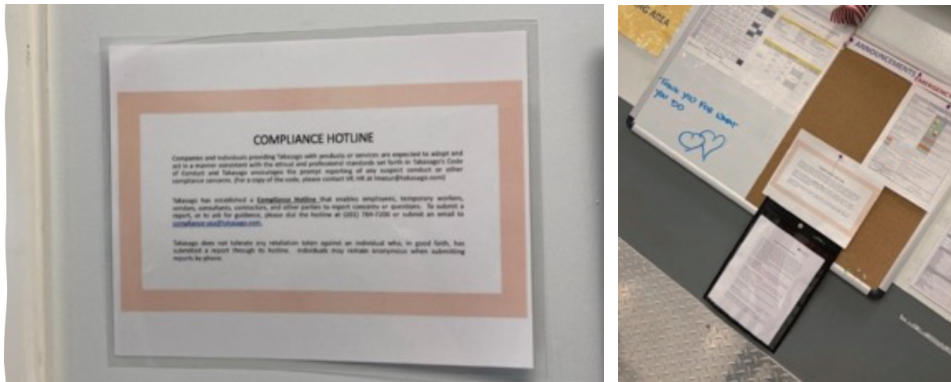
Compliance

Compliance Structure

The Takasago Group believes that compliance is one of its top priority management issues and strives to continuously improve its compliance system while ensuring fair and proper business activities and effective corporate governance.

Compliance Hotline

The Takasago Group has a compliance hotline that enables all employees and other stakeholders such as suppliers and customers to report any compliance issues through the hotline and all of the information submitted to the hotline will be treated in the strictest confidence. Posters advertising the hotline have been displayed at offices and factories to ensure that our stakeholders know how to report any issues they discover. In 2021, the number of consultations was 4 cases in entire the Group.



Approach to Anti-Bribery

The Takasago Group understands that corporate bribery is an impediment to fair competition and a serious threat to corporate credibility. Based on this, we have established The Takasago Group Anti-Bribery Policy to ensure fair and ethical business activities by preventing bribery involving the employees or officers of The

Takasago Group companies, ensuring compliance with the bribery laws and regulations of the countries and regions where we do business prohibiting bribery without exception.

The Takasago Group Anti-Bribery Policy stipulates the implementation of education and training and the establishment of a consultation and reporting system. In 2021, 351 employees participated in the training, which is 96% of the number of employees applies to the training.

Approach to Eliminating Organized Crime

Our position against organized crime is clearly stated in our Charter of Corporate Behavior and Code of Conduct as well as The Takasago Group Supplier Code of Conduct. We work to eliminate organized crime by encouraging the entire group and also our supply chain. Furthermore, in response to the Tokyo Metropolitan Government's policy of eliminating organized crime groups, we have included a clause regarding the elimination of organized crime into our basic transaction contracts.

Ethical Audits

To operate our business sustainably, we need to understand our own business practices, enhance our business ethics and ensure that we comply with the principles of social responsibility. Our group utilizes SMETA* to conduct ethical audits by third-party organizations at our own manufacture sites. Through SMETA, we properly confirm compliance of our sites and strive to improve in accordance with audit results and findings.

In FY2021, Takasago Group conducted SMETA at 7 main manufacture sites. We conduct a plan to receive SMETA regularly across the globe and have conducted at main our manufacture sites (100%) over the five-year period from FY 2017 to FY 2021. The SMETA checks the following items according to the ETI Base Code established by the International Labour Organization.

[Major audit issues in SMETA]

- Appropriate working and employment conditions
- No discrimination and harassment
- Freedom of association and the right to collective bargaining are respected
- Safe and hygienic working environment
- Environmental standards meet local and national laws and requirements
- Compliance (bribery, corruption, and any improper business practices) meet local and national laws and requirements

and In FY2021, Takasago Group conducted SMETA at 7 manufacture sites. We have a plan to receive SMETA regularly across the globe, and have conducted at all our manufacture sites (100%) over the five-year period from FY 2017 to FY 2021. All issues found in these audits have been corrected and addressed. We will continue to implement the SMETA to build an ethical corporate culture.

*SMETA(Sedex Members Ethical Trade Audit) is Sedex's social auditing methodology, and the most widely used social audit in the world. SMETA is to assess a site based on 4 pillars: labour, health and safety, environment, and business ethics.

Tax Compliance Initiatives

The Takasago Group recognizes that the payment of taxes is one of the most basic and important social responsibilities that companies must fulfill, and we believe that proper tax payment plays an important role in the development of the countries and regions where we do business.

- We do not engage in tax planning or use tax havens to avoid taxes, and we comply with the laws and regulations of each country and region and the guidelines set forth by the Organization for Economic Cooperation and Development (OECD).

- We have established a scheme to enhance tax compliance and reduce tax risks by securing and training appropriate human resources while strengthening cooperation with external experts and other departments. In addition, we comply with laws and regulations and strengthen risk management by sharing the information about legal judgements and lawsuits that the tax authorities of various countries and regions provide.

- We build and maintain good relationships with tax authorities in each country and region and respond to their requests in good faith. In addition, we strive to ensure transparency and trust in the tax authorities of each country and region by appropriately disclosing the information required by applicable laws and regulations.

External Partnerships and Initiatives

Takasago engages with several organizations, supports initiatives and interacts with sustainability-related organizations including those listed below.

- American Chemical Society
- CDP
- EcoVadis
- European Flavour Association (Executive Board)
- Flavor and Extract Manufacturers Association (Board of Governors)
- International Fragrance Association (Board of Directors)
- International Organization of the Flavor Industry (Board of Directors)
- Japan Business Federation
- Japan Chemical Industry Association
- Japan Climate Initiative
- Japan Flavor & Fragrance Materials Association
- Japan Food Additives Association
- Japan Sustainable Palm Oil Network (JaSPON)
- Mint Industry Research Council
- Monell Chemical Senses Center
- Natural Renewable Stewardship Circle
- Rainforest Alliance
- Research Institute for Fragrance Materials (Board of Directors)
- Roundtable on Sustainable Palm Oil
- Science Based Targets Initiative (SBTi)
- Sedex
- Syndicat National des Fabricants de Produits Aromatiques
- The Global Alliance for Sustainable Supply Chain
- The Sustainable Vanilla Initiative
- UN Global Compact