

Sanyo Chemical Group Integrated Report

2022

For the year ended March 31, 2022



Sanyo Chemical Group Corporate Identity

/ Sanyo Chemical Group company mission

*Establish a better society
through our corporate activities*

/ Vision 2030

Vision

Grow into a global, unique, and highly profitable company where every employee feels pride and satisfaction in his/ her work

Values

- Inspire WakuWaku feeling from all the stakeholders
- Co-create environmental, social and economic values with the stakeholders
- Facilitate every employee's value creation

2030 Targets

Operating profit

50 billion yen

ROIC

10%

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Disclaimer

This document contains forward-looking statements regarding the plans, strategies, and performance of the Sanyo Chemical Group. These forward-looking statements are based on information available as of August 3, 2022. However, actual results may differ significantly due to economic conditions surrounding the Sanyo Chemical Group's business domains, competitive conditions, changes in product development status, related laws and regulations, exchange rate fluctuations, and other factors. Please note that factors that affect these statements are not limited to the factors above.

Conceptual Diagram of “WakuWaku Management”

The Sanyo Chemical Group aims to achieve an environment-friendly circular-oriented society, a society where people can live healthy and safely, a society where everyone can shine with their personality. To this end, we pursue the 2030 vision as an “Interface Innovator” that takes on challenges beyond the boundaries of chemistry with its chemical capabilities, taking advantage of its strength in advanced interface control technology.

Concept of “WakuWaku Management”

WakuWaku Management intends to inspire the “WakuWaku” feeling of all stakeholders by spotlighting every employee so that we can grow into a profit-oriented strong One Team. WakuWaku Management will activate the interface with stakeholders more than ever and build a better society towards a “WakuWaku Future”.

2030

Vision

Grow into a global, unique, and highly profitable company where every employee feels pride and satisfaction in his/ her work

Society we want to achieve

- An environment-friendly circular-oriented society
- A society where people can live healthy and safely
- A society where everyone can shine with their personality

Conceptual diagram of “WakuWaku Management”

WakuWaku Management

- DEI
- Job Satisfaction
- Free Atmosphere
- Bright, Pleasant and Positive



- Passion
- Comfortable Workplace
- Pride and DNA
- Flexible Work Styles

Interface Innovator

- Interface Control Technology
- Creation of New Business Model
- Link People to People
- Creation of Innovation
- Providing Solutions
- Beyond the Boundaries of Chemistry

Outcome

- “WakuWaku” of Everyone
- “WakuWaku Company”
- “WakuWaku” Influence
- Support the Environment
- Support Diversity
- Support People and Their Lives

“WakuWaku Future”

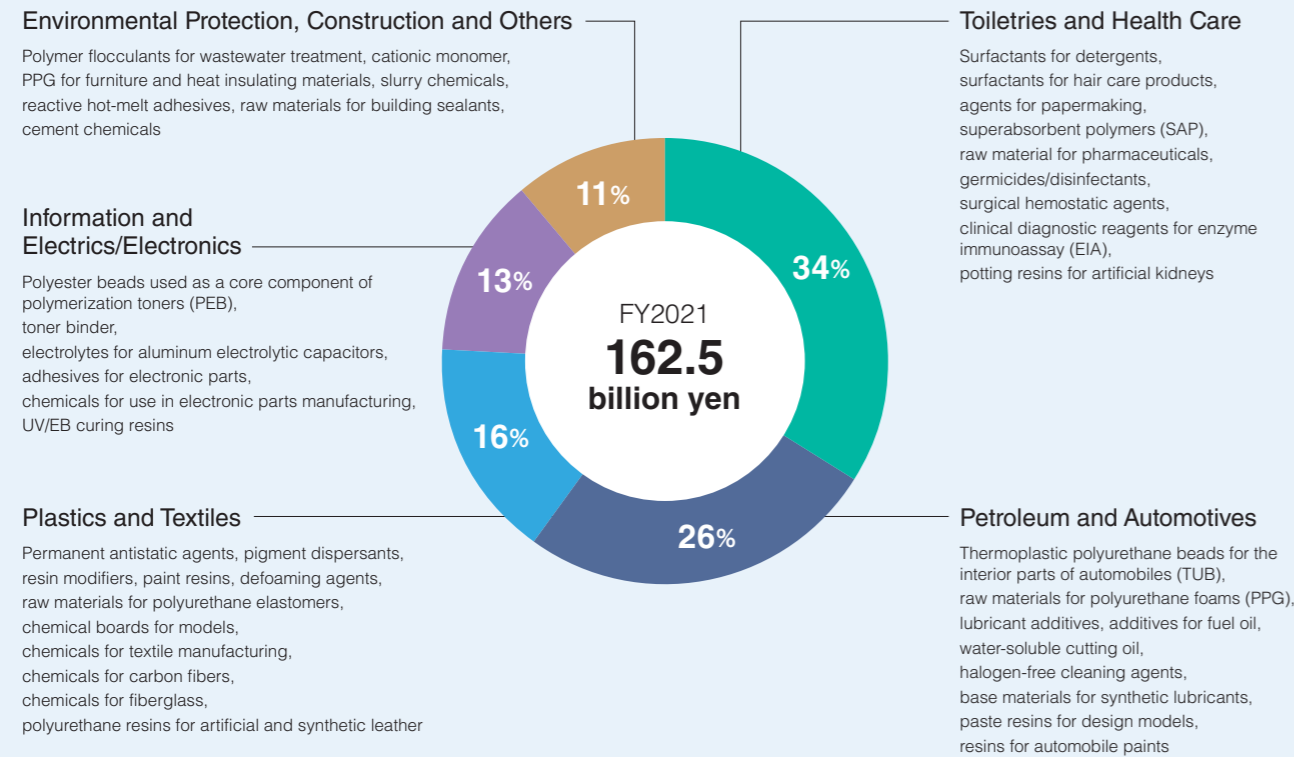
Beautiful Planet

Society Where Everyone Shines

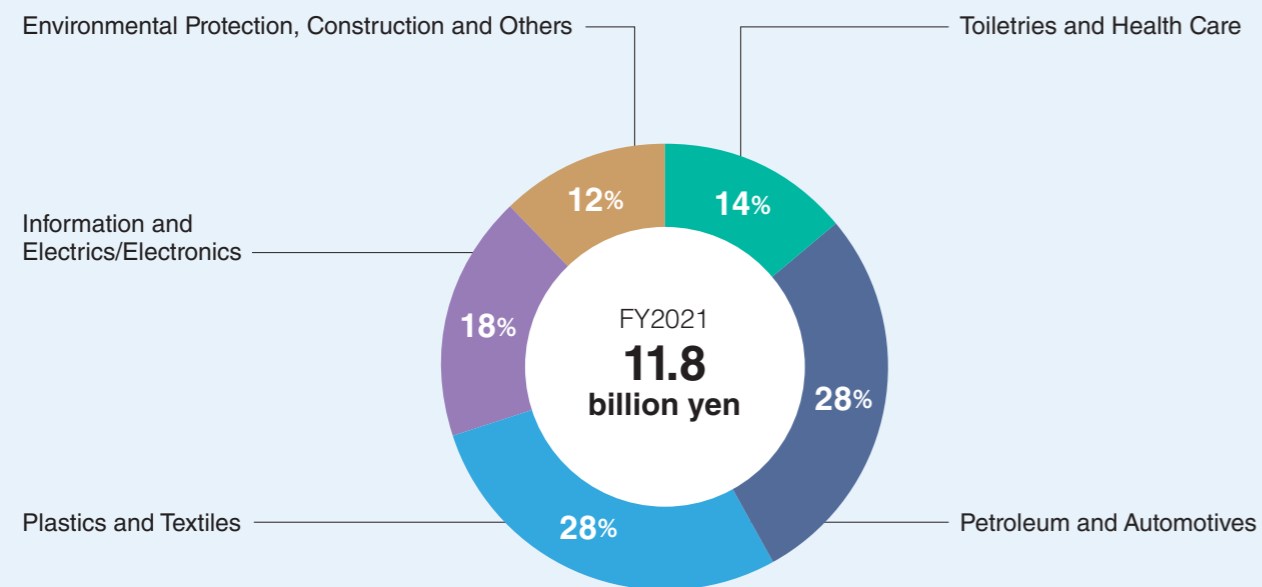
Interface Innovator:
Facilitating changes at all interfaces by not only providing technologies and products, including interface control technology and related products, but also connecting people and providing solutions beyond the boundaries of chemistry with its chemical capabilities

At a Glance

Sales composition ratio



Operating profit composition ratio

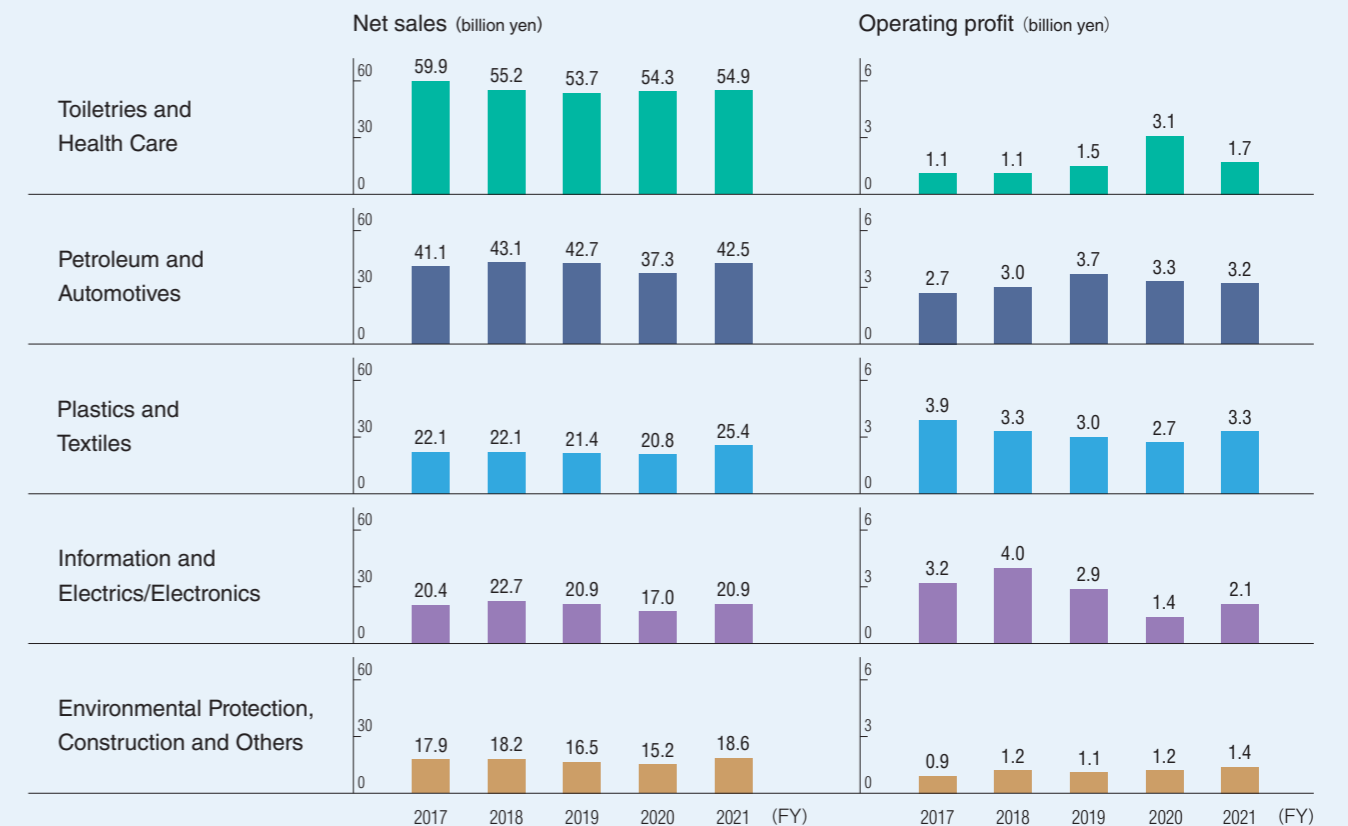


Major business bases of the Sanyo Chemical Group

Domestic business bases



Overseas business bases / Subsidiaries & Affiliates



Sanyo Chemical Group History

The Sanyo Chemical Group began operations in Kyoto in 1907 as Tada Soap-Oleo Works, a general partnership company, which manufactured and sold high-quality soap. In 1949, during the recession in Japan after World War II, the company re-started as a joint venture (capital: 4 million yen, number of employees: 123) between Toyo Cotton Co., Ltd. and Toyo Rayon Co., Ltd. In 1963, the company name was changed to Sanyo Chemical Industries.



Tada Soap-Oleo Works at the time of its founding: Located around the current Kyoto Factory

- 1907** Tada Soap-Oleo Works established.
- 1949** Sanyo Oil & Fat Industrial Co., Ltd. established.
Investment: 50% each by Toyo Cotton Co., Ltd. and Toyo Rayon Co., Ltd.
Capital: 4 million yen; Number of employees: 123
- 1959** Research institute launched.
- 1960** Kawasaki Factory began operations.
- 1963** Corporate name changed to Sanyo Chemical Industries.
- 1966** SAN NOPCO LIMITED established.
San-Abbott Ltd., now San-Apro Ltd., established.
- 1968** Stock listed on the Second Section of Osaka Stock Exchange.
Nagoya Factory began operations.

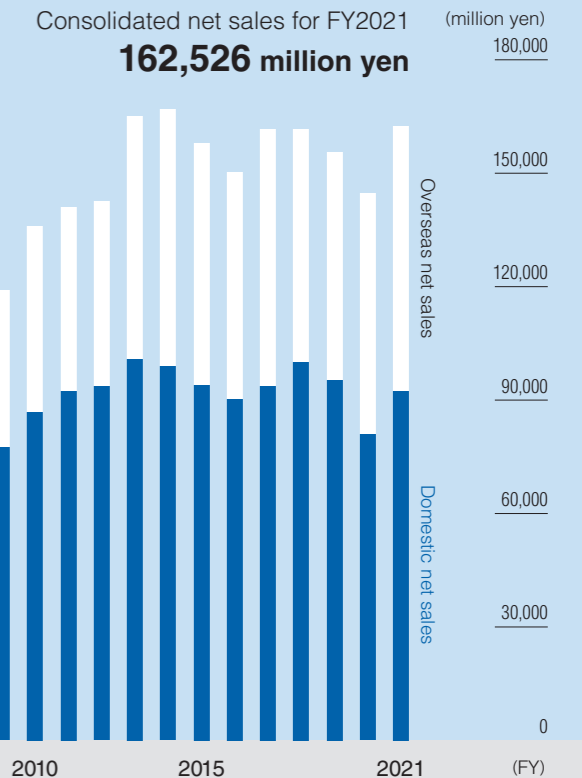
- 1976** Kashima Factory began operations.
- 1977** San-Petrochemicals Co., Ltd. established.
- 1978** Stock listed on the First Section of Tokyo and Osaka Stock Exchanges.
- 1982** San Chemical Co., Ltd. established.
- 1989** SANAM Corporation, now Sanyo Chemical America Incorporated, established.

Development of New Products

- 1960** SANNIX raw material for polyurethane foams, and PEG polyethylene glycol developed.
- 1963** ACLUBE lubricant additive developed.
- 1969** SANFLOC polymer flocculant developed.
- 1972** HIMER toner resin developed.
- 1977** SANWET superabsorbent polymer developed.
- 1978** EIA diagnostic reagent developed.
- 1982** CARRYOL cold flow improver for fuel oil developed.
- 1986** SANELEK electrolyte for aluminum electrolytic capacitors, and SANMODUR chemical board developed.
- 1992** UCOAT polyurethane emulsion developed.

- 1997** Sanyo Kasei (Thailand) Ltd. established.
- 1999** Kinuura Satellite Factory, now Kinuura Factory, began operations.
- 2001** San-Dia Polymers, Ltd., now SDP Global Co., Ltd., established.
- 2003** Added Sunrise Chemical LLC as an affiliate.
San-Dia Polymers (Nantong) Co., Ltd. established.
Sanyo Kasei (Nantong) Co., Ltd. established.
Code of Corporate Ethics enacted.
- 2005** Sanyo Chemical Texas, Inc., now Sanyo Chemical Texas Industries, LLC, established.
- 2007** SANYO CHEMICAL (SHANGHAI) TRADING CO., LTD. established.
- 2008** Sanyo Kasei Korea, Ltd. established.
Katsura Research Laboratory began operations.

- 2010** SANYO KASEI (TAIWAN), Ltd. established.
- 2015** SDP GLOBAL (MALAYSIA) SDN. BHD. established.
- 2017** GC Polyols Co., Ltd. established.
- 2018** Sanyo Chemical Manufacturing Korea, Ltd. established.
- 2019** Sanyo Chemical Foundation for Social Contribution established.
- 2020** Added APB Corporation as an affiliate.



* Disclosure of consolidated financial results started in FY1994
Full-fledged consolidated accounting started in FY1999

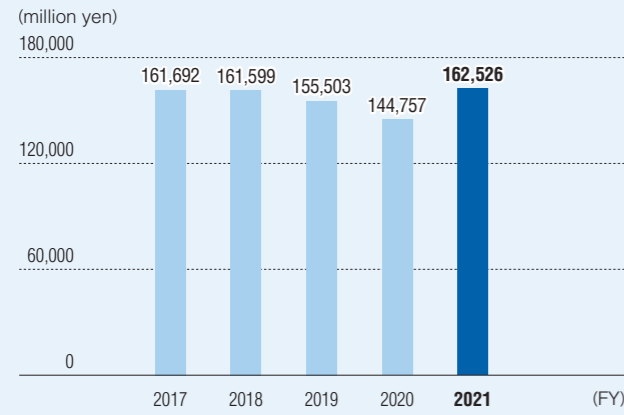
- 1994** PELESTAT permanent antistatic agent developed.
- 1999** POWERELEK electrolyte for electric double-layer capacitors developed.
- 2000** THERPUS polyurethane beads for automobile interior raw materials, and NAROACTY nonionic surfactant derived from higher alcohol developed.
- 2002** ULTIFLOW, EXCELFLOW, and PRIMEPOL raw materials for polyurethane foams developed.
- 2003** APEXNARROW polyester beads (intermediates for polymerization toners) developed.
- 2004** LEVEFLOW SS agent for slurry excavation developed.
- 2005** EIA diagnostic reagent for small cell lung cancer developed.
- 2006** LAUROMACROGOL 100 medical drug exclusively used in manufacturing developed.
- 2007** HISTAT SK cutting fluid for silicon ingots developed.
CHEMICLEAN PR cleaning agent for use in hard disk manufacturing developed.
- 2008** SphereLight proBNP clinical reagent for diagnosis of heart failure developed.
- 2009** SHARPFLOW raw material for polyurethane foams developed.

- 2010** PELECTRON permanent antistatic agent developed.
SANWET SG superabsorbent polymer developed.
- 2011** Approved as a medical device business operator for the first time.
- 2012** New manufacturing process for raw materials for polyurethane foams developed.
- 2014** HYDROFIT surgical hemostatic agent launched as our first-ever medical device in Japan. (The overseas trade name is AQUABRID®.)
- 2015** Magrapid magnetic particle for EIA diagnostic reagents developed.
- 2016** CALPROTECTIN MOCHIDA received Japan's first approval as an in-vitro diagnostic agent for Ulcerative Colitis.
- 2017** EMULMIN CS liquid laundry detergent base developed.
- 2019** ALPHAPUR HSG nonionic surfactant for skincare developed.
- 2020** PIUSERIA AMC amino acid-type amphoteric surfactant developed.

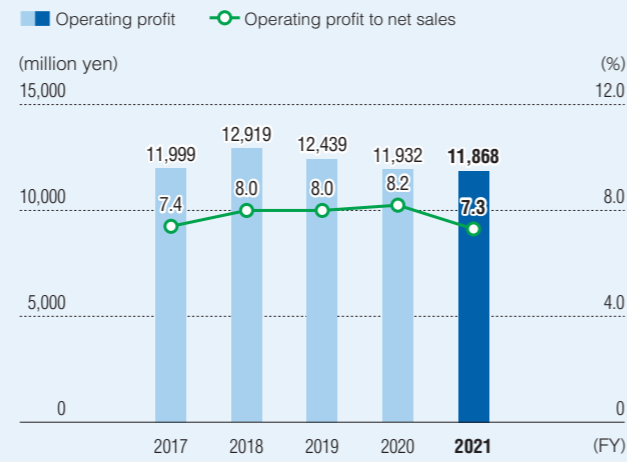
Financial and Non-financial Highlights

Financial highlights

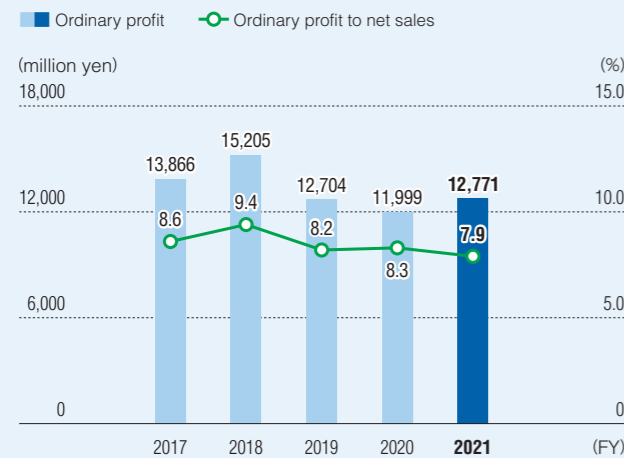
Net sales



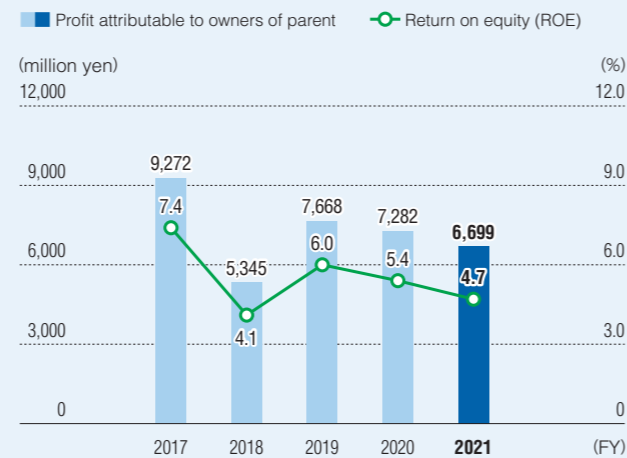
Operating profit / Operating profit to net sales



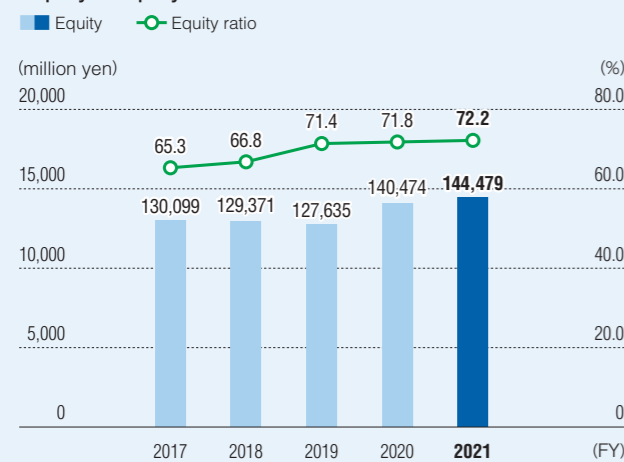
Ordinary profit / Ordinary profit to net sales



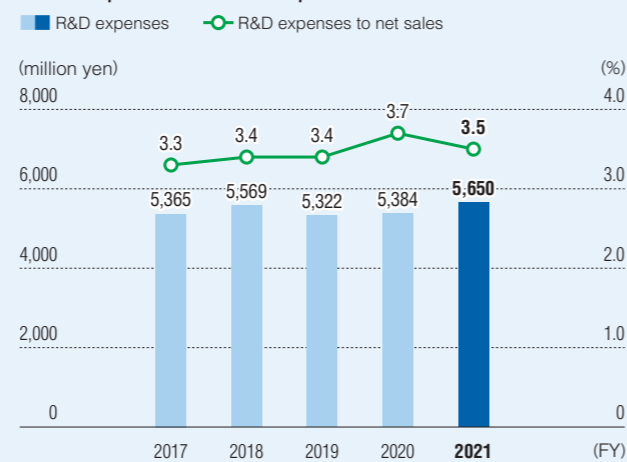
Profit attributable to owners of parent / ROE



Equity / Equity ratio

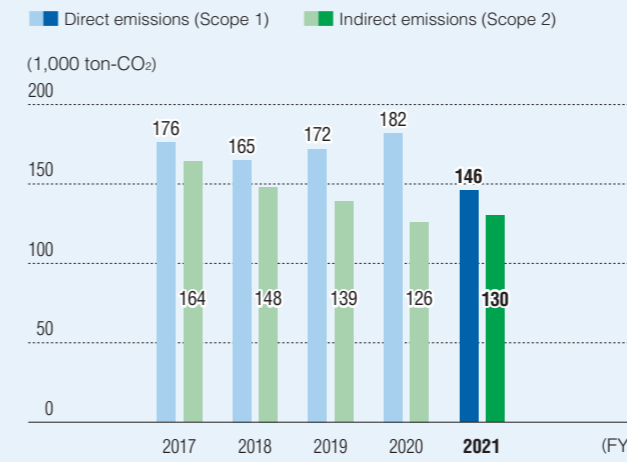


R&D expenses / R&D expenses to net sales



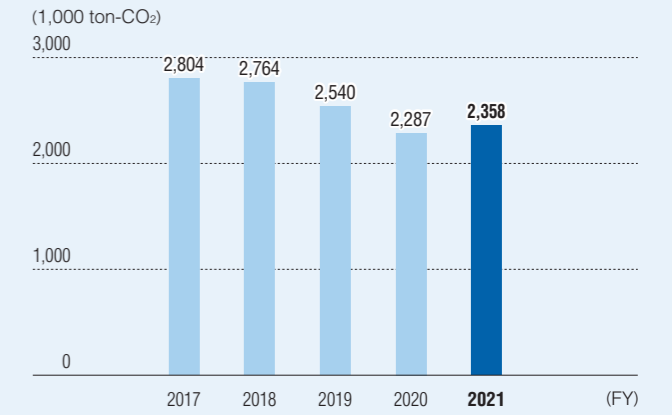
Non-financial highlights

CO₂ emissions (Direct emissions (Scope 1) + Indirect emissions (Scope 2))^{*1}



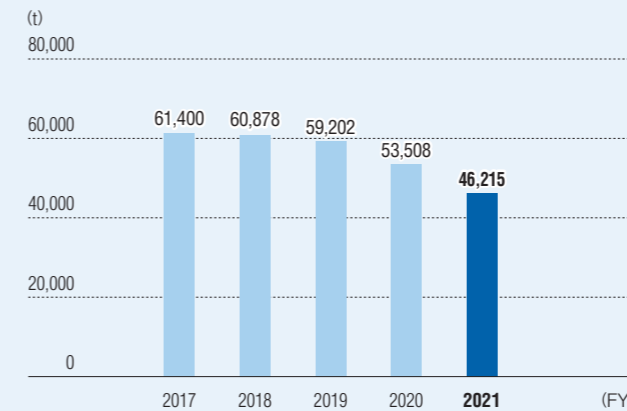
^{*1} Scope of data collection: Sanyo Chemical Industries, Ltd., domestic subsidiaries and affiliates, and overseas subsidiaries and affiliates with a manufacturing base

CO₂ emissions (Scope 3)^{*2}

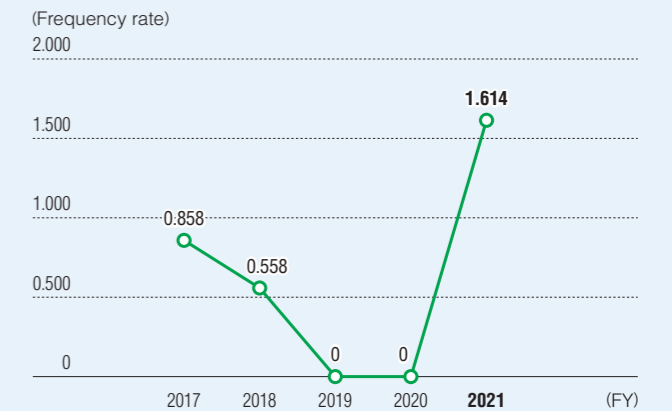


^{*2} Scope of data collection: Cat. 1-7: Sanyo Chemical Industries, Ltd., SDP Global Co., Ltd., and San Chemical Co., Ltd. Cat. 12: Sanyo Chemical Industries, Ltd., SDP Global Co., Ltd., San Chemical Co., Ltd., and some products sold by overseas subsidiaries and affiliates. Cat. 15: Sanyo Chemical Industries, Ltd.

Waste generated

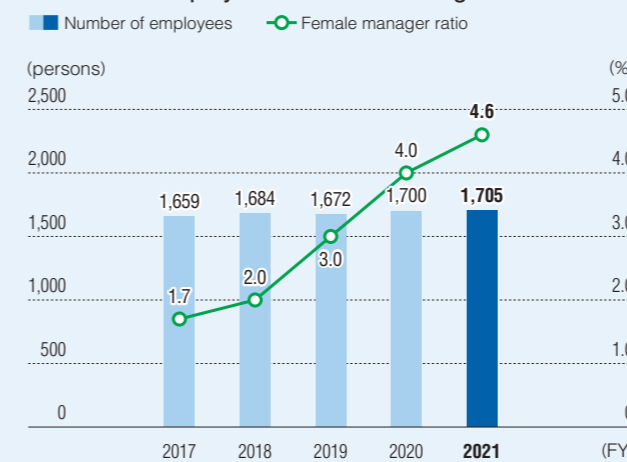


Occupational accident frequency rate^{*3}



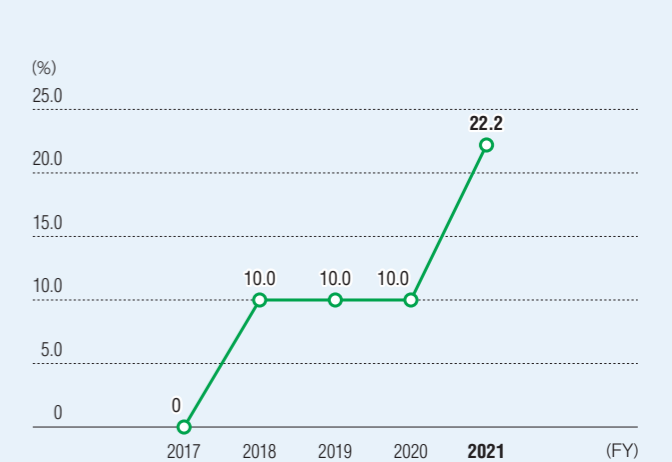
^{*3} Frequency rate = (Number of employees subject to accident with lost time ÷ (total working hours) × 1,000,000. This value indicates the generation frequency of accident victims (Group company employees) per 1 million hours.

Number of employees / Female manager ratio^{*4}



^{*4} Scope of data collection: Sanyo Chemical Industries, Ltd. (including loaned employees from Sanyo Chemical Industries, Ltd.)

Female director ratio



Message from the President



Akinori Higuchi

Representative Director,
President and CEO

Grow into a global, unique, and highly profitable company where every employee feels pride and satisfaction in his/ her work

Fiscal year 2021 (ended March 31, 2022) was my first year as president, and in March 2022, I announced the new management policy, “WakuWaku Explosion 2030,” which was formulated over the course of about one year. Under this management policy, we aim to promote businesses that support the environment, people and their lives, and diversity in order to resolve many issues faced by the global community and achieve the dynamic growth of the Sanyo Chemical Group.

Meanwhile, prospects for the global economy are becoming increasingly uncertain due to Russia’s invasion of Ukraine and the resulting economic sanctions, in addition to the COVID-19 pandemic, which has entered its third year. The Group, which is positioned downstream in the chemical supply chain, has never experienced such sudden fluctuations in naphtha prices in the past. I have to say that the current situation is extremely difficult for the Group.

FY2021 business performance and future outlook

Net sales for FY2021 increased by 12.3% year on year, to 162,526 million yen. Operating profit was 11,868 million yen (a decrease of 0.5% year on year), and ordinary profit was 12,771 million yen (an increase of 6.4% year on year) mainly due to an increase in foreign exchange gains. Profit attributable to owners of parent was 6,699 million yen (a decrease of 8.0% year on year) mainly due to a loss on valuation of investment securities.

While we hope that the impact of COVID-19 on social and economic activities will gradually diminish in FY2022, trends in raw material costs and foreign exchange caused by the emergence of geopolitical risk among other factors remain extremely unpredictable. Under these circumstances, we expect an increase in sales and profits in FY 2022 by achieving 206,000 million yen in net sales, 12,500 million in operating profit, 13,000 million yen in ordinary profit, and 8,500 million yen in profit attributable to owners of parent through price revisions due to soaring raw material costs and expanded sales for high-value-added products.

Fatal accident at the Nagoya Factory in January 2022

On January 15, 2022, a fatal accident occurred on the premises of the Nagoya Factory. First of all, as a manager, I take this incident very seriously because fatal accidents should never occur. I went to the Nagoya Factory and prayed for the repose of the soul of the victim at the scene of the accident. Investigations by the relevant authorities are still ongoing. In addition to fully cooperating with them, we have established our own accident response committee to analyze the cause. The Group has had two fatal accidents in the past, and we have taken specific measures to prevent a recurrence. However, I believe that there is a fundamental cause behind the recurrence of such accidents. To prevent fatal accidents from occurring again in the future, I will take the lead as a manager in taking countermeasures while delving into the essential details, including any indirect factors that led to this accident.

WakuWaku Explosion 2030

To be a company completely committed to a “WakuWaku Future”



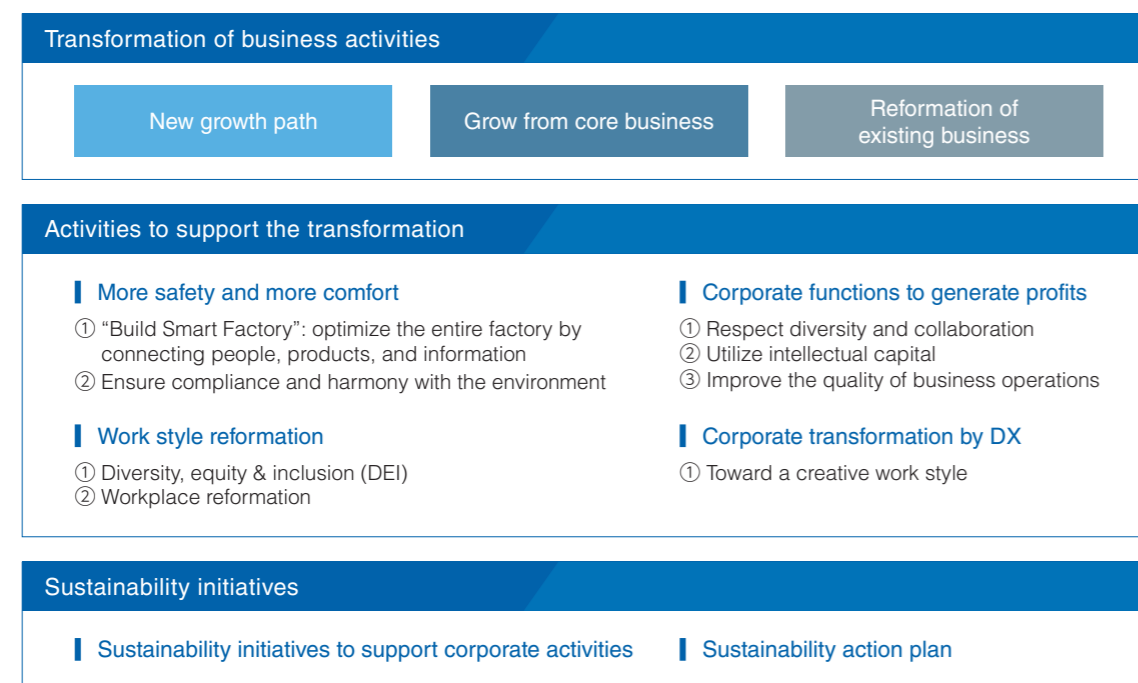
Management policy for Vision 2030 “WakuWaku Explosion 2030”

In the management policy “WakuWaku Explosion 2030,” we have defined a vision toward 2030 for our further growth and have indicated the direction of transformation toward this vision. At the same time, we have renewed our slogan to “WakuWaku” and have adopted the term “Explosion” for the title of the new management policy with a strong desire for dynamic growth.

We have also designed the 2024 vision, one of the milestones toward the 2030 vision. Based on this, we have reorganized our business activities into the three categories of “New growth path,” “Grow from core business,” and “Reformation of existing business,” and have embarked on initiatives to re-build and reinforce the business portfolio. As I mentioned earlier, since it is extremely difficult to forecast prospects for the global economy in the short term, we have not set detailed numerical targets but have only used operating profit and ROIC as management indicators. However, it is expected that medium- to long-term global trends will continue to focus on responses to climate change and humanitarian issues. Accordingly, in this management policy, emphasis is placed on “environment” and “people and their lives” as fields to which we contribute through our business, and on “diversity” as the foundation that supports our business.

Each business unit has started operations aimed at achieving the 2024 vision. For details, please refer to the report on each business (pages 23-34). Although the report is still incomplete, I believe that the introduction of the seeds of a wide range of new products and part of our pipeline will help you understand our vision of being an innovator beyond the boundaries of chemistry with our chemical capabilities.

Overview of the management policy “WakuWaku Explosion 2030”



“WakuWaku Future”

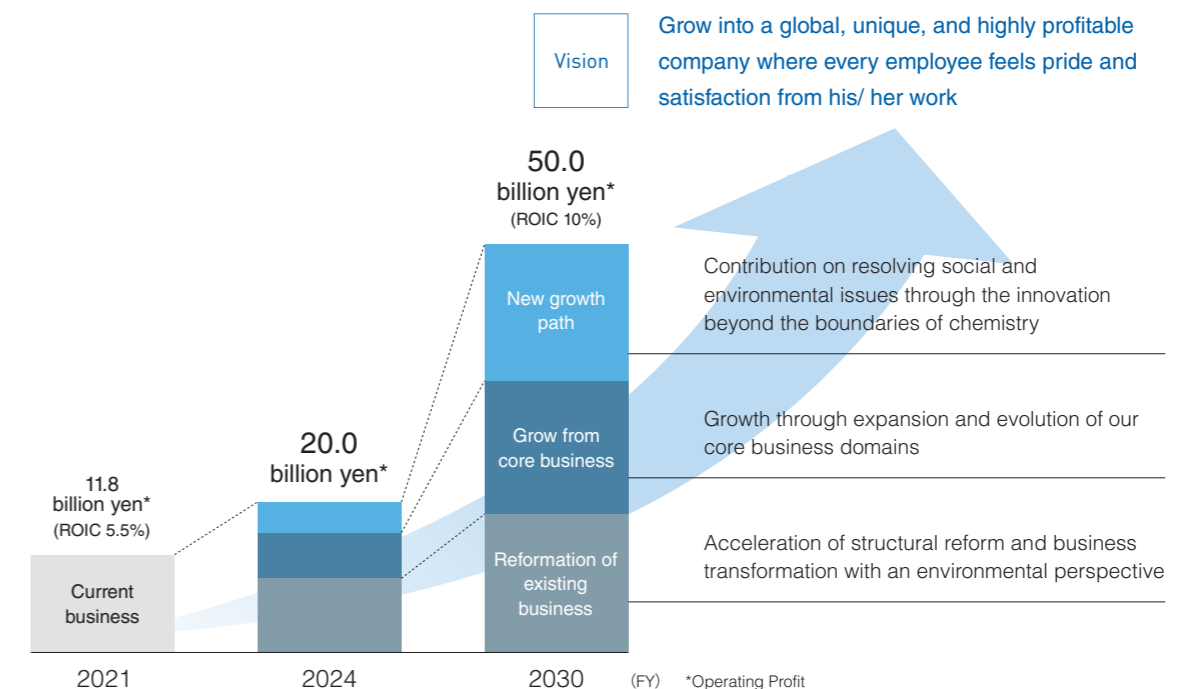
In formulating the new management policy, we have subtitled it as “To be a company completely committed to a WakuWaku Future.” I will explain to our stakeholders why we have adopted the term “WakuWaku” and what it means.

When we work hard toward the dream that we want to achieve in the future, we will feel excited about even the toughest jobs. This is “WakuWaku” in my view. In order to overcome a series of difficulties, it is extremely important to raise the level of motivation. I believe that the source of motivation is “WakuWaku.”

A good company can only be realized by clarifying its direction and goals and sharing these goals with its employees and other stakeholders. However, no matter how earnestly I set out the vision of “growing into a global, unique, and highly profitable company,” it will still be necessary to take time and go through the various stages before each and every employee is convinced of it. I hope that this vision will be translated into a true vision that becomes the source of “WakuWaku” for all employees, including those in the accounting, general affairs, HR, and other administrative departments. I believe that whether or not this is realized will determine the success or failure of our sustainable growth.

Accordingly, I am currently having one-on-one dialogues with all general managers over the course of about three months. This is based on the idea that a “department” consisting of people who see each other and share daily work in the same workplace is a team that can share the same vision, and that it is the general manager who leads the department. Each general manager should take the initiative to create goals that are appropriate for their work and share them with all team members. The keyword for aligning the vector of the entire company at that time is the idea that “Every department is a profit center.”

Vision (Transformation of business activities)



WakuWaku Explosion 2030

To be a company completely committed to a “WakuWaku Future”



“Every department is a profit center.”

One accounting task is to consider how management accounting should be structured. Accordingly, the team in charge of accounting may have the goal of changing the company by devising a system of management accounting that is suitable for our vision and exchanging views with the management. Also, at the factory that I visited the other day, I had the opportunity to talk with young employees, and they enthusiastically told me their thoughts on the kind of smart factory that they want to realize in the future. Although we do not know whether individual initiatives will work until they are implemented, the key to “WakuWaku Explosion 2030” is that all departments throughout the company get excited (“WakuWaku”) about the idea of changing the company from their own department (team) and take on any challenges that they encounter.

By sharing the vision of the department (team) beyond daily routine work, the work of each employee becomes creative. I believe that whether or not this is realized will be the turning point and determine whether we grow as a company or not. I also believe that only when all departmental teams become “One Team,” the Group will be able to make the leap to become a global, unique, and highly profitable company.

A global, unique, and highly profitable company

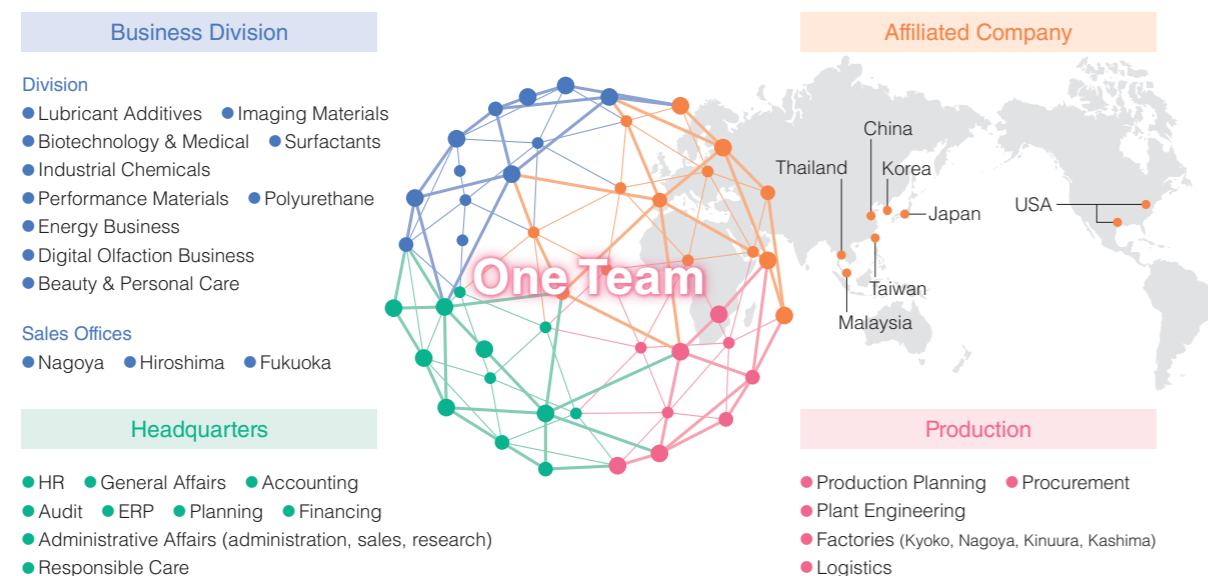
Global

Currently, the Group’s overseas sales ratio is 43%. Since the domestic market is shrinking due to the declining birthrate and aging population, it is expected that there will be more opportunities to develop business in the global market in the future, resulting in an increase in overseas sales. However, I do not define whether a company is a global company by the amount of overseas sales or the number of overseas bases.

What underlies “WakuWaku Management”* as proposed in the new management policy is the idea that peo-

Activities to support the transformation “Every department is a profit center”

- Every employee of the Sanyo Chemical Group plays a leading role.
- Promoting WakuWaku works by spotlighting everyone.



ple are always at the center of corporate activities. Accordingly, the most important thing in becoming a global company is to increase the number of employees who can conduct business overseas in the same way as they do in Japan while playing a major role. To remove the barriers between domestic and overseas business operations and make overseas business trips more familiar, I would like to stop using the term “overseas” for business trips to other countries and reconsider the necessity for approval for overseas business trips. I would also like to provide opportunities to employees who volunteer to conduct business overseas and go on overseas business trips. It will take time to cultivate global human resources by accumulating these steady efforts. However, I am convinced that there is no shortcut to human resources development and that the Group can grow into a truly global company only with the will of the management and the enthusiasm of employees for creative work.

Unique

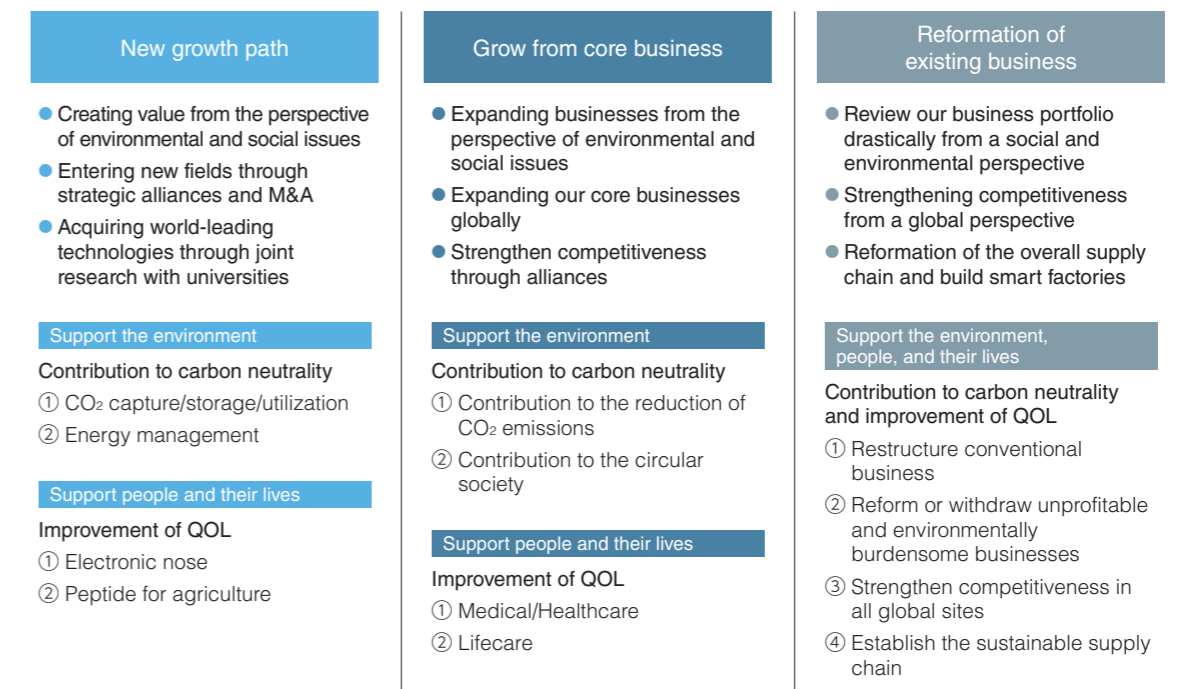
The source of the Group’s uniqueness is its technology and products. By taking advantage of these factors, we aim to become a highly profitable company.

When looking at the global chemical industry, I have to say that it is extremely difficult for Japanese companies that rely on imports for raw materials to develop mass production business models in the future due to their poor cost competitiveness. In order to compete with companies in Europe and the U.S. and emerging companies in India and China, it is imperative to provide a large number of unique, competitive, and high-value-added products.

One of the Group’s major pillars is interface control technology, and we have always focused on its research and development. We will not change this approach in the new management policy. In addition, we plan to put particular focus on marketing activities for creating more markets in order to enable the development of a wide variety of products that are expected to have high added value even if they are niche products.

* WakuWaku Management: Our unique management method that intends to inspire the “WakuWaku” feeling of all stakeholders. We spotlight every employee to bring out their individual excitement (“WakuWaku”) and make them a leading player who contributes to value creation so that we can grow into a strong One Team in which all organizations are profit-oriented. We develop activities to build a sustainable and better society towards a “WakuWaku Future.”

Direction aimed at by the transformation



WakuWaku Explosion 2030

To be a company completely committed to a “WakuWaku Future”



Becoming an innovator beyond the boundaries of chemistry with our chemical capabilities

I believe that the chemical capability is limitless. The product groups that we are currently working on include compounds that contribute to improving the yield and quality of agricultural products, devices that detect odors, and eel farming. Thus, we are developing unique products beyond the boundaries of chemistry. I hope that the spread of these products will eventually make up for the declining working population in Japan and help with food shortages caused by pandemics and international conflicts.

Beyond the boundaries of chemistry

Cucumber cultivation is carried out at the Katsura Research Laboratory. This research aims to increase the yield by 1.5 times, and its effectiveness has already been confirmed in a plastic greenhouse in the laboratory. A demonstration experiment is currently being conducted in Miyazaki Prefecture, with which we have an association. The full-cycle farming of eels is also conducted at the Katsura Research Laboratory. We are getting closer to success in the facility, and if successful, it will be a very rare example in the world.

The sensor developed by our company that visualizes odors has made it possible to identify what odor is even if the chemical substance causing the odor is unclear, which is the same function as the human olfactory sense. For the electronic nose, the Digital Olfaction Business Creation Dept. has been newly established as an independent department to cultivate its technology and expand sales channels through marketing efforts.

Thus, we work to resolve issues faced by a completely new market for us by developing new products. We are currently in the process of planting seeds for high-value-added products that will become growth drivers for the Group in the next era, taking advantage of the interface control technology that we have cultivated over many years and which is the source of our competitive advantage.

Evoking a “WakuWaku” feeling

Most of the members of the newly established “Digital Olfaction Business Creation Dept.” have been recruited through the internal multiple work system. Volunteers were recruited from throughout the entire Group, including subsidiaries and affiliates, so that the work could be done with high motivation. Approximately 15 people, mainly employees who have volunteered from various departments, have formed a team to achieve the vision of the Digital Olfactory Business Creation Dept.

Many other projects have been launched with the theme of resolving issues faced by traditional industries in Kyoto. A considerable number of employees who have volunteered for each project are engaged in the relevant project in parallel with their existing work. I will further expand this system, creating teams on a department basis, to promote reforms to make the work in the Group even more “WakuWaku,” while also using the system for developing global human resources.

Above all, I would like all of our employees to work with “WakuWaku.” Although they will have a variety of experiences, such as pleasant, tough, and even painful experiences, I believe that if they are engaged in creative work that makes them feel “WakuWaku,” this will enable every department to be a profit center. I hope that I can have a conversation in which our employees and I speak honestly about their work when I meet them in the company.

Investment and shareholder returns

Growth investment

In the announcement of financial results for FY2021, we reported that the amount of investment in plant and equipment for FY2022 will be 12,000 million yen. However, this does not include the investment in various new products and new businesses set out in the new management policy and is mainly for ensuring the safety of aging facilities and improving their efficiency.

As described in this report, although there are many seeds that will become growth drivers for the Group in the next era, our activities aimed at dynamic growth have only just begun. In addition, since we expect to create more projects in the future, we are unable to disclose the number and size of investment projects at this time. I would like to report from time to time when each project takes shape.

Dividend policy

We believe that enhancing the return of profits to shareholders is one of the important management issues. We aim to improve our dividend payout in the medium- to long-term, targeting a consolidated payout ratio of 30% or higher, while comprehensively considering the allocation of resources necessary for sustainable growth over the medium- to long-term, including investment in employees and safe facilities and reinforcing the corporate base for the future through improvement in the Group’s profitability.

The dividend payout ratio for FY2021 was 56%, and the annual dividend per share was 170 yen.

Here we present the first Integrated Report for the Group. Integrated Report 2022 has been compiled in collaboration with many departments based on cross-departmental activities of the department in charge for over a year, and has been reviewed and approved by the Board of Directors.

Since this is the first year of publication, we understand that there are many deficiencies. However, I hope that this report will help our stakeholders understand the direction that we are aiming for. I would be more than happy if we could share the vision of the Group with you and have you feel “WakuWaku” together with us.

September 2022

Representative Director,
President and CEO



Sanyo Chemical Group Material Issues

We have identified six material issues based on our company mission “Establish a better society through our corporate activities.” We address these issues while realizing “inspire WakuWaku feeling from all the stakeholders,” “co-create environmental, social and economic value with the stakeholders,” and “facilitate of every employee’s value creation.”

Material issues on business domain

Environment

Achieve carbon neutrality as Interface Innovator




Our approach

Contribute to carbon neutrality with the interface control technology

- **New batteries:** Develop functional agents
- **Power semiconductors:** Improve functionality on GaO-based semiconductors
- **CO₂ recovery:** Develop a new system by utilizing interfacial chemistry
- **Agriculture:** Reduce the environmental impact with peptide agriculture
- **Wind power:** Carbon fiber convergents for wind turbine blades
- **Automotive:** Improve gasoline consumption with lubricant additives
Increase the efficiency of energy use with aluminum electrolytic capacitors
- **Plastic recycle:** Develop agents for enhancing PP duration during recycling
- **Fossil base materials:** Replace to natural base raw materials proactively

Life

Improve QOL by performance through chemistry



Our approach

Create value in the medical field through new technologies

- **Heart disease therapy:** Develop safe hemostasis with abiotic-derived hemostat
- **Clinical diagnostic reagents:** Develop prompt diagnostic reagents to reduce the burden of patients
- **Intractable diseases:** Develop functional proteins for wound and knee joint healing
- **Regenerative medicine:** Improve production efficiency of mesenchymal stem cells


Create new value that is closely linked to people’s lives

- **Visualization of smells:** Develop innovative electronic nose
- **People friendly products:** Develop cosmetic ingredients using natural origin raw materials

Material issues on management domain

Society

Create innovations by supporting value creation of industry, culture and education



Our approach

Challenge beyond the boundaries of chemistry with our chemical capabilities

- Utilize “UQ Chem” services to link unused chemical knowhow to untapped needs
- Support various traditional craft industries of Kyoto with our chemical technologies
- Promote collaboration and alliances with different fields and investment on startups
- Promote DX and MI (Materials Informatics)
- Carry our on-site chemical classes at elementary and junior high schools
- Participate in the Kyoto Super SDGs Consortium with Kyoto University

Society

Develop human resources and improve work environment by recognizing diversity




Our approach

Diversity, equity & inclusion (DEI): Facilitate WakuWaku culture

- Promote women’s contribution
- Promote LGBTQ understanding
- Join the IKUBOS corporate alliance
- Promote health management
- Introduce an internal multiple work system
- Enhance communication between management and employees: Morning meetings (lectures to all employees), Camps (discussions with senior general managers), One on One (dialogue with general managers), Dojo (hand down to managers), and Salons (dialogue among mid-level and young employees)

Governance

Conduct the risk management thoroughly by strengthening the Guardian function




Our approach

- Strengthen quality governance by isolating quality assurance from production
- Establish a management system for reputation risks which may be critical to corporate value
- Strengthen the legal compliance system
- Strengthen the safe and healthy system by utilizing the safety education center

Governance

Implement challenge-oriented and transparent management



Our approach

- Promote “WakuWaku Management”: Every department shall be profit-oriented
- Diversify directors: Women directors (22→30%) and outside directors (>1/3).
- Disclose the skills matrix of directors
- Enhance disclosure of non-financial information
- Enhance dialogue with shareholders, employees, and other stakeholders
- Establish the Sustainable Management Committee

Feature

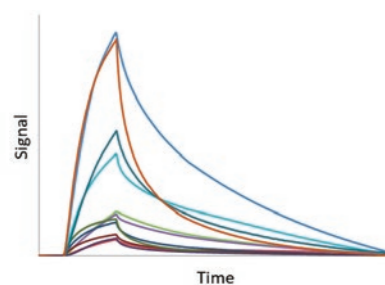
Odor sensing system
“Electronic nose”

The development of electronic nose started from the idea of “creating a device that mimics the human nose” three years ago. In April 2022, the Digital Olfaction Business Creation Dept. was established as a separate in-house organization. It aims to commercialize the business in FY2023 by creating new markets in such fields as food and agriculture, environment and industries, personal and life care, and support for achieving high added value to cope with manpower shortages, improve productivity, and contribute to new customer experience.



Expressing “odors” comprising mixtures of various volatile organic compounds in digital data

It is known that most odors which can be perceived by the human olfactory organ (nose) (e.g., smell of fruits and beverages, odors derived from physiological phenomena, such as body odor, odor of industrial products) consist of mixtures of many volatile organic compounds (VOCs). From a chemical viewpoint, the characteristics of odors can be explained by the composition ratio of VOC mixtures. However, to investigate compounds contained in a corresponding odor sample and its concentration requires fundamental chemical analysis techniques, including gas chromatography (GC). Thus, analyzing odors (on-site analysis in particular) has difficulties in terms of both technology and cost. In the olfactory sense of humans, each of about 400 types of olfactory receptors interacts with VOCs moderate-selectively and reversibly, which have specific chemical structures (including similar structures), and the brain receives information as electric signals. The brain can process the responses of respective olfactory receptors as patterns, achieving sophisticated identification of odors with a small olfactory organ. “Electronic nose” developed by Sanyo Chemical performs functionality similar to that of the human olfactory sense by using the proprietary chemicals composition



Data output from respective chips

A sensor probe comprises multiple detection chips, and the recorded data contains as much as the number of the chips.

for the function of olfactory receptors and AI for the function of the brain. We aim to contribute to various fields with such “digital olfaction.”

Successfully identify odors using our developing elemental technologies

We develop mainly three elemental technologies: (1) various types of “odor detection chips,” which correspond to olfactory receptors (see the figures in the center and on the right below), (2) “sensing systems,” which accurately expose odor samples to odor detection chips and record electrical changes in physical properties that occur in the respective chips (see the figure above (a prototype under development)), and (3) “AI,” which identifies odor samples based on the changing patterns of physical properties derived from the chips (see the figure on the left at the bottom). We also maximize the value of these elemental technologies for respective users and propose the concept of our electronic nose by developing measurement techniques and offering technical support to meet various needs of odor measurement.

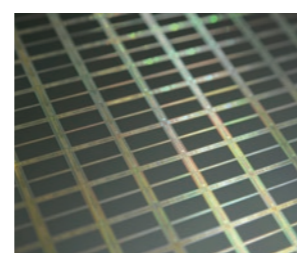
Monitoring of the food fermentation process

One typical example of food manufacturing using the fermentation process is sake brewing (moromi state). In



Odor detection chip

The odor detection chip can identify odors with high accuracy based on a proprietary composition design.



Integrated sensor probe

A sensor probe comprising multiple detection chips which integrated on a single circuit board, that can be applied with a wide range of odors and use cases.

the moromi state, two reactions proceed simultaneously. Specifically, the yeast decomposes sugar into ethanol, while aroma components specific to sake are generated as a by-product. The progress of these reactions changes depending on the fermentation conditions, such as the product temperature of the moromi. In-depth analysis of components of these reaction products is expected to improve the quality of sake. As discussed above, however, it is unrealistic to conduct chemical analysis frequently. Products are manufactured based on partial chemical analysis using limited techniques available and the sensory experience of brewing engineers (at small brewing companies in particular). We may be able to contribute to reducing the workload and pass on the skills if the experience of brewing engineers can be recorded as digital data using electronic nose. In the autumn of 2021, we embarked on joint research with a brewing company in Fushimi, Kyoto. We have found the possibility of estimating ethanol by volume and concentration of some aroma components by measuring the odors of moromi during fermentation using electronic nose and processing the measurement data using AI. We will study the possibility of applying the technology to management of sake and various fermented foods.

Monitoring service for helping daily life

Elderly persons who live alone need monitoring by someone else. However, it is difficult to set up a camera in a private space. Both privacy and security can be attained, for example, if changes in odors in the living

space attributed to diseases and changes in the lifestyle can be detected using electronic nose. Unlike gas chromatography (GC), electronic nose do not require maintenance and replacement of expensive parts by engineers who have expertise in using and maintaining equipment. Thus, we have started consultations with customers for various applications, including monitoring services for elderly persons at nursing care facilities and hospitals or at home.

Quality control of chemicals

As one of Sanyo Chemical's core businesses, we also manufacture and sell raw materials for cosmetics, such as shampoos. Raw materials of the identical specifications may have different odors depending on the country of origin of the materials. Electronic nose is highly promising for quality control when odors are important characteristics of products.

Future robots might have a “nose”

The Digital Olfaction Business Creation Dept. has a future vision to further improve the accuracy and reduce the size of electronic nose and build sensors into robots. At present, most robots operate based on the information of sound, light and other physical stimulus. The functionality of robots can be expanded by adding the information of odors. Robots are expected to take active roles in many more applications.

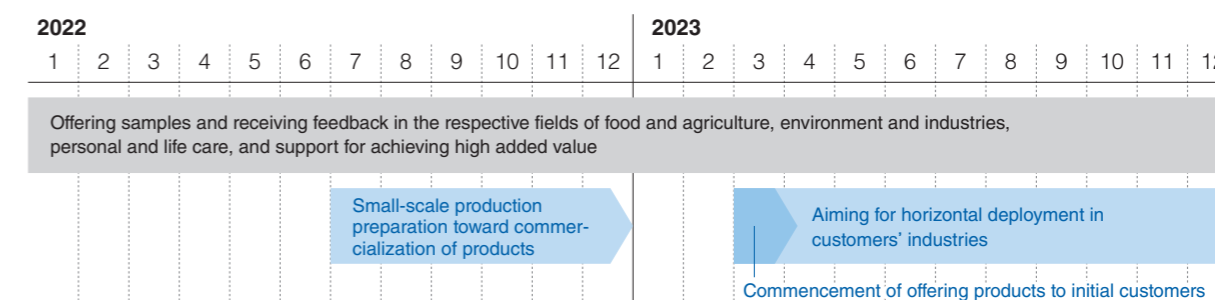
Digital Olfaction Business Creation Dept.

At present, the Digital Olfaction Business Creation Dept., operated under the presidential management, consists of 18 full-time researchers and 15 marketing team members, who use the internal multiple work system. The members who are engaged in R&D experience “WakuWaku” (a Japanese word that means a positive, bright, up-lifting feeling inspired by inner motivations and/or one's own will) in developing

new products. Meanwhile, members in charge of marketing experience “WakuWaku” in creating new businesses, meeting new customers in search of new buyers, and discussing new topics.

The Digital Olfaction Business Creation Dept. aims to commercialize its business in FY2023 and will contribute to the business performance of the company in several years.

Activity plan



Business Overview

Toiletries and Health Care

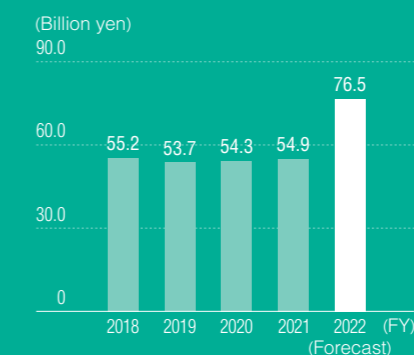


Main products

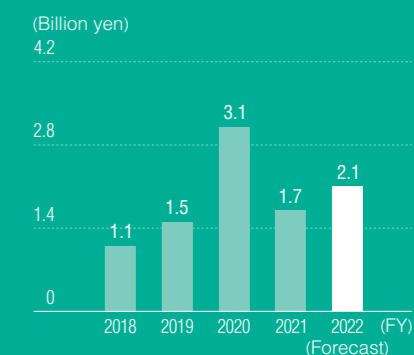
■ **Health Care**
Superabsorbent polymers (SAP), raw material for pharmaceuticals, germicides/disinfectants, surgical hemostatic agents, clinical diagnostic reagents for enzyme immunoassay (EIA), potting resins for artificial kidneys

■ **Toiletries**
Surfactants for detergents, surfactants for hair care products, agents for papermaking

Net sales



Operating profit



* For FY2022 and beyond, the method of allocating the research and development expenses for new businesses which are not appropriate for reportable segments has been revised. (Research and development expenses not subject to allocation: 1.8 billion yen in FY2022)

Affiliated companies

SDP Global Co., Ltd.
San-Dia Polymers (Nantong) Co., Ltd.
SDP GLOBAL (MALAYSIA) SDN. BHD.
(Related to multiple segments)
San Chemical Co., Ltd.
SAN NOPCO LIMITED
San-Apro Ltd.
Sanyo Kasei (Thailand) Ltd.
Sanyo Kasei (Nantong) Co., Ltd.

Operating results in FY2021

Net sales of this segment were 54.922 billion yen (increased by 1.1% year on year), and operating profit was 1.708 billion yen (decreased by 46.5% year on year).

Health Care

In the Health Care segment, although there was a temporary drop in sales of superabsorbent polymers in the mainstay Chinese market due to a rapid production adjustment resulting from energy shortages, this was followed by a recovery. Net sales decreased by 628 million yen to 40.703 billion yen.

Toiletries

In the Toiletries segment, sales were strong due to a surge in sales of polyethylene glycol both in Japan and overseas and a recovery in papermaking chemicals. Net sales increased by 1.248 billion yen to 14.219 billion yen.

Topics

A capital and business alliance formed with ROHTO Pharmaceutical

Conventionally, Sanyo Chemical has been committed to opening the markets in growth fields, such as cosmetics, biotechnology and medical, agriculture and nutrition, and energy and electronics. Recently, we have formed a capital and business alliance with ROHTO Pharmaceutical Co., Ltd. to promote collaboration in the medical field, such as utilization and application of several materials in the skin care and cosmetics fields, production and research of mesenchymal stem cells in the regenerative medicine business, and new medical devices.

This capital and business alliance aims to utilize the resources of each other to develop proprietary raw materials and apply them to new functionalities and different industries, thereby expanding business and enhancing corporate value.

Reformation of existing business

Improvement of profitability by reviewing the sales portfolio of SAPs

Superabsorbent polymers (SAPs) for paper diapers, which we currently manufacture at SDP Global Co., Ltd., which is one of our production sites in Japan, and other production sites in Malaysia and China, are our mainstay products. We are ranked sixth in the global market, accounting for about 10% of the market share. Although the sales volume of SAPs for paper diapers is high, intensifying price competition is unavoidable due to the improved performance of competitors' products and commoditization. Against this backdrop, we have been reviewing our sales portfolio. We have been making efforts to improve profitability by shifting our buyers to other regions, including China and emerging countries, where we can take advantage of our strength in engineering capabilities, which we have developed over many years, and our production sites.

Grow from core business

Accelerating the development of new products in the medical field

We also focus on the development of new products that are expected to add high value to SAPs. Since we became the first company in the world to start commercial production of SAPs in 1978, we have developed high-value-added SAPs to meet various needs. Recently, we have developed a purification method to recover exosomes, which are biological substances that transmit various types of information between cells, with high accuracy and yield, through co-creation with a research group of Tokushima University. We have many other pipelines for the medical field, including non-biological surgical hemostatic materi-

als which do not pose risks of virus infection,*¹ genetically engineered artificial proteins, the first of its kind in Japan,*² cleaning agents for the digestive tract which are used before a colon examination,*³ and functional materials to properly deliver medicine to affected areas.*⁴ We will contribute to advanced medical care by offering these unique products derived from our proprietary technologies.

*¹ Specially controlled medical devices *² Artificial protein: silk-elastin
*³ MACROGOL, a medication base material used for cleaning the digestive tract before diagnosis *⁴ Application of polyethylene glycol derivatives

Global deployment of the surfactant business

Regarding surfactants, which are raw materials for detergents and body care products, we have been promoting production at appropriate global sites. Efforts have been made to establish a supply system for Southeast Asia and China, where demand for high-value-added products, such as low stimulation shampoos, is expected to continue to expand. We are shortly planning to newly invest one billion yen in a production facility at Sanyo Kasei (Thailand) Ltd. The construction of the facility will start by December 2022. Trial operation is scheduled for the third quarter of FY2023, and the commencement of commercial production is scheduled for the first quarter of FY2024.

With the launch of a new production facility, Sanyo Kasei (Thailand) Ltd. will contribute to improving the QOL of people in China and Southeast Asia by spreading the use of high-functionality shampoos and facial cleansers, whose performance, including foaming and texture, is enhanced. The company expects to attain an increase in net sales of 340 million yen and an increase in operating profit of 25 million yen in five years.

We will further enhance communication with overseas sites, deepen understanding about local business practices, and formulate strategies with a view to solving local social issues in order to grow as a global company.

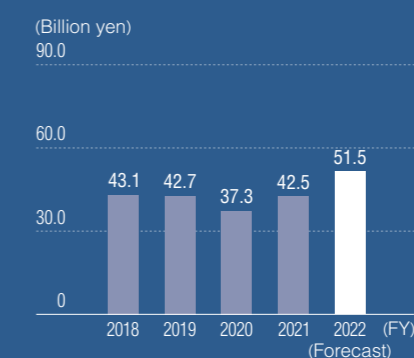
Business Overview

Petroleum and Automotives

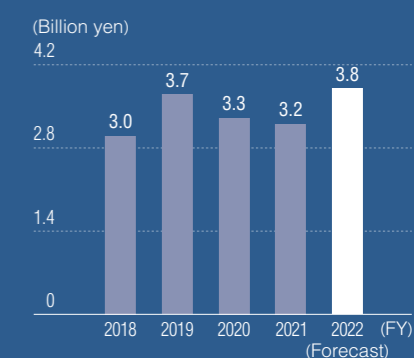
Main products

Thermoplastic polyurethane beads for the interior parts of automobiles (TUB), raw materials for polyurethane foams (PPG), lubricant additives, additives for fuel oil, water-soluble cutting oil, halogen-free cleaning agents, base materials for synthetic lubricants, paste resins for design models, resins for automobile paints

Net sales



Operating profit



* For FY2022 and beyond, the method of allocating the research and development expenses for new businesses which are not appropriate for reportable segments has been revised. (Research and development expenses not subject to allocation: 1.8 billion yen in FY2022)

Affiliated companies

Sanyo Chemical Texas Industries, LLC

Sanyo Chemical Manufacturing Korea, Ltd.

(Related to multiple segments)

San Chemical Co., Ltd.

SAN NOPCO LIMITED

San-Apro Ltd.

Sanyo Kasei (Thailand) Ltd.

Sanyo Kasei (Nantong) Co., Ltd.

Operating results in FY2021

In the Petroleum and Automotives segment, sales of thermoplastic polyurethane beads for the interior parts of automobiles remained flat, but the raw material for polyurethane foams used in automobile seats and other applications and lubricant additives, whose global demand has been growing, remained strong. The price of products increased in line with the significant increase in the price of raw materials, among other factors, resulting in a considerable increase in net sales. Consequently, this segment posted an increase in net sales and a decrease in operating profit.

Specifically, net sales were 42.54 billion yen (increased by 14.0% year on year), while operating profit was 3.265 billion yen (decreased by 3.0% year on year).

Product topics

ACLUBE series lubricant additives (VIIs^{*1}) Contributing to coping with energy problems and climate change

Various measures to reduce CO₂ emissions have been implemented in the automotive industry. Our ACLUBE series, which represents PMA^{*2}-based viscosity index improvers for engine oil, is specially designed to form an oil film with the increase in viscosity when the temperature is high to prevent seizure. It can keep the oil viscosity low when the temperature is low, achieving further improvement in fuel efficiency.

At present, the ACLUBE series has the top share for PMA-based additives in Japan and the second largest share outside Japan. The products contribute to coping with energy problems and climate change by increasing the fuel efficiency and reducing the CO₂ emissions of vehicles around the world.

*1 Viscosity index improvers (VIIs): It is added to engine oil to reduce temperature dependence of its viscosity.

*2 There are two types of VIIs: OCP-based and PMA-based. PMA-based additives can keep viscosity low even at low temperature compared to OCP-based additives.

Grow from core business

Further improving fuel efficiency through the development of new VIIs for lubricating oil

Focusing on the development of VIIs for automotive lubricating oil, Sanyo Chemical will continue to contribute to saving energy through the development of new products which help further improve fuel efficiency. To meet the growing global demand for VIIs, we have newly invested in South Korea, following Japan and China, and established an additional production site. We have also been working on the development of additives for lubricating oil optimized for HVs/EVs.

Regarding non-automotive products, we will develop environmentally friendly additives for improving the performance and optimizing the thermal efficiency of lubricant and hydraulics, which are used in various fields, including vessels, agricultural machines, refrigerators, and biodiesel engines. Regarding our intellectual property strategy, we have started to explore new themes by using a technique called IP landscape. We have identified candidate themes for applications other than lubricant. We will deploy our business by using our fundamental technologies.

In the urethane business, we will work on recycling of urethane foam, which has emerged as a social issue, in collaboration with customers, to contribute to reducing waste.

Activities to support people and their lives

In line with the progress in MaaS,* we will contribute to creating a comfortable cabin space based on the concept of "mobility as a movable private space." We will seek to create a sense of luxury through the improvement

of seating comfort and low-noise performance by taking advantage of our know-how in polyurethane chemicals used in automobiles and interior parts of automobiles that we have refined through many years of operations.

* MaaS (Mobility as a Service) refers to a service which enables users to search, book, and pay for mobility services in a batch by optimally combining multiple public transportation services and other mobility services to meet the mobility needs of respective local residents and tourists in the unit of trips (source: website of the Ministry of Land, Infrastructure, Transport and Tourism).

Reformation of existing business

Regarding polyurethane chemicals used in automobiles and thermoplastic polyurethane beads for the interior parts of automobiles, which are part of our mainstay products, we will promote activities to increase profitability, including optimization of production efficiency through integration of product types, and thereby streamline our operations to ensure proper profit. Through GC Polyols Co., Ltd., a joint venture established by PTT Global Chemical Public Company Ltd. and Toyota Tsusho Corporation, we aim to expand our business for Japanese-affiliated automotive manufacturers, which launched into Asian countries, and optimize our production sites from a global viewpoint.

Business Overview

Plastics and Textiles



Main products

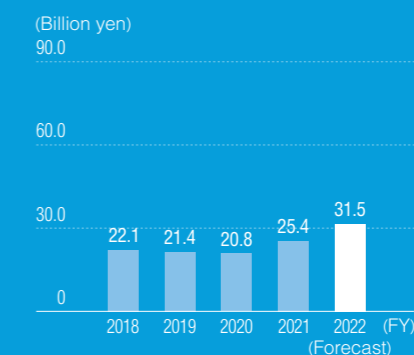
■ Plastics

Permanent antistatic agents, pigment dispersants, resin modifiers, paint resins, defoaming agents, raw materials for polyurethane elastomers, chemical boards for models

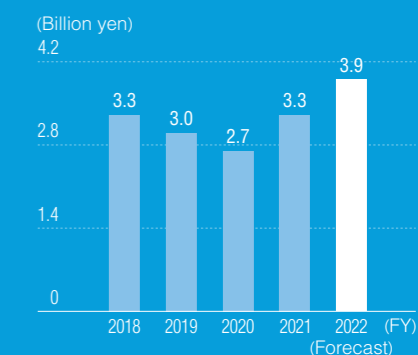
■ Textiles

Chemicals for textile manufacturing, chemicals for carbon fibers, chemicals for fiberglass, polyurethane resins for artificial and synthetic leather

Net sales



Operating profit



* For FY2022 and beyond, the method of allocating the research and development expenses for new businesses which are not appropriate for reportable segments has been revised. (Research and development expenses not subject to allocation: 1.8 billion yen in FY2022)

Affiliated companies

SAN-PETROCHEMICALS CO., LTD.

Sunrise Chemical LLC

(Related to multiple segments)

San Chemical Co., Ltd.

SAN NOPCO LIMITED

San-Apro Ltd.

Sanyo Kasei (Thailand) Ltd.

Sanyo Kasei (Nantong) Co., Ltd.

Operating results in FY2021

Net sales of this segment were 25.466 billion yen (increased by 22.4% year on year), and operating profit was 3.346 billion yen (increased by 23.7% year on year).

■ Plastics

In the Plastics segment, sales of our mainstay permanent antistatic agents remained strong, and overseas demand for paint resins and additives as well as resin modifiers used as paint binders recovered. Thus, net sales increased significantly by 3.148 billion yen to 18.532 billion yen.

■ Textiles

In the Textiles segment, sales of chemicals for carbon fibers increased, and sales of polyurethane resins for synthetic leather and elastomer fiber used in automobiles and the spin finish oil used in the manufacturing process of tire cord yarns and other items were strong. Net sales increased significantly by 1.515 billion yen to 6.934 billion yen.

Product topics

PELESTAT and PELECTRON, permanent antistatic agents Preventing problems caused by static electricity

The PELESTAT and PELECTRON series are permanent antistatic agents that are kneaded into plastics. Conventional low-molecular antistatic agents deposit on the surface of plastics to exhibit antistatic performance. However, they posed two issues: impermanent effect and surface contamination. The PELESTAT and PELECTRON, permanent antistatic agents form conductive circuits in plastics to attain long-lasting and clean antistatic performance. Due to such characteristics, the PELESTAT and PELECTRON series are used for air conditioners and other electric home appliances, inner bag films for explosion-proof flexible container bags, and transport trays and packaging films for delicate electronic parts which require sustained effects and cleanliness. The scope of application is expected to expand to medical and other purposes by taking full advantage of their cleanliness.

Grow from core business

■ Activities to support the environment

To meet the growing demand for carbon fibers which are used for blades of windmills, we will actively make additional investments in production facilities for sizing agents for carbon fibers so that we can underpin the expanded use of renewable energy in terms of materials. Global demand for carbon fibers is expected to expand in markets other than wind power generation. We will contribute to the overall industry by taking full advantage of Sanyo Chemical's strength in additives.

We have also been deploying solvent-free waterborne paint resin from a global viewpoint. Regarding polyurethane dispersion, which is our main product of waterborne paint resin, we will collaborate with BASF to jointly develop and manufacture innovative and environmentally friendly products and access the global market through global production sites of the two companies.

We have also been promoting research and development to apply our technologies to material recycling. We are studying the possibility of developing products, including chemicals to improve the physical properties of recycled polypropylene resins.

■ Activities to support people and their lives

To meet the growing demand for permanent antistatic agents, which are applied to various industrial fields, such as electronic parts and packaging materials, we launched a new production site at the Rayong plant of Sanyo Kasei (Thailand) Ltd. The production site went into full scale in July 2022. Because permanent antistatic agents are our unique and high-functionality products,

we have been working to open up new markets while taking into account the possibility of further expanding the production facility depending on future demand. In addition to permanent antistatic agents, we have many resin additives and adhesives which have proprietary functions. We will continue to take on challenges to develop new materials.

Reformation of existing business

Business operations related to paint and ink resins, which we have dealt in for many years, will be integrated and consolidated by SAN NOPCO LIMITED, which is one of our group companies, to deepen the business strategies from the viewpoint of customers and accelerate the shift to high-value-added products.

Business Overview

Information and Electrics/ Electronics

Main products

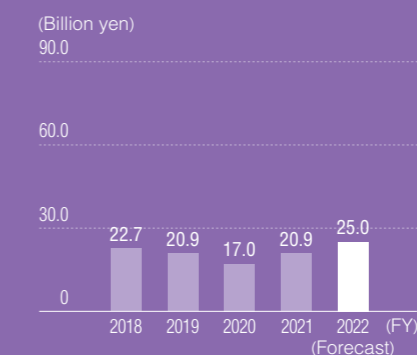
■ Information

Polyester beads used as a core component of polymerization toners (PEB), toner binder

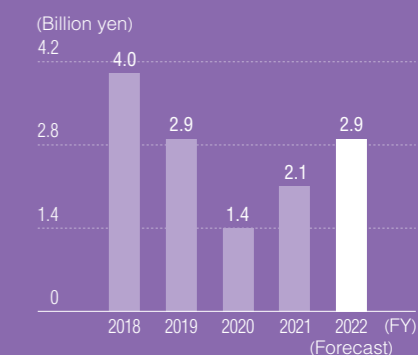
■ Electrics/Electronics

Electrolytes for aluminum electrolytic capacitors, adhesives for electronic parts, chemicals for use in electronic parts manufacturing, UV/EB curing resins

Net sales



Operating profit



* For FY2022 and beyond, the method of allocating the research and development expenses for new businesses which are not appropriate for reportable segments has been revised. (Research and development expenses not subject to allocation: 1.8 billion yen in FY2022)

Affiliated companies

APB Corporation

(Related to multiple segments)

San Chemical Co., Ltd.

SAN NOPCO LIMITED

San-Apro Ltd.

Sanyo Kasei (Thailand) Ltd.

Sanyo Kasei (Nantong) Co., Ltd.

Operating results in FY2021

Net sales of this segment were 20.989 billion yen (increased by 22.8% year on year), and operating profit was 2.11 billion yen (increased by 46.6% year on year).

■ Information

In the Information segment, office printing demand, which had stagnated due to the COVID-19 pandemic, recovered, and sales of polyester beads as a core component of polymerization toners and pulverized toner resins were strong. As a result, net sales increased significantly by 2.386 billion yen to 11.759 billion yen.

■ Electrics/Electronics

In the Electrics/Electronics segment, sales of raw materials for resists, which are used in manufacturing semiconductors, remained strong due to ongoing high demand for semiconductors. Sales of resins for flat panel displays (FPDs) also increased significantly. Net sales increased by 1.506 billion yen to 9.229 billion yen.

Product topics

SANELEC, electrolytes for aluminum electrolytic capacitors Long-run products which underpin the widespread use of EVs and smart home appliances

There are three types of capacitors, which are built into all electrical and electronic devices: ceramic capacitors, film capacitors, and electrolytic capacitors. Notably, many electrolytic capacitors, which can store a large amount of electricity, are used in power supply circuits of EVs, air conditioners, and industrial equipment, among others. Products using aluminum, which is inexpensive and characterized by superb workability, are in the mainstream. However, electrolyte leakage was the biggest issue faced by the capacitor industry.

SANELEC solved the problem of electrolyte leakage by using a proprietary structure. Since its development in the mid-1990s, SANELEC has been used in various fields and has become a long-run de-facto-standard product.

Grow from core business

■ Activities to support the environment

In the Information segment, we have been working on energy saving by improving the copier toner materials in which Sanyo Chemical has strength. In a copier, toner is fixed by applying heat momentarily. We will contribute to reducing power consumption by developing toners that can be fixed at low temperature. From the viewpoint of contributing to material recycling, we consider the possibility of utilizing recycled resins as raw materials for toners.

In the Electrics/Electronics segment, demand for highly functional aluminum electrolytic capacitors has been growing because vehicles have been increasingly electrified, as exemplified by the widespread use of EVs and the development of automated driving vehicles in pursuit of safety and security. We will make contributions in terms of materials by building a system for increasing the production and supplying electrolytes for capacitors. Regarding new research and development, we will offer added value to the market from the viewpoint of reducing the environmental impact.

■ Activities to support people and their lives

In the Information and Electrics/Electronics segment, we focus on various devices that help make people's lives more comfortable. For smartphones, liquid crystal displays have been increasingly replaced by organic EL displays (OLEDs) due to their advantages, including the charging time, image quality, and lightweightness. We actively promote the development of materials for OLEDs, with the possibility of forming alliances taken into account, by utilizing the know-how refined in the

course of the adhesive business for touch panels. We will globally deploy the photoacid catalyst business for the semiconductor industry, which is the main business of San-Apro Ltd.

Meanwhile, polyurethane dispersion is likely to contribute to improving the performance of devices through replacement or combination with conventional materials for various electronic materials in this segment in addition to waterborne paint resins discussed in the Plastics and Textiles segment. Thus, we will actively make proposals by launching a website for introducing resins and functional chemicals.

Reformation of existing business

In the Information segment, the toner market has become increasingly mature due to the spread of telecommuting and paperless operations at offices. We ensure proper profitability by creating added value based on the engineering capabilities that we have developed in addition to making efforts to cut costs, including optimization of production facilities. Meanwhile, we will promote the development of products for new applications, such as inkjet and textile printing.

Business Overview

Environmental Protection, Construction and Others

Main products

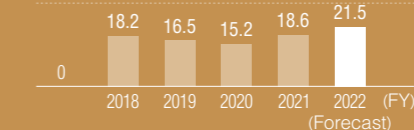
Polymer flocculants for wastewater treatment, cationic monomer, PPG for furniture and heat insulating materials, slurry chemicals, reactive hot-melt adhesives, raw materials for building sealants, cement chemicals

Net sales

(Billion yen)
90.0

60.0

30.0

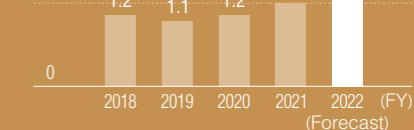


Operating profit

(Billion yen)
4.2

2.8

1.4



* For FY2022 and beyond, the method of allocating the research and development expenses for new businesses which are not appropriate for reportable segments has been revised. (Research and development expenses not subject to allocation: 1.8 billion yen in FY2022)

Affiliated companies

(Related to multiple segments)

San Chemical Co., Ltd.

SAN NOPCO LIMITED

San-Apro Ltd.

Sanyo Kasei (Thailand) Ltd.

Sanyo Kasei (Nantong) Co., Ltd.

Operating results in FY2021

In the Environmental Protection segment, sales of cationic monomers for polymer flocculants for overseas markets increased, resulting in a significant increase in net sales. In the Construction segment, sales of both raw materials for building sealants and raw materials for polyurethane foams, which are mainly used for furniture and heat insulating materials, remained strong. Thus, net sales increased significantly.

As a result, total net sales in this segment were 18.607 billion yen (increased by 22.1% year on year), and operating profit was 1.437 billion yen (increased by 17.2% year on year).

Product topics

LEVEFLOW series, additives used in manufacturing cement panels

Sanyo Chemical's products indispensable to maintain fluidity and shape retention properties

Recently, cement panels commonly known as sidings, which are made mainly from cement, have been increasingly used for outer walls of single-family detached homes. The manufacturing method called the extrusion method can reduce the weight because cavities can be created inside. Cement panels can also be used in combination with heat insulating materials. Cement panels with high design quality can be created by adding rough patterns.

The LEVEFLOW series, our acrylic-acid-based additives for manufacturing extrusion-molded cement panels, take active roles to adjust the balance of appearance, shape retention properties, and productivity. The products are characterized by lubrication, water retention, shape retention, and thickening functions.

Grow from core business

In the Environmental Protection and Construction segment, we aim to maximize the business value by solving sustainability issues, which are faced by customers in the resource/environment and next-generation infrastructure fields, and achieving social changes with customers.

Activities to support the environment

We will take full advantage of our technologies to contribute to environmentally friendly agriculture (e.g., development of biodegradable materials for fertilizers) and environmental conservation activities (e.g., desert greening, wastewater purification), the development of chemicals that contribute to the widespread use of biomass fuel, and reduction of waste, in particular.

Activities to support people and their lives

We will contribute to improving the efficiency of agricultural production (e.g., development of new chemicals for fertilizers) and deployment to the next-generation infrastructure field (e.g., development of chemicals that contribute to achieving high functionality of cement and chemicals for low-carbon cement).

Reformation of existing business

Polymer flocculants, raw materials for building sealants, and raw materials for polyurethane foams mainly used for furniture and heat insulating materials, all of which have been our mainstay products, have been increasingly commoditized. Thus, we will optimize profit primarily by reviewing the production process and consolidating products. Meanwhile, we aim to expand our business by offering high-value-added products based on proposals for solutions integrating our proprietary water treatment technologies and by forming alliances with suppliers.

New Growth Path

The Sanyo Chemical Group aims to create new value from the viewpoint of environmental and social issues through innovation beyond the boundaries of chemistry with our chemical capabilities. We have been working to create new businesses quickly to acquire world-class strengths by taking on challenges to open up new fields based on strategic alliances and M&As and combining our various technologies and know-how, including interface control technology, with external findings through joint research with universities.

New business creation system

The Business Planning Division is in place under direct control of the president to create new businesses. The division consists of the Business Planning Department and the Research Planning Development Departments 1 and 2. It works on (i) changing the business models of existing businesses and creating new businesses through collaboration and alliances (including equity participation and M&A) with partner companies (including startups) and (ii) study measures to cope with matters that should be addressed across the company (achievement of carbon neutrality).

Mechanism to create new businesses

Examples of open innovation

- Utilization of external technology exploration organizations
- Marketing based on the intellectual property information strategy
- Utilization of external experts
- Utilization of external incubation and accelerator programs
- Utilization of venture capital
- Collaboration with startups (e.g., equity participation)

Human asset rotation based on the draft system

Other: technology exchange and technology fusion

- Establishment of the Informatics Promotion Dept.
- Information searching tool (a tool for cross-organizational searching of in-house database)

Alliances with external partners (examples)

| Target project | Alliance partner |
|------------------------------------|--|
| Artificial protein Silk-elastin | Rohto Pharmaceutical Co., Ltd. (mesenchymal stem cells) |
| | Kyoto University (wound healing materials) |
| | Hiroshima University (meniscus regeneration materials) |
| Peptide for agriculture | Shintomi Town, Miyazaki Prefecture (research and development and demonstration experiment using peptide in agriculture) |
| | Pharma Foods International Co., Ltd. (establishment of "peptide agriculture" using biostimulants) |
| Electronic nose | Miyakotsuru Shuzo Co., Ltd. (commercialization of the "electronic nose" business) |

"UQ chem," a matching platform that links unused chemicals with needs

Sanyo Chemical started the test operation of the "UQ chem" service, a matching platform to offer new value by visualizing "unused chemicals and technologies" which were developed by companies but have not been marketed, and linking them with potential needs.

UQ chem's dedicated portal website introduces unused products, including those of our group and competitors, using videos, to match the needs of various users, including those in different industries, with optimal solutions. UQ chem aims to link unrecognized and unused technologies with new target customers, who were unaware of such technologies, to create new value, thereby revitalizing the chemical industry and creating innovation.



<https://uqchem.net/>
(Japanese only)

Support the environment

Contribution to carbon neutrality

CO₂ - capturing/storage/utilization

We have been studying the possibility of applying our know-how to design and manufacture ionic liquids, which are used as electrolytes for aluminum electrolytic capacitors, to efficient systems to capture, use, and store CO₂. We aim to separate CO₂ from flue gas by using ionic liquids capable of absorbing CO₂ even at a low pressure close to the atmospheric pressure. Eventually, we will apply such ionic liquids to separation of CO₂ from air, which has attracted a lot of public attention as a negative emission technology.

Energy management

We also work on electrical energy management and thermal energy management.

In electrical energy management, we have been developing active materials for inorganic particle coating for all-polymer batteries, which are manufactured by APB Corporation, to spread the use of renewable energy. We have also started working with FLOSFIA, a venture company that manufactures next-generation power semiconductors and in which we have taken a stake, to develop chemicals that contribute to improving the performance and production efficiency of power semiconductors capable of achieving high power conversion efficiency. We aim to realize an energy-saving society through collaboration with FLOSFIA.

In thermal energy management, we will solve issues and create new businesses to use solar energy with high efficiency. For example, we will create a "mechanism to convert sunlight into heat" through an alliance with tiem factory Inc.



Solar heat collection panel

Support people and their lives

Improvement of QOL

Electronic nose

We have been working on the development of electronic nose to improve the quality of food, health and life by visualizing odors. In April 2022, we established a new organization which has both research and development and marketing functions to commercialize the business.

Peptide for agriculture

In the agriculture and nutrition field, we have been working to implement "peptide agriculture", which can contribute to the development of the sixth sector industrialization, which is promotion of primary producers' diversification into processing and distribution, by enhancing the intrinsic functions of plants through effective utilization of peptides, reducing the consumption of chemical fertilizers and pesticides, and creating high-value-added crops and highly functional health foods. We will increase our capabilities to propose solutions to customers through combinations with soil diagnosis technology that can contribute to improving agriculture production efficiency and technology to ensure prolonged release of chemicals, in particular.

Research and Development/Intellectual Property

The Sanyo Chemical Group's strength lies in various core technologies, including interface control technology and its development style to translate customer value and needs into functions, translate functions into physical properties, and translate physical properties into compositions and synthetic processes rationally and in the fastest way. We have developed more than 3,000 performance chemicals that are used in various fields.

R&D system and strategies

A flat organization based on the research unit system

R&D department has a unique organizational structure. Research Unit (RU) System where the size of each R&D unit is small but directly reports to the research general manager. This flattened organizational structure enables researchers to make quick decisions and take action flexibly. Also, the system allows even young researchers to take active roles as unit leaders.

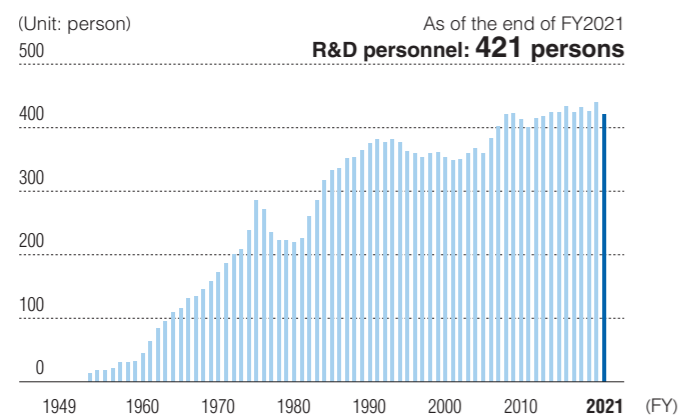
Promptly meeting diverse customer needs with NeeSeeds-Oriented R&D approach

Taking a NeeSeeds-Oriented approach, we have updated the life cycles of existing products, transformed existing processes and expanded into new fields.

The NeeSeeds-Oriented approach is a term that we coined by combining "needs-oriented" and "seeds-oriented." With this approach, a technique developed to meet a certain need is combined with another technique to create another new seed technology for new products. By taking this approach in a chain reaction manner, we will develop products in new business fields with high originality. We have developed as many as 3,000 different types of products by diversifying the technology in the NeeSeeds-Oriented R&D. In recent explorations of new business ventures in the energy, electronics and biomedical fields, we have placed special focus on this approach on open-innovation and alliances with other companies.

Changes in the number of R&D personnel

Nearly 30% of our employees are involved in research and development activities. (equivalent to about 5% of net sales each year).



Measures to foster motivation

We have various measures to keep researchers highly motivated and active, such as including the challenge system, the commendation system, technology fusion, and opportunities of human resources development. Researchers can take on appropriate challenges any time and gain successful experience with support from others. A corporate culture in which those who succeed are commended but those who fail are not criticized is well established. This is how we nurture the challenging spirit of researchers.

Challenge system

Personal Challenge for Research, independent research

Commendation system

Inventor of The Year Award, R&D Award, Best RU Award

Technology fusion

Technology exchange promotion meeting, research discussions, in-house seminars

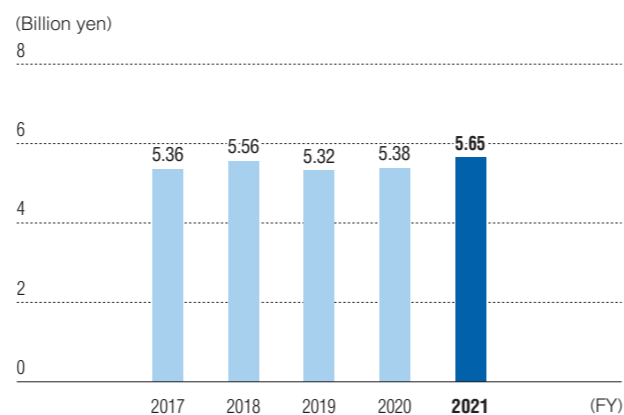
Human resources development

Research skills map, mini project system, study abroad system

Personal Challenge for Research

In this system, researchers propose research themes on which they expect to launch a new business and freely conduct research in the other department for one to two years. A successful researcher can become a leader and organize a team to promote research and development. Thus far, 23 out of 80 projects were successful.

Changes in R&D expenses



Interface control technology

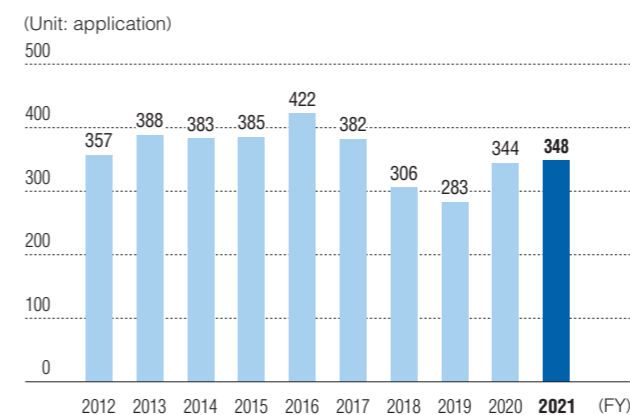
There is always an interface between two different substances, such as "between water and air" and "between water and oil." And the properties of the interface are deeply related to many phenomena, including ease of mixing and wettability. We have technologies to manage the various interfacial functions, such as "cleaning," "penetrating/wetting," "emulsification," "dispersion," "lubrication," "plasticizing/softening," "antibacterial," "rust prevention," "adhesion," "antistatic," and "coagulation," by controlling the interfacial chemical features.

DX

The product development competition becomes more intense due mainly to globalization of economic activities, technological advancements, and shorter product cycles. Against this backdrop, we launched full-scale efforts on materials informatics (MI)*1 and cross-organizational use of technological information possessed by respective research departments in 2020. Such efforts have already started to produce results. For example, awareness has been raised to actively use data for efficient product development. Analysis of accumulated data has made it possible to quickly design products whose performance exceeds that of conventional products.

In April 2022, the Informatics Promotion Dept. was established as a dedicated department. It serves as a hub to promote advanced use and familiarization of MI. To enable on-site researchers to use MI and data in their daily operations, we have been deploying a proprietary data analysis tool and cross-organizational information search tool, which are readily accessible to all employ-

Number of patent applications



ees. We have also launched various education programs that meet the needs of practical operations to develop human resources who work on data utilization and improve data literacy on a company-wide basis.

*1 Materials informatics (MI): Efforts to increase the efficiency of materials development by using machine learning and statistical analysis to reduce the development period and develop innovative materials

IP landscape

In terms of the intellectual property activities, we have developed highly unique products and ensured reliability by reliably patenting developed technologies, building a patent network and increasing the technological advantage, improving profitability, and avoiding infringement of third-party intellectual property rights, among others.

To enhance our business advantage in the global market, where the competition is becoming more intense, while contributing to society, we must conduct overall analysis of intellectual property information and market information and formulate and implement a management strategy (IP landscape*2) based on such analysis.

We will use the NeeSeeds-Oriented approach, which is characteristic of research and development of our group, in combination with the IP landscape, verify the advantage of our proprietary technologies in the existing and new fields, and search new applications, in particular.

The use of the IP landscape requires interdepartmental collaboration because it calls for expertise in intellectual property of the Intellectual Properties Dept. and capabilities to appraise technologies and market trends. The IP landscape enables the Intellectual Properties Dept. to collaborate with not only research sections but also respective business divisions, the Business Planning Division, and the Corporate Planning Division, participate in formulation of strategies for these sections and divisions, and provide useful intellectual property information to make our business unique and more profitable.

*2 IP landscape: A coined word taken from "intellectual property" and "landscape"

Climate Change

The Sanyo Chemical Group has been stepping up efforts to contribute to carbon neutrality, as exemplified by the main strategies and the Sustainability Action Plan in “WakuWaku Explosion 2030,” our management policy announced in March 2022. To contribute to carbon neutrality, we implement various measures to reduce CO₂ emissions from our plants and focus on early commercialization of new products that can reduce CO₂ emissions many times more than that we emit from our plants by harnessing our proprietary engineering capabilities.

Targets in the Sustainability Action Plan

Our group has been systematically reducing CO₂ emissions to achieve net-zero emissions by 2050. In FY2021, the first year in the Sustainability Action Plan (base year: FY2020), we reduced emissions by 10.4%.

■ Sustainability Action Plan

| Theme: Contribution to Carbon Neutrality (Scope 1 + Scope 2) | |
|--|---|
| Results in FY2021 | CO ₂ emissions reduction by 10.4% (compared to FY2020) |
| 2030 Target | CO ₂ emissions reduction by more than 50% (compared to 2020) |
| 2050 Target | Net Zero |

Targets in the Environmental Action Plan

We have been working on targets from FY2021 to FY2024. The CO₂ emissions in FY2021 (the first fiscal year) were 276,000 tons, attaining the target for FY2024 (295,000 tons).

■ Environmental Action Plan (period: FY2021 to FY2024)

Scope: Sanyo Chemical, group companies in Japan, overseas group companies which have production sites

| Theme: CO ₂ emissions | |
|----------------------------------|--|
| Results in FY2021 | 276,000 tons: Reduction by 11.3% from the FY2019 level |
| Target for FY2024 | 295,000 tons or less: Reduction by 5% or more from the FY2019 level (311,000 tons in FY2019: 176,000 tons in Japan, 135,000 tons overseas) |

| Theme: Energy consumption | |
|---------------------------|--|
| Results in FY2021 | 132,000 kL: Reduction by 10.3% from the FY2019 level |
| Target for FY2024 | 140,000 kL or less in crude oil equivalent: Reduction by 5% or more from the FY2019 level (147,000 kL in FY2019: 90,000 kL in Japan, 57,000 kL overseas) |

Energy conservation

We organized a working group for coping with global warming with business sites in Japan as part of the Environmental Action Plan, which started in 2000. We have worked to increase the efficiency of energy use, improve the production processes, and switch fuels, in particular.

Previously, we set the target values based on the basic unit for many years. In the latest Environmental Action Plan, the target setting has been changed from the basic unit per production volume to consumption in crude oil equivalent from the viewpoint that management in total volume is more important.

Support for TCFD

In December 2021, we showed support for the recommendations by the Task Force on Climate-related Financial Disclosures (TCFD).

The TCFD is a task force established by the Financial Stability Board (FSB) at the request of the G20.

Amidst the growing global momentum for reducing the greenhouse gas emissions in accordance with the Paris Agreement, the TCFD recommends companies to evaluate the financial impact of climate-change-related risks and opportunities on management and disclose information on four items (governance, strategy, risk management, and metrics and targets).

Based on the company mission of “Establish a better society through our corporate activities,” we work on sustainable management while keeping in mind sustainability in the environment, society, and economy. By showing support to the recommendations, we reflect climate-related risks and opportunities in our management strategy and contribute to realizing a sustainable society. Such risks and opportunities are also incorporated in the financial statements and other documents for information disclosure, thereby helping improve the sustainable corporate value.



Efforts to cope with climate change based on TCFD recommendations

We have long been coping with climate change. We will promote the following efforts to cope with climate change based on the TCFD recommendations to realize “CO₂ emissions reduction by 50% or more by 2030 (compared to the FY2020 level) and net-zero emissions by 2050” as specified in the management policy.

| Item | Details |
|---------------------|---|
| Governance | Construction and operation of a monitoring system by the board of directors |
| Strategy | Definition of climate-related risks and opportunities Scenario analysis/definition of multiple scenarios |
| Risk management | Construction of a system to select, manage, and evaluate climate-related risks |
| Metrics and targets | Determination of metrics and targets in the system to select, manage, and evaluate climate-related risks Disclosure of information about CO ₂ in Scopes 1, 2, and 3 |

CO₂ emissions through the supply chain (Scope 3)

Our group calculates direct emissions due to use of fuels, etc. (Scope 1), indirect emissions from the use of electricity, heat, and steam supplied by others (Scope 2), and emissions through the supply chain (Scope 3).

The CO₂ emissions in FY2021 were 2.36 million tons. The CO₂ emissions attributed to purchased raw materials and those attributed to disposal of final products using our products accounted for 51.7% and 43.3%, respectively, of Scope 3.

The CO₂ emissions attributed to the use, processing, and transport by buyers of our products are not calculated because it is difficult to collect data required for calculation.

To design and supply products with less environmental impact and provide customers with appropriate product information, our group established the green procurement standard for production materials. The standard has been operated since 2005. The CSR procurement working group, which is organized by the Global Purchasing Division, Corporate Social Responsibility Promotion Dept., and Products Evaluation Dept., studied the possibility of integrating the conventional green procurement and CSR procurement into sustainable procurement. In FY2021, the working group established the “sustainable procurement guidelines.” Previously, we conducted our own questionnaire survey of suppliers. Starting in FY2021, we use a standard questionnaire tool (common SAQ) formulated by the Global Compact Network Japan (GCNJ) to actively reduce CO₂ emissions through the supply chain.

External recognition

- Selected for inclusion in the S&P/JPX Carbon Efficient Index (FY2021)



Human Resources/Job Satisfaction

In its management policy “WakuWaku Explosion 2030” announced in March 2022, the Sanyo Chemical Group defined its 2030 Vision as “Grow into a global, unique, and highly profitable company where every employee feels pride and satisfaction in his/ her work.” We aim to realize a work environment where all employees mutually recognize diverse values and enjoy working in good health, by promoting DEI (diversity, equity & inclusion) and health management.

Policy

Under the slogan “WakuWaku,” all Sanyo Chemical Group companies will work together to grow into a corporate group where “Every employee feels pride and satisfaction in their work” by sharing dreams to make daily work more creative.

■ Targets set under the Sustainability Action Plan

Theme: A workplace that recognizes diverse values

- Promote DEI, improve psychological safety, and introduce reforms for greater job satisfaction
- Support people's sustainable lifestyles and improve their QOL

Diversity, equity & inclusion (DEI)

We aim to create a work environment where all employees can work without fear while staying true to themselves. By promoting work style reforms and DEI, we strive to realize a work environment where all employees, including women, LGBTQ, senior human resources, and people with disabilities can work comfortably. At the same time, we endeavor to raise employee awareness,

reform the corporate culture, and reinforce systems in order to accept diverse values and ensure that diverse human resources can play an active role.

Health management

We believe that it is important for the Company to be actively involved in promoting employees' health maintenance and improvement, rather than leaving health management to individual employees. Based on this idea, in 2018 we announced the Health Management Declaration to promote health management.

If employees work in good mental and physical health, not only the employees but also their families are happy, which also leads to the development of the Company. We strive to develop a work environment that helps employees continue to work vigorously and energetically for many years.

In recognition of such efforts, we have been certified as a Health and Productivity Management Organization (White 500), jointly selected by the Ministry of Economy, Trade and Industry and the Nippon Kenko Kaigi (Japan health council) for four consecutive years.

External evaluations

- Work style reform: Approved as a best practice company in Kyoto Prefecture (FY 2016)
- Childcare support: Granted Platinum Kurumin Certification (FY 2017)
- LGBTQ initiatives, etc.: Granted the highest Gold rating in the PRIDE Index (for three consecutive years from 2019)
- Promotion of women's advancement: Granted three stars, the highest rating in Eruboshi Certification (FY 2021)

Support for external organizations

- Promotion of women's advancement: Cabinet Office's “Declaration on Action” by a group of male leaders who will create “A Society in which Women Shine”
- Promotion of women's advancement: The “Challenge to 30% by 2030” initiative of the Japan Business Federation (Keidanren) aims to achieve a ratio of 30% or more female executives by 2030
- LGBTQ initiatives, etc.: “Business for Marriage Equality,” a campaign for equality in marriage (legislation of same-sex marriage)
- Life-work balance: Participation in the “Ikuboss Company Alliance”



2022
健康経営優良法人
Health and productivity
ホワイト500

Start of operation of the internal multiple work system on a trial basis

We aim to create a “WakuWaku company” that enables individual employees to maximize their potential, which will facilitate further enhancement of corporate value. In February 2022, we started operation of the internal multiple work system on a trial basis as a measure to improve the job satisfaction and motivation of employees. Under this system, employees can voluntarily address themes they wish to pursue in parallel with their existing work.

Items at the present time (employee numbers are as of the end of March 2022)

- Traditional technologies in Kyoto (42 employees)
- Development of electronic nose (7 employees)
- Development of CO₂ absorbents and separation membranes (3 employees)
- Peptide for agriculture (8 employees)
- Joint development of a wearable liquid sensor device (4 employees)

Challenge of the Kyoto traditional industry team

Kyoto Culture x Technology of Sanyo Chemical Group

In February 2021, we launched the “Kyoto Culture x Technology of Sanyo Chemical Group = XX Innovation” project, which revitalizes Kyoto traditional industries by Sanyo Chemical Group technologies. Its proposer, Ritsuro Namiki, General Manager of the Finance Dept., talks about the project.

A project that began with an e-mail message to the President

In Kyoto, there are 74 categories of traditional industries, including Nishijin textile, Kyoto Yuzen dyeing, and Kiyomizu ware, all of which are renowned both in Japan and overseas. However, traditional industries in Kyoto have been in a predicament, due to a decline in shipment value and a lack of successors. With the survival of some of these categories at risk, the stagnation of Kyoto's traditional industries has become a matter of social concern in the region.

Witnessing the hardship of these local traditional industries, I sent the President an e-mail saying, “I believe there is something Sanyo Chemical can do to help improve the situation.” The President replied that “Sanyo Chemical is a company based in Kyoto. If the Company's technologies can bring about innovation that will help revitalize Kyoto, I'll give you the OK to go ahead with the project!” I then visited the Kyoto City Industry and Tourism Bureau and the Kyoto Municipal Institute of Industrial Technology and Culture, and learned that traditional industries have issues that could be resolved by chemistry, along with a shortage of successors and other problems. The Institute of Industrial Technology and Culture provided us with 28 themes, which we announced to approximately 400 researchers of our Company to invite ideas to generate solutions. We were able to collect many ideas, which were summarized and suggested to these organizations. At the same time, we gave presentations on the prevention of discoloration in gold/silver threads and how to improve incombustibility, as we began to see the clues to resolving these two issues. Since the Nishijin textile industry had given up finding a solution to the discoloration of gold/silver threads, our presentation on a preventive method was received with surprise. Now I see great potential in our Company's activities to make a positive contribution to traditional industries.

Current status of the project

At present, we have six Traditional Industry Teams, consisting of about 40 members in total. Originally started in Kyoto City, the project has expanded its scope of activities to cover a wider area as we have become associated with the Kyoto Prefectural government and various industrial organizations through the intermediation of local financial institutions. Now we are trying to find out what we can do to support each of these organizations in resolving their respective issues.

Aside from research activities, preparations are under way to establish a Sanyo Chemical Kyoto Traditional Industry Development Fund, as part of our initiatives to help nurture prospective artisans who will take over traditional industries.

In addition, we are considering the conclusion of a trilateral agreement with Kyoto Prefecture and Kyoto City, with the objective of supporting traditional industries. In so doing, we want to revitalize the traditional industries of Kyoto, thereby contributing to local communities.



Occupational Safety and Health/Accident Prevention

Details of a fatal occupational accident on January 15, 2022

On January 15, 2022, a fatal occupational accident occurred on the premises of the Nagoya Factory (Tokai City, Aichi Prefecture) of Sanyo Chemical Industries, Ltd. Specifically, an employee of a subcontractor died during preparation for the resumption of production after periodic equipment repairs. We sincerely pray for the repose of the employee's soul and extend our heartfelt sympathy to the family of the deceased. We would also like to deeply apologize for the inconvenience and anxiety we may have caused to all those concerned.

The outline of the currently known facts is as follows:

| | |
|----------------------|--|
| Discovery date | Around 12:00, January 15 (Sat.), 2022 |
| Discovery location | Production Dept., Nagoya Factory of SDP Global Co., Ltd., 31-1 Shinpomachi, Tokai-shi, Aichi |
| Discovered situation | During the preparation for resumption of production after periodic plant equipment repairs, an affiliate's employee was lost sight of. Other employees then looked for the employee, who was then found to have collapsed in the plant. The public fire department was notified and the accident victim was immediately transferred to a hospital. However, the employee was confirmed dead. |
| Deceased person | One employee of a subcontractor |
| Cause | The cause of the accident is still under investigation by the authorities concerned. The Company will continue to provide full cooperation in the investigation. |
| Future measures | At the time of issuance of this integrated report, the investigation by the authorities concerned was still ongoing, and the Company will continue to fully cooperate in the investigation. In addition, the Company has established its own accident response committee to analyze various possible causes, including indirect factors that may have led to the accident. We will continue to take measures to identify the fundamental issues and prevent the recurrence of similar accidents. |

The Sanyo Chemical Group, which runs chemical businesses, is well aware that safety is the basis of everything, and has been striving to achieve accident-free/injury-free operation. We earnestly regret the occurrence of this fatal accident. The Group will redouble its efforts to ensure that all its employees go back to the basics and remain committed to occupational safety and health and accident prevention.

Policy

We will give top priority to safety and accident prevention in all our business activities. We will strive for the continuance of accident-free/injury-free operation and contribute to social safety. At the same time, we will protect the safety and health of everyone involved in our operations, and strive to create a comfortable work environment.

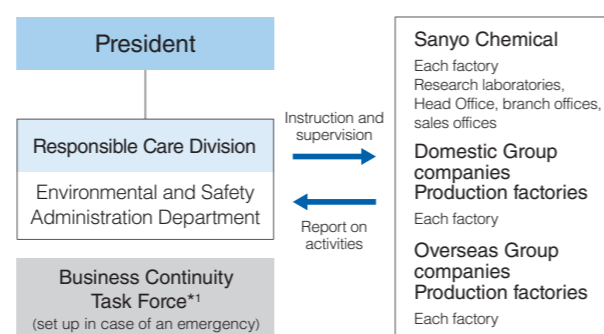
System

To promote occupational safety and health, each manufacturing base of the Group has established an Environment and Safety Department (Section). The Environmental and Safety Administration Department of the Responsible Care Division provides instruction and supervision to these departments (sections), as well as research laboratories, Head Office, branch offices, and sales & marketing offices.

The General Manager of the Responsible Care Division oversees the Occupational Safety and Health Committee, which was set up in accordance with the Occupational Safety and Health Law. The Committee promotes occupational safety and health activities based

on a consensus between labor and management.

In case of an emergency, a local emergency task force is established in the region where the emergency has occurred. Should a large-scale earthquake or other wide-area disaster occur, the Business Continuity Task Force will be set up at the Head Office to implement support and reconstruction activities on a company-wide level. Since natural disasters and environmental accidents are mutually related, the Responsible Care Division General Manager serves concurrently as the Business Continuity Task Force General Manager.



*1 Headquarters to be set up in the event of a large-scale earthquake or other wide-area disaster to implement support and reconstruction activities, and the Responsible Care Division General Manager will serve concurrently as the General Manager of the task force.

Safety / accident prevention activity

In order to ensure safe business operation and business continuity, we implement countermeasures for both "hardware" and "software" and, after having set the response/action plan in case of an emergency, conduct training in accordance with it.

Training for handling abnormalities and emergency response

We regularly conduct training for handling abnormalities and other contingencies to prepare for earthquakes, fires, and leakage accidents in accordance with the annual schedule. We also hold training in cooperation with the local community, including joint training with the neighboring factories of other manufacturers and the local fire department. Notably, most recent disaster drills have been held without a prearranged scenario, in order to improve our practical disaster response capabilities. In 2012, we established the Safety and Technology Education Center aimed at improving safety education and production technology at the Nagoya Factory. The center is equipped with devices that allow visitors to experience the danger of occupational accidents and simulators that reproduce onsite production equipment, allowing for the study of principles and theories.

Earthquake countermeasures

Following the Great Hanshin-Awaji Earthquake in 1995, we have been continuously implementing the aseismic reinforcement of our buildings and production equipment. We have also been undertaking the formulation of business continuity plans (BCPs) since 2007. Based on the experience of the Kashima Factory, which was hit by the 2011 Great East Japan Earthquake, we conduct BCP training and continuously review the response manual and other documents.

Predictive maintenance and accident prevention measures

We have started to employ a predictive maintenance method that makes effective use of AI and DX (digital transformation) for the replacement and repair of parts and other components at appropriate times. As a result, we believe this will reduce unnecessary parts replacement and the unexpected problems that tend to occur when periodic maintenance is carried out.

We have also introduced smart glasses. When wearing these glasses, skilled workers can view images and give instructions from outside the plant.

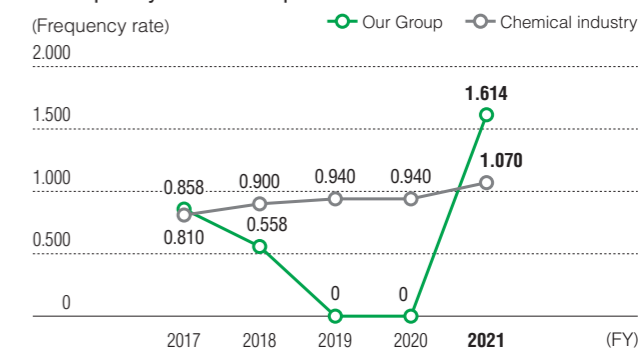
In addition, we have been implementing accident prevention measures. These include sharing prevention activities conducted by our respective factories through

"Teams" and holding Safety Sessions at which such efforts are presented company-wide.

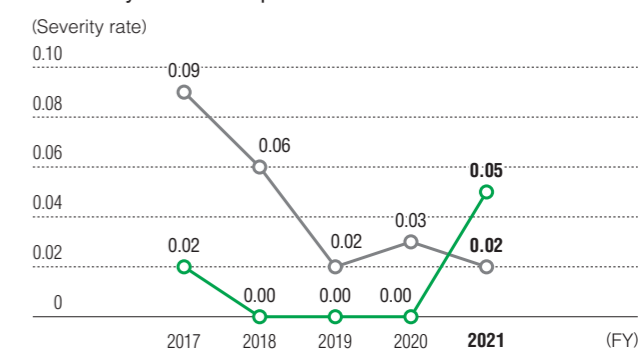
Status of labor accidents

To achieve zero labor accidents, we are conducting activities under the main themes of improvement of workers' hazard prediction capability, creation of a workplace culture in which workers warn each other, thorough implementation of recurrence prevention measures, and achievement of safer work environment. In fiscal year 2021, we had a fatal accident involving the death of an affiliate's employee. There were also six occupational accidents involving our employees with lost time and two without lost time. As for dispatched employees/employees of affiliates, there was one occupational accident with lost time and four without lost time. We have investigated the actual causes of the accidents by using the five whys method,*2 implemented recurrence prevention measures, and rolled out important countermeasures to all Group factories in Japan and abroad.

Frequency rate of occupational accidents*3



Severity rate of occupational accidents*4



*2 A technique to verify the effectiveness of countermeasures against a certain problem, by examining the direct cause of the problem (why did it occur) and by repeating the question "Why?" to determine the root cause.

*3 Frequency rate = (Number of employees subject to accident with lost time ÷ (total working hours) × 1,000,000
This value indicates the generation frequency of accident victims (Group company employees) per 1 million hours.

*4 Severity rate = (labor lost days) ÷ (total working hours) × 1,000
This value indicates the severity of accidents per 1,000 working hours.

Corporate Governance

Based on the Company mission, “Establish a better society through our corporate activities,” the Sanyo Chemical Group will realize sustainable growth towards the future by enhancing both economic and social values in close cooperation with all stakeholders. To this end, we consider the establishment of corporate governance that is trusted by stakeholders to be one of the highest priority management issues.

Corporate governance system

The Company has adopted a Company with an Audit & Supervisory Board structure. The Company has also introduced the executive officer system, under which Executive Officers execute business in accordance with the management policy, etc., determined at meetings of the Board of Directors. In this manner, the Company clearly separates the management decision-making and supervisory function from the business execution function.

Directors and the Board of Directors

The duration of Directors' terms of office is one year. The Board of Directors comprises nine directors, including three Outside Directors who satisfy the independence standards of the Company. With the objective of strengthening the management supervisory functions, a third of the Company's Directors are independent Directors, and the Chairman of the Board is selected from among Directors who are not involved in the execution of business.

The Board of Directors hold a meeting, in principle, once a month. It makes decisions on important matters, such as the management policy, and supervises the status of business execution. In fiscal 2021, 15 meetings of the Board of the Directors were held.

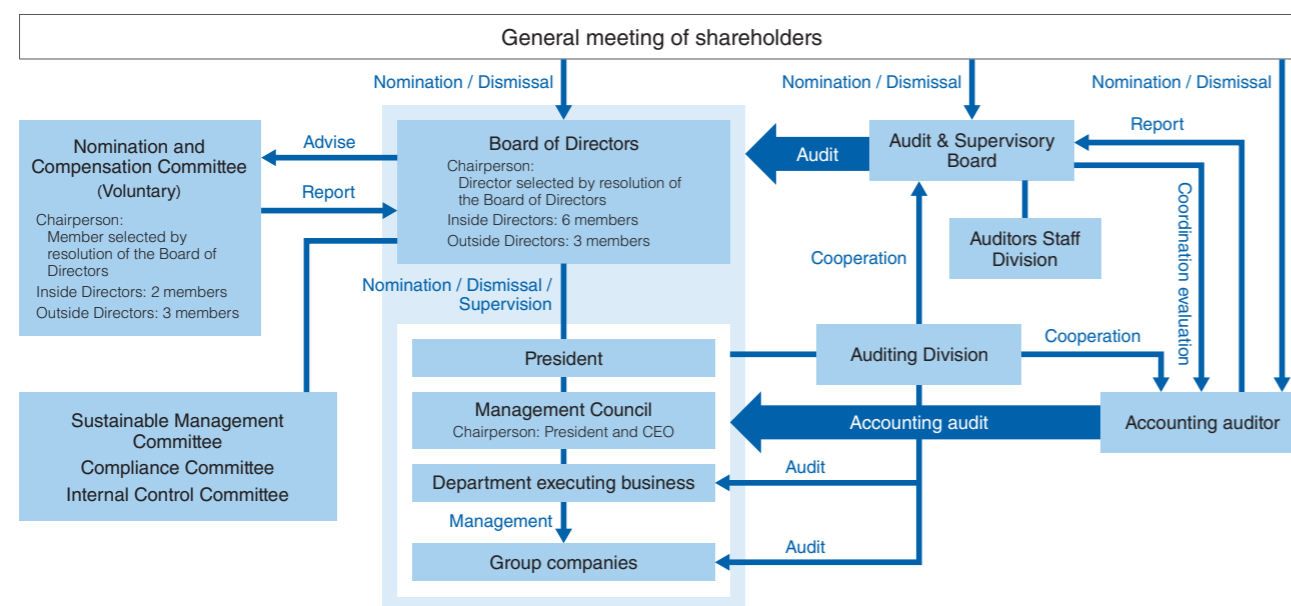
Audit & Supervisory Board Members and the Audit & Supervisory Board

Of four Audit & Supervisory Board Members, three are from outside the Company. The Audit & Supervisory Board Members not only attend Board of Directors' meetings, Management Council meetings and other important meetings, but also inspect important approval documents. They thus audit the status of Directors' business execution, capitalizing on the knowledge of inside members who are well versed in the wide range of businesses of the Company, as well as the expertise of outside members with experience concerning financial and accounting affairs or outside members with business management experience. In addition, as an organization under the direct control of the Audit & Supervisory Board, the Company has established the Auditors Staff Division. The Division staff who assist the Audit & Supervisory Board Members in their duties are independent of the Directors. By establishing this structure, we strive to secure the effectiveness of audits.

Management Council

The Management Council meets once a month, in principle, to make decisions on important matters regarding business execution, based on the management policy etc., determined at meetings of the Board of Directors.

Corporate governance structure



Committees

Nomination and Compensation Committee

Chairperson: Chairman of the Company
Frequency of meetings: 5 times (FY 2021)
Role: An advisory body to the Board of Directors. The majority of its members are outside Directors. The Committee reports to the Board of Directors the results of its deliberation on matters regarding the nomination of Directors and compensation for them.

Sustainable Management Committee

Chairperson: President and CEO
Frequency of meetings: Twice (FY 2021)
Role: As a body under the direct control of the Board of Directors, the Committee deliberates and makes decisions on the policy for responding to important matters to be addressed with high priority, regarding the process for sustainable growth, the environment, society, and governance.

Compliance Committee

Chairperson: President and CEO
Frequency of meetings: Once (FY 2021)
Role: As a body under the direct control of the Board of Directors, the Committee deliberates and makes decisions on basic policies and measures to ensure full compliance with laws and regulations.

Internal Control Committee

Chairperson: President and CEO
Frequency of meetings: Twice (FY 2021)
Role: As a body under the direct control of the Board of Directors, the Committee makes decisions on the entire internal control system, and provides instructions and supervision for the internal control system's development, operation, evaluation, and improvement activities.

Standards for selection of Directors

The Company's policy is to form a Board of Directors consisting of inside directors who have objective judgement, foresight, and insight into management issues based on their expertise, knowledge, and experience they have accumulated in sales and research or production and general affairs departments, and outside Directors who can proactively provide advice and suggestions based on their rich experience from an objective perspective. In line with this policy, the Company selects candidates while taking into account the balance and diversity of the Board of Directors, and other elements.

Standards for selection of Audit & Supervisory Board Members

The Company's policy is to form an Audit & Supervisory Board consisting of outside members who have legal independence in addition to high levels of expertise and discernment based on their experience in serving as a manager or person in charge of accounting in a listed company, and inside members who can express their opinions regarding objective auditing based on their knowledge and experience in finance and accounting or other specialized fields and who are sufficiently qualified to ensure their independence from those involved in business execution. In line with this policy, the Company selects candidates for the Audit & Supervisory Board with its agreement.

Reason for selection as Outside Director

| Name | Independent Director | Supplementary explanation on applicable items | Reason for selection |
|---------------|----------------------|--|---|
| Aya Shirai | ○ | No applicable items | We have designated Ms. Aya Shirai as an independent Director since she meets the Company's independence standards and is therefore deemed to have no conflict of interest with our general shareholders. She has a wealth of experience gained through administrative activities from her many years of involvement in municipal administration. In addition, she has experience and achievements from having been involved in corporate management as an outside Director of other listed companies. We expect that she will be involved in our decision-making processes from an independent standpoint, capitalizing on her wide breadth of knowledge of experience, which will enhance the supervisory functions of the Board of Directors. |
| Hideaki Obata | ○ | No applicable items | We have designated Mr. Hideaki Obata as an independent Director since he meets the Company's independence standards and is therefore deemed to have no conflict of interest with our general shareholders. He has abundant experience and achievements from having been involved in management over many years at companies with a wide range of business domains. We expect that he will be involved in our decision-making processes from an independent standpoint, capitalizing on his wide breadth of knowledge and experience, which will enhance the supervisory functions of the Board of Directors. |
| Yumi Sano | ○ | She is a business executive (Kansai Office General Manager) of Japan Institute for Women's Empowerment & Diversity Management, which is an outsourced contractor of the Company. Since the annual amount of actual transactions in the latest fiscal year is less than 2% of the ordinary profit of the said institute, it is not applicable to the organization whose main client is our Company. | We have designated Ms. Yumi Sano as an independent Director since she meets the Company's independence standards and is therefore deemed to have no conflict of interest with our general shareholders. She has a wealth of practical experience in promoting diversity and developing human resources in listed companies, etc. In addition, she has experience and achievements from having been involved in corporate management as an outside Director of another listed company. We expect that she will be involved in our decision-making processes from an independent standpoint, capitalizing on her wide breadth of knowledge and experience, which will enhance the supervisory functions of the Board of Directors. |

Diversity of the Board of Directors

The Company selects candidates for its Board of Directors by comprehensively considering each member's personality and other aptitudes, in order to form a Board of Directors with a good overall balance of knowledge, experience, and ability to effectively perform its roles and responsibilities. It should also ensure both an appropriate size and diversity, including in terms of gender, internationality, professional experience, and age. To enhance our corporate value in the medium to long term in keeping with the basic philosophy described below, the Nomination and Compensation Committee held discussions on the skill items required for the Company's Board of Directors and decided on the following eight items: corporate management; finance and accounting; corporate governance; international business; sales and marketing; research and development, production and new business development; human resource development and training; and understanding of diversity. These skill items will be reviewed and revised, if necessary, in the light of the business environment and social circumstances.

Basic philosophy

- Contribute to society through fulfillment of the Company mission: "Establish a better society through our corporate activities"
- Steadfastly maintain a stable management base and proactively develop new businesses while leveraging the strength of our existing businesses
- Realize a WakuWaku company that respects diversity and where all employees enjoy high job satisfaction

The current Board of Directors consists of Directors (including three independent outside Directors, two of whom are female) with knowledge or experience in line with the above skill items, and four Audit & Supervisory Board Members (one of whom is an independent outside member). In selecting these board members, the Company has taken

into account diversity, including their gender, internationality, professional experience and age, and each member's skills, experience, and personality, so that the Board of Directors achieves a good overall balance of knowledge, experience, and ability to effectively perform its roles and responsibilities. Independent outside Directors include members who have management experience at other companies.

Compensation and incentives for Directors

Compensation, etc., for the Company's Directors is designed to secure excellent human resources towards improving corporate performance, as well as to ensure that the compensation level and system reflect their duties. The compensation level and system are based on financial results, external objective data, and other factors, and the appropriateness thereof is verified by the Nomination and Compensation Committee, of which a majority of members are outside Directors. The policy for determining compensation for Directors is deliberated and determined at the Board Meeting.

With regard to bonuses for Directors, the total amount to be paid is calculated by using consolidated ordinary profit, which is a benchmark for a corporation's profitability, as an indicator, based on the status of financial results for the relevant fiscal year and over the medium to long term. Allocation is determined based on the roles and responsibilities of each Director.

The Company has also introduced a stock-based compensation system for Directors other than outside Directors. The objectives are to further clarify the link between Directors' compensation and the Company's stock price, and share the benefits and risks resulting from fluctuations with shareholders, thereby incentivizing contributions toward enhancing business performance and corporate value over the medium to long term.

Skills matrix

| Name | Position | Independent outside | Meeting attendance | Corporate management | Finance and accounting | Corporate governance | International business | Sales and marketing | R&D, production, and new business development | Human resource development and training | Understanding of diversity |
|----------------------|---------------------------------------|---------------------|--------------------|----------------------|------------------------|----------------------|------------------------|---------------------|---|---|----------------------------|
| Takao Ando | Chairman | | 15/15 (100%) | ● | | ● | ● | ● | ● | ● | ● |
| Akinori Higuchi | Representative Director and President | | 15/15 (100%) | ● | | | ● | ● | ● | ● | ● |
| Kohei Maeda | Representative Director | | 15/15 (100%) | ● | | | | ● | ● | | ● |
| Hiroyuki Shimominami | Director | | 15/15 (100%) | ● | | | ● | ● | | | ● |
| Masahiro Harada | Director | | (Newly appointed) | | | | | ● | ● | | ● |
| Kenichi Nishimura | Director | | (Newly appointed) | | ● | ● | ● | | | | ● |
| Aya Shirai | Director | ● | 15/15 (100%) | ● | | ● | | | | ● | ● |
| Hideaki Obata | Director | ● | 11/12 (92%) | ● | | ● | ● | ● | ● | ● | ● |
| Yumi Sano | Director | ● | 12/12 (100%) | | | ● | | | | ● | ● |

Training for Directors and Audit & Supervisory Board Members

For inside and full-time Directors and Audit & Supervisory Board Members, when they assume office, we provide explanations on relevant laws and regulations, the Company's Articles of Incorporation, the Board of Directors regulations and other internal regulations. For outside Directors and full-time Outside Audit & Supervisory Board Members, we facilitate their understanding of the Company's businesses by conducting inspection tours to our factories and other operation sites. We also offer opportunities to acquire necessary knowledge and information by such means as participation in external seminars on corporate governance.

Major discussion topics and themes

Board of Directors

- Formulation of management policies and comprehensive plans
- Policy on operating major businesses
- Matters regarding investment, financing, donations
- Confirmation of the results of the effectiveness evaluation of the Board of Directors
- Matters on which to seek advice from the Nomination and Compensation Committee
- Approval of closed financial statements
- Matters regarding procedures for the general meeting of shareholders
- Resolutions are made primarily based on the Companies Act
Resolutions on conflict-of-interest transactions, directors' and officers' liability insurance, etc., based on the Companies Act
Appointment and dismissal of important employees
Matters related to compensation for directors

Nomination and Compensation Committee

- About the composition (diversity) of the Board of Directors
- Development of a plan for selecting a successor to the President
- Formulation of the policy and standards for selection of the President
- Formulation of the policy and standards for dismissal of the President
- Verification of the Directors' compensation level
- Verification of the Directors' compensation system and the process of determining their compensation

Sustainable Management Committee

- Organization of a system of principles in sustainable management
- Basic Policy on Sustainability
- Identification of material issues
- Initiatives to address climate change

Compliance Committee

- Implementation and planning of corporate ethics study meetings
- Results of the use of whistleblowing contact points for consultation or reporting

Internal Control Committee

- Results of the evaluation of internal control activities related to financial reports
- About proposals for disclosing the operational status of the Internal Control System in the Business Report
- Results of the evaluation of the operational status of the Internal Control System regarding significant risks other than those included in financial reports

Effectiveness evaluation of the Board of Directors

Outline of survey

Date: January 2022
Those surveyed: All Directors (9 persons) and all Audit & Supervisory Board Members (4 persons)
Survey method: Anonymous survey, rating on a five-point scale or free description
Evaluation method: Using the system of a third-party organization
Questionnaire items:

- ① Composition and operation of the Board of Directors
- ② Discussions at Board of Directors meetings
- ③ Monitoring function of the Board of Directors
- ④ Support system and training for Directors and Audit & Supervisory Board Members
- ⑤ Efforts made by each Director
- ⑥ Dialogue with shareholders

Outline of the results

- We recognized that the Board of Directors' effectiveness is generally assured.
- The previous year's evaluation results indicated that there was room for improvement in terms of "reinforcing the governance system," "improving discussions on management strategies from a medium- to long-term perspective," and "enhancement of support to outside Directors," in order to further improve the effectiveness of the Board of Directors. This year's results showed certain improvement in these matters. At the same time, we recognized anew the need for continuous improvement efforts.
- Of the activities in fiscal 2021, high ratings were given to the voluntary establishment of the Nomination and Compensation Committee and explanations given by the executive officers regarding their proposals submitted to board meetings.

Risk Management

To avert business continuity crises and prepare for unforeseen circumstances, the Sanyo Chemical Group has established internal regulations to cope with each possible risk. We conduct risk management by raising the risk awareness of employees by providing training and holding drills.

Risk management system

In order to address risks surrounding the Group, internal regulations such as the Operational Responsibilities Regulations, the Basic Regulations for Product Liability (PL), and the Information System Security Regulations have been formulated, and the departments in charge shall manage the risks. The Auditing Division (Business Auditing Department or Technical Auditing Department) under the direct control of the President monitors the status of risk management with the Group. If a risk arises, the Internal Control Department serves as a point of contact and deals with the risk in a timely and appropriate manner. The Department also develops recurrence prevention measures, which are implemented by relevant departments.

Business continuity plan(BCP)

A business continuity plan(BCP) is a plan designed in advance to minimize a decline in a company's business activities, if the company is adversely affected by a natural disaster, accident, or other unexpected event, and to recover in the shortest possible time.

There are a wide variety of conceivable risks. The Group has drawn up BCPs that prepare for response in the event of a massive earthquake or a pandemic. The BCP Secretariat, which is in charge of revising the documents, has been set up within the Internal Control Department. We also continuously hold practical drills in each region.

Information management

In accordance with the remarkable development of information and communication technology, the communication environment has been rapidly changing, bringing about greater convenience as well as increasing threats. Since the introduction of the telework system, the Company has seen increasingly widespread use of IT equipment outside the offices/factories. To ensure IT security, we have established the Information System Security Regulations and the Personal Computer and Network Management Regulations, and introduced a firewall and other network security systems. We also manage licenses for the use of information systems and limit access to the Internet. As for the protection of personal information, we have laid down the Personal Information Protection Policy, which stipulates the purpose and methods of use of personal information and its management, as well as consultation procedures regarding such information. Moreover, we comply with the Social Media Policy, formulated to address issues concerning employees' personal use of social media, which has become a matter of concern in various companies in recent years.

Overseas crisis management activities

The Sanyo Chemical Group has established and implemented the Basic Regulations for Overseas Crisis Management, which set forth basic points for reducing risks that may cause harm to the lives, bodies and property of the Group employees outside Japan, and for responding to an overseas crisis if such an event should occur. The Overseas Crisis Management Secretariat constantly gathers and analyzes information and issues overseas travel warnings as necessary. We have also determined the crisis management organizations and the chain of command that will function in case of emergency, and defined the responsibilities and authority of the Overseas Crisis Management Secretariat and the response headquarters, so that appropriate responses can be made accordingly. When a BCP is implemented, the overseas crisis management organizations will work in coordination with the Business Continuity Task Force.

Compliance

In the Code of Corporate Ethics, we have declared that it is essential corporate behavior to ensure legal compliance and to fulfill our corporate social responsibility. The Sanyo Chemical Group is voluntarily adopting this advice in order to realize a sustainable society and to fulfill the Company mission, "Establish a better society through our corporate activities," with common sense and integrity towards society as a whole.

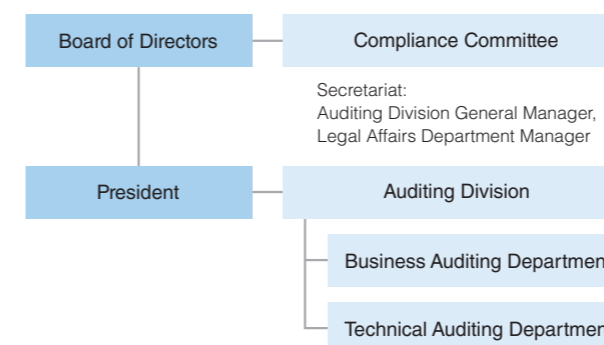
Compliance system

We have appointed a Director in charge of corporate ethics and established the Compliance Committee, which is under the direct control of the Board of Directors.

The Compliance Committee is a deliberative and decision-making body on the basic policy and measures regarding compliance. As a rule, the Committee holds regular meetings twice a year.

We have also set up the Auditing Division under the direct control of the President, so as to strengthen our internal auditing function.

■ Compliance promotion organization



Internal auditing

The Business Auditing Department and the Technical Auditing Department of the Auditing Division conduct internal auditing. These departments objectively inspect and evaluate the business management and operation systems and the status of business execution in terms of legitimacy, effectiveness, and efficiency. Based on the results, these auditing departments make proposals for improvement or corrective recommendations, in order to facilitate the Company's sound management and sustainable development.

The Business Auditing Department audits matters related to personnel, finance, accounting, sales, purchasing, international business affairs, etc. The Technical Auditing Department audits matters related to research and technological development, production, logistics, etc.

Internal whistleblowing system

If an employee becomes aware of a compliance problem, the employee should basically discuss it with his/her supervisor and/or the personnel concerned. However, if the problem cannot be resolved through such discussions, the employee can use the internal reporting service (compliance hotline), whose points of contact are set up both inside the Company and outside. The General Manager of the Auditing Division, who is a member of the Compliance Committee Secretariat, serves as the internal contact point for whistleblowing. For consultation outside the Company, employees may use a corporate lawyer's office. The whistleblowers' confidentiality is carefully protected.

In fiscal 2021, two reports were submitted through the compliance hotline.

Education and awareness-raising activities

Every autumn, the Sanyo Chemical Group observes a Corporate Ethics Month with the objective of preventing the occurrence of corporate misconduct. During the month, all departments in the Group hold study sessions, the results of which are reported to the personnel in charge of corporate ethics. In recent years, these sessions have placed particular focus on the kind of corporate culture that may form the background to corporate misconduct, and we have learned that corporate culture reform leads to improved compliance.

In each Corporate Ethics Month from fiscal 2019, we have held a group discussion after viewing an educational video created outside the Company, by revising the content and methods of past study sessions.

Spirited Discussion Meeting of Outside Directors



Aya Shirai
Outside Director

Hideaki Obata
Outside Director

Yumi Sano
Outside Director

Here are conversations from a discussion meeting of Outside Directors, which we planned to let readers gain a glimpse of the Company's corporate governance practices. The three directors fully discussed the essential theme—what is WakuWaku Management—in line with the recently announced management strategy “WakuWaku Explosion 2030.” They also talked about Kinmirai (near future) Camp, in which directors stay and interact together for three days and two nights, and topics related to the Board of Directors.

Kinmirai Camp serves as a place for honest debate

Obata: When I first participated in the Kinmirai Camp, I had just taken up my present post in June 2021, so I still didn't know much about the Company. However, the Camp was very informative. I remember that around 40 directors got together at the meeting, where they spoke freely about the management plan, each department's plans, and other issues. During the meeting, Mr. Higuchi attentively listened to the other directors. I was very impressed with his attitude, which made it easier for directors to freely and actively express their opinions, not only about their own divisions, but also about the entire Company. In this sense, I think the foundation for WakuWaku Management has already been established to a certain extent.

Sano: The theme of the Kinmirai Camp was “How can we realize the Vision of Sanyo Chemical?” It is typical for companies to discuss the gap between their vision and the present situation. However, the directors of Sanyo Chemical had a positive way of thinking and expressed their dreams toward achieving the Vision. It left me with a very nice expression.

Each director made a statement of about two minutes. I felt that so-called psychological safety was maintained at the meeting. There was a perfect balance between the leadership style shown by Mr. Higuchi, who closely listened to the others, and the punchy directions

sometimes given by Mr. Ando. When Mr. Ando issued a direction saying, “Immediately take action to ensure that female members account for 20-30% of all participants of the meeting,” I was impressed with his great agility.

Ms. Shirai, you have witnessed the evolution of the Kinmirai Camp. How do you feel about it?

Shirai: This year it was the fourth time for me to participate in the Kinmirai Camp, which is an annual event. Although this 3-day and 2-night program is long and hard, I believe that we can exchange our true opinions at the meeting. Any company can hold many meetings. However, the Kinmirai Camp offers a rare opportunity to engage in honest debate during the 3 days and 2 nights, both during work hours and after hours. I therefore feel that Sanyo Chemical's Kinmirai Camp is different from similar programs of other companies.

Outside Directors find the uniqueness of Sanyo Chemical in its corporate culture

Obata: I think that the uniqueness of a company is something like corporate culture or DNA. This is extremely important for a company. If it takes approaches or measures that are a good fit for its corporate culture, they will take root, but they are ill-fitted, these approaches and measures will fail. I therefore believe it is vital for Sanyo Chemical to consider how we should recognize its uniqueness and how to share it. It may be a good idea to

have an in-depth discussion to revisit the nature of Sanyo Chemical's uniqueness.

Sano: Since the time when Mr. Ando was President, Sanyo Chemical has promoted DEI (Diversity, Equality, and Inclusion) with the highest level of commitment. The Company strives to fulfill its mission “Establish a better society through our corporate activities” in a form that meets present-day needs by promoting DEI. This approach has something in common with the basic philosophy of the SDGs: “the realization of a sustainable, diverse and inclusive society where ‘no one will be left behind.’” This approach clearly represents the uniqueness of Sanyo Chemical. Its top management in person tells employees that Sanyo Chemical will embody this philosophy as a company.

Obata: Reading the history of the Company, I realize that Sanyo Chemical placed human resources at the center of its management from very early on. In 1988, the Company was already referring to “people-oriented management,” had introduced a performance-based wage system, and established a career development system for employees. Most Japanese companies began to reform their business structures and personnel systems in the mid-1990s after the burst of the bubble economy. In contrast, Sanyo Chemical developed its concept of people-oriented management around 1988 in the midst of the bubble era. Probably we can find some clues leading to this concept in the Company's history.

As part of that history, Mr. Ando commenced diversity management. It has now evolved into WakuWaku Management, which spotlights every employee. In this manner, the Company has advanced step by step. This is Sanyo Chemical's corporate culture, DNA, and uniqueness.

Since WakuWaku Management stems from the uniqueness of the Company, I believe it will take root in the organizational culture. The next development will also come from the Company's uniqueness. Sanyo Chemical has maintained such a positive growth cycle, which is not borrowed but has originated from within.

Shirai: When I accepted my appointment as Outside Director four years ago, I wondered what contribution I could make here. I then heard that for a very long time Sanyo Chemical has had so-called salons where directors voluntarily assemble and learn from each other, transcending the boundaries of departments and positions. I told Mr. Ando, who was then President, that I wanted to set up a salon, and obtained his approval. Since then, I have continued to hold the salon over the past four years, with the Diversity Promotion Department acting as the point of contact. Every time the salon is held, between five and ten employees participate. These participants talk about everything, including the Company's strengths and drawbacks, how they usually feel, and their personal problems. So far, the salon has been held a total of 40 times at the Company's Nagoya and Kashima Factories, and at Kawasaki Factory of San Chemical Co., Ltd. The total number of participants is estimated to have been between 400 and 500.

Although I am a person from outside the Company,

Sanyo Chemical accepted my request to organize the salon. I'm sure that this is because salons have taken root in the Company as part of its corporate culture. During a two-hour salon session, participants talk about their honest feelings, even if they are mutual strangers, and empathize with and encourage each other. I was truly surprised to know the Company has such a corporate culture. I believe that the historical background of valuing others has made the Company what it is today.

Obata: It may be true that you couldn't have inaugurated a salon without the Company having such a corporate culture, but in Japan there may be very few outside directors like you who try to do things like that. Even though the salon system already existed in the Company, I feel that an Outside Director's involvement will lead to the system becoming even more unique.

Outside Directors play their roles

Sano: It is less than one year since I was appointed Outside Director. However, I can receive explanations about the discussion topics before a meeting of the Board of Directors. At the board meeting, we discuss many challenging tasks, such as new businesses and joint ventures. Nevertheless, the directors who have drafted the plan explain it cheerfully. I think that these directors enjoy doing what they want to do in a free atmosphere, despite the feeling of tension present during the board meeting. When Mr. Obata asked the question, “Is there a numerical target?” Mr. Ando and Mr. Higuchi replied, “No. Even if we fail, we can return to the original state.”

Obata: When I heard them saying that no numerical targets were necessary, I said, “I don't think that's a good idea.” My remark evoked a debate, which I believe was not unproductive. To ensure the sound performance of the Board of Directors, it is necessary to always have an antithesis. However, even though the Company encourages candid dialogue, it is actually difficult to present an objection because of the superior-subordinate relationships. It is the Outside Directors who can raise an objection against management.

Sano: The Chairman, President, and we Outside Directors are all in the same boat called “Sanyo Chemical.”





When the boat is wondering which direction to go, although I have no chemical expertise, I try to make a comment from an objective perspective after considering what stakeholders, including minority shareholders, will think. I believe that it is exactly the reason for the existence of Outside Directors.

Obata: Also, regarding the practice of WakuWaku Management, we should play our roles as Outside Directors. To have every employee become WakuWaku, the Company may allow individual employees to do what they want. However, if their efforts are dispersed in all directions, the Company, with its limited resources, will be in great trouble. It is therefore extremely important to bring our efforts into alignment while promoting the WakuWaku Explosion of everyone. The keyword is “profit.” The concept “Every department is a profit center” is probably based on the idea that if each and every employee is encouraged to think of profit, then their efforts will naturally be aligned in the direction indicated in the management policy. As Outside Directors, I think that we must have the function to check this.

The Board of Directors continues to evolve

Shirai: The Board of Directors has also made significant progress. When I joined the Board four years ago, resolution matters were given to us on the spot during a board meeting. So the Outside Directors requested information sharing and background briefings on these matters in advance. Now, we can receive prior notice even regarding matters currently under discussion within the Company, and explanations about a new business or project are provided not only by directors but also by young employees in charge. As an aside, it is inspiring for us to see these young employees taking charge of the new business and tackling their responsibilities with a strong awareness of the issues. With many young employees like them, the Company's future looks bright.

Obata: In the past, almost nobody spoke at a board meeting. In-house meetings, such as department meetings, managing executive officers' meetings, management meetings, and the Board of Directors' meetings, were held with almost the same attendees. So, there were no cases of decisions that had been discussed being overturned at a board meeting in the long run. How-

ever, now that the Company has Outside Directors, some debates may occur at the board meeting. Even after I say “I see” when receiving a prior explanation, if questions arise during later consideration, I will not hesitate to ask the questions. This is because if I say “Yes” without being convinced of the matter at the board meeting, it may cause the Company to choose the wrong path.

Shirai: In such a case, another discussion may begin. We may also have to start over again at the next meeting.

Obata: If so, decision making will be delayed a little. However, if there is a true need for urgency, the Company can hold an extraordinary meeting of the Board of Directors. I think that it is our role to say something that may turn everything upside down.

Shirai: The minutes of board meetings have changed as well. Previously, the minutes just reported that “All directors agreed without objection,” and did not record who said what during the meeting. For this reason, we have no way to know what was discussed at past meetings. To resolve this problem, the minutes now include all information about who said what.

Obata: Immediately after I became an Outside Director, a meeting of the Board of Directors was held to deliberate on a considerably critical issue. Since I had only a little information obtained from newspapers, I was going to say nothing and listen at the meeting. However, Mr. Higuchi asked every member to make a comment. It was the first time I had been called on to speak at a board meeting.

Sano: It is innovative that the President sought a comment from an Outside Director, who did not know much about what was going on until then. However, the fact that you were given an opportunity to have your say indicates the Company's expectation for Outside Directors.

Shirai: I remember that Mr. Higuchi repeatedly stressed the importance of the issue.

Are the interests of minority shareholders protected?

Obata: The Company was established under the name of Sanyo Oil & Fat Industrial Co., Ltd., in 1949 by Toyo Cotton and Toyo Rayon (now Toray Industries). After being renamed Sanyo Chemical Industries in 1963, the Company was listed in 1968. Since then, the percentage of general shareholders has gradually increased, but about 40% of common stock is still owned by large shareholders at present. Nevertheless, the Company is not managed by large shareholders, so we can recognize that the autonomy of the management is maintained. To reward all shareholders, the Company aims to improve its dividend payout targeting a payout ratio of 30% or higher. The ratio was 56% at the end of fiscal year 2021. Despite the spread of COVID-19 infections and the impact of Russia's invasion of Ukraine, our profit has increased relatively steadily. It is therefore safe to say from an Outside Director's perspective that none of the Company's management policies are disadvantageous to minor shareholders.

Shirai: That's right. I am involved in discussions at board meetings with the sheer desire to provide accountability to stakeholders. I always deliberate on resolution matters from this viewpoint.

Obata: Whenever attending a board meeting myself, I intend to discuss matters from the standpoint of shareholders and other various stakeholders while taking into account the global environment and the Company's social contribution. I also feel that the Company ensures benefits for stakeholders. In this sense, I don't think there is anything to worry regarding the interests of minor shareholders for the time being.

Sano: In considering how we can directly protect the interests of minor shareholders, I think the first thing is to provide information accurately and fairly.

Shirai: As for shareholder composition, I would like to suggest another point of view. Since about ten years ago, companies have reduced cross-shareholdings, as required by Japan's Corporate Governance Code. In this sense, it is the Company's clear mission to figure out a way to increase the number of stable shareholders.

Previously, after a general meeting of shareholders, the Company held a dinner party to exchange with general shareholders. The event was a precious opportunity to hear various opinions. Participating shareholders expressed their views about the Company's direction, and sometimes I was asked personal questions. We were able to feel closer to shareholders and hear what they had to say. The dinner party is no longer held, due to COVID-19. I think that we need more opportunities for interacting with shareholders. Currently, these occasions are limited to some management personnel and IR department members. It is important for us Outside Directors to create these opportunities or participate in interactive events.

Sano: Indeed, direct dialogue with shareholders is very important.

What is WakuWaku?

Sano: WakuWaku can be defined in many ways. Some had the opinion that WakuWaku means “continuing to increase salaries.” It is true that sufficient income is necessary, but employees cannot be happy just by earning a good salary. They need to develop motivation spontaneously.

It is about half a year since the WakuWaku Management policy was launched. I think that Mr. Higuchi and Mr. Ando also feel WakuWaku now. The same holds true for directors, auditors, and executive officers. How about employees in middle management? There will be no future for a company without a functioning cadre of middle management that will form the next generation of senior managers. The challenge is to find a better method to inspire WakuWaku feeling of all those in middle management and general employees.

Obata: WakuWaku Management is based on an interesting idea. In the present age, many people think that what matters is not always the corporate growth rate or profit ratio. Different people have a different sense of values, with some

finding value in making a social contribution while some others want to promote diversity. I think that WakuWaku Management intends to help every employee achieve self-actualization, which will lead to the Company's growth.

Sano: The internal multiple work system is now in the trial phase. I think this system is wonderful. It will serve as a source of WakuWaku feeling. I know of some other companies that permit employees to have a second job outside. However, by offering the internal multiple work system, Sanyo Chemical sends the message that it will support employees' initiatives, saying, “You are encouraged to find an interesting or attractive theme anywhere in the Company, and take on new challenges to pursue that theme.” We also need to review the conventional work styles. I expect that in the process of disseminating the system's concept company-wide, employees will become more motivated and have higher job satisfaction, resulting in the creation of a culture that is full of WakuWaku.

Shirai: During the Kinmirai Camp, we had the following discussions: Some employees leave the Company, while others join from other companies. Those who could not display their abilities at Sanyo Chemical may move to another company, where their skills are more highly regarded. If so, it would be wonderful. Also, there may be mid-career workers who want to join the Company. We would be very pleased if they are able to exhibit for us the abilities that they cultivated at the previous company. The essential idea is that WakuWaku feeling should be shared not only within the Company but also across society at large. It was a refreshing surprise to learn that the management of Sanyo Chemical has a truly broad conception of WakuWaku.

Obata: Beside WakuWaku of employees, Sanyo Chemical values WakuWaku of shareholders, society, and the global environment. The Company aims to offer WakuWaku feeling to all stakeholders as an ultimate outcome (creation of social value). This is the concept of WakuWaku Management. To be a company that makes all stakeholders WakuWaku, I am sure that profit is the key. **Sano:** How true. The Company mission is to “Establish a better society through our corporate activities.” That is indeed the intended outcome, isn't it? I was happy to have a very meaningful discussion today, just as we did during the Kinmirai Camp.



Directors, Audit & Supervisory Board Members, and Executive Officers

As of July 2022

Directors



Takao Ando
Chairman

Date of birth: March 7, 1953
 Apr. 1977 Joined the Company
 Jun. 1998 Director, Deputy General Manager of Research & Development Division
 Apr. 2001 Director, General Manager of Research & Development Division
 Jun. 2003 Executive Officer, General Manager of Research & Development Division
 Jun. 2004 Executive Officer, General Manager of International Project Promotion Division
 Jun. 2008 Managing Executive Officer
 Jun. 2010 Director, Senior Managing Executive Officer
 Jun. 2011 Representative Director, President & CEO
 Jun. 2021 Chairman
 Chairman of the Board of Directors (to present)



Akinori Higuchi
Representative Director,
President and CEO

Date of Birth: November 7, 1959
 Apr. 1984 Joined the Company
 Jun. 2012 President, Representative Director of SAN NOPCO LIMITED
 Jun. 2014 Executive Officer of the Company
 President, Representative Director of SAN NOPCO LIMITED
 Jun. 2015 Managing Executive Officer
 Jun. 2016 Director, Managing Executive Office
 Jun. 2018 Director, Senior Managing Executive Officer
 Jun. 2020 Representative Director, Executive Vice President
 Jun. 2021 Representative Director, President & CEO (to present)



Yumi Sano
Outside Director

Date of birth: August 20, 1961
 Apr. 1984 Joined Shikishima Boseki Ltd.
 Apr. 1997 Joined Kansai Employers' Association
 Apr. 2004 General Manager, Membership Administration
 Apr. 2013 Joined Japan Institute for Women's Empowerment & Diversity Management
 Apr. 2014 General Manager, Kansai Office (to present)
 Jun. 2021 Outside Director of the Company (to present)



Kohei Maeda
Representative Director,
Executive Vice President,
in charge of Production,
and General Manager of
Production Division

Date of birth: November 3, 1960
 Apr. 1985 Joined the Company
 Oct. 2012 Executive Officer, General Manager of Research & Application Division, and Head of Head Office Research Laboratory
 Jun. 2014 Director, Executive Officer, General Manager of Research & Application Division, and Head of Head Office Research Laboratory
 Jun. 2015 Director, Managing Executive Officer, in charge of Research & Development
 Jun. 2019 Director, Senior Managing Executive Officer
 Jun. 2021 Representative Director, Executive Vice President, supervising R&D
 Jun. 2022 Representative Director, Executive Vice President, in charge of Production, and General Manager of Production Division (to present)



Hiroyuki Shimominami
Director, Managing
Executive Officer

Date of birth: January 22, 1960
 Apr. 1983 Joined Tomen Corporation
 Oct. 2005 General Manager of Industrial Materials Department
 Apr. 2009 President of Toyota Tsusho (H.K.) Co., Ltd.
 Jun. 2013 Executive Officer of the Company
 Director of San-Dia Polymers Co., Ltd.
 Apr. 2014 Executive Officer,
President, Representative Director of SDP Global Co., Ltd. (to present)
 Jun. 2016 Director, Executive Officer
 Jun. 2020 Director, Managing Executive Officer (to present)



Hirokazu Kurome
Outside Audit & Supervisory
Board Member (Full-time)

Date of birth: September 5, 1957
 Apr. 1982 Joined Toray Industries, Inc.
 Nov. 2009 General Manager of Tsuchiura Plant
 Jun. 2012 General Manager of Gifu Plant
 May. 2015 General Manager of Mishima Plant
 Jun. 2016 Member of the Board of Toray Industries (Malaysia) Sdn. Berhad
 President of Penfibre Sdn. Berhad
 Jun. 2018 Full-time Director, Deputy Representative for Malaysia of Toray Industries, Inc., Toray Industries, Inc.
 Vice President of Toray Industries (Malaysia) Sdn. Berhad
 May. 2021 Full-time Director in charge of Corporate Strategic Planning Division of Toray Industries, Inc.
 Jun. 2021 Outside Audit & Supervisory Board Member of the Company (to present)



Takafumi Horie
Audit & Supervisory Board
Member (Full-time)

Date of birth: July 6, 1958
 Apr. 1983 Joined the Company
 Jul. 2003 Deputy General Manager of Research & Development Division, and General Manager of Environmental Chemicals Research Department
 Jun. 2005 General Manager of Research & Application Division
 Jun. 2010 President, Representative Director and General Manager of Research & Development Control Division of SAN NOPCO LIMITED
 Jun. 2012 General Manager of Purchasing Division of the Company
 Jun. 2014 General Manager of Research Administration Division
 Jan. 2016 General Manager of Auditing Division and General Manager of Internal Control Department
 Jun. 2019 Audit & Supervisory Board Member (to present)



Masahiro Harada
Director, Managing Executive
Officer, supervising Business
Planning, General Manager of
Energy Business Division,
and General Manager of
Biotechnology & Medical
Division

Date of Birth: February 8, 1964
 Apr. 1989 Joined the Company
 Jul. 2010 General Manager of Automotives II & Foam Industry Department
 Apr. 2017 General Manager of Electronic Materials, Resins & Coloring Materials Division
 Jun. 2018 Executive Officer, General Manager of Electronic Materials, Resins & Coloring Materials Division
 Jun. 2021 Managing Executive Officer, General Manager of Business Planning Division and General Manager of Energy Business Promotion Division
 Apr. 2022 Managing Executive Officer, General Manager of Business Planning Division and General Manager of Energy Business Division
 Jun. 2022 Director, Managing Executive Officer supervising Business Planning, General Manager of Energy Business Division, and General Manager of Biotechnology & Medical Division (to present)



Kenichi Nishimura
Director, Executive Officer,
in charge of Corporate
Ethics and General Affairs,
and General Manager
of Administrative Affairs
Division

Date of birth: January 3, 1965
 Apr. 1988 Joined Sumitomo Bank, Limited
 Mar. 1990 Joined Toray Industries, Inc.
 Sep. 2011 Manager of Finance & Accounting Department, Member of the Board of Toray Industries (Malaysia) Sdn. Berhad
 Sep. 2017 General Manager of Finance Department of Toray Industries, Inc.
 Sep. 2021 Deputy General Manager of Administrative Affairs Division of the Company
 Jun. 2022 Director, Executive Officer in charge of Corporate Ethics and General Affairs, and General Manager of Administrative Affairs Division (to present)



Jun Karube
Outside Audit &
Supervisory Board Member

Date of birth: July 1, 1953
 Apr. 1976 Joined Toyota Tsusho Corporation
 Jun. 1999 General Manager of Logistics Business Department
 Jun. 2004 Member of the Board
 Apr. 2006 Executive Officer
 Jun. 2008 Managing Executive Officer
 Jun. 2011 President & CEO, Representative Director
 Jun. 2018 Chairman of the Board, Representative Director
 Jun. 2019 Outside Audit & Supervisory Board Member of the Company (to present)
 Jun. 2020 Chairman of the Board of Toyota Tsusho Corporation
 Outside Audit & Supervisory Board Member of KDDI Corporation (to present)
 Jun. 2022 Senior Executive Advisor of Toyota Tsusho Corporation (to present)



Yusuke Nakano
Outside Audit &
Supervisory Board Member

Date of birth: May 15, 1969
 Apr. 2002 Registered as certified public accountant
 Jul. 2005 Executive Senior Partner of Seiyu Audit Corporation (to present)
 Sep. 2005 Registered as certified tax accountant
 Jan. 2010 Head of NAKANO C.P.A. OFFICE (to present)
 Dec. 2014 Outside Auditor of SK-Electronics CO., LTD.
 Jun. 2015 Independent Audit and Supervisory Board Member of Nissha Co., Ltd. (to present)
 Dec. 2018 Outside Director (Audit and Supervisory Committee Member) of SK-Electronics CO., LTD. (to present)
 Jun. 2021 Outside Audit & Supervisory Board Member of the Company (to present)



Aya Shirai
Outside Director

Date of birth: May 23, 1960
 Apr. 1979 Joined ALL NIPPON AIRWAYS CO., LTD.
 Jun. 1993 Member of Amagasaki City Council
 Dec. 2002 Mayor of Amagasaki City
 Jun. 2018 Outside Director of the Company (to present)
 Jun. 2019 Outside Director of BROTHER INDUSTRIES, LTD. (to present)
 Jun. 2022 Outside Director of Royal Hotels Co. Ltd. (to present)



Hideaki Obata
Outside Director

Date of birth: February 18, 1951
 Apr. 1973 Joined Sumitomo Electric Industries, Ltd.
 Jun. 2004 Executive Officer, General Manager of HR & Administration Division
 Jun. 2008 Managing Director, Vice General Manager of Manufacturing Management & Engineering Unit, and General Manager of HR & Administration Division
 Jun. 2009 Senior Managing Director of Nissin Electric Co., Ltd.
 Jun. 2010 Representative Director & Senior Managing Director
 Jun. 2011 President
 Jun. 2017 Chairman
 Jun. 2021 Outside Director of the Company (to present)
 Special Adviser of Nissin Electric Co., Ltd. (to present)
 Chairman of Kyoto Prefecture Council of Social Welfare (to present)

Executive Officers

Hiroyuki Tsuruta Senior Managing Executive Officer, supervising Sales, and General Manager of Surfactants Division

Yuichi Fujii Managing Executive Officer, supervising R&D, General Manager of Polyurethane Division, General Manager of Research Administration Division, Head of Head Office Research Laboratory, and Head of Katsura Research Laboratory

Hiroyuki Susaki Managing Executive Officer, General Manager of Corporate Planning Division

Yoshiyuki Oku Managing Executive Officer, General Manager of Personnel Division

Masahiro Fukui Executive Officer, General Manager of Responsible Care Division

Minoru Tsuchiya Executive Officer, General Manager of Lubricant Additives Division

Koji Nire Executive Officer
Representative Director and
President of SAN NOPCO LIMITED

Motohisa Miyawaki Executive Officer, General Manager of Engineering Division

Tatsuya Nakano Executive Officer, General Manager of Performance Materials Division

Sho Takeuchi Executive Officer, General Manager of General Affairs Division

Yusuke Yamamoto Executive Officer, General Manager of Industrial Chemicals Division

Eleven-year Financial Summary

Sanyo Chemical Industries, Ltd and Subsidiaries

| Annual | FY2011 | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 | FY2018 | FY2019 | FY2020 | FY2021 (Millions of yen) |
|---|----------|----------|---------|----------|----------|------------|----------|----------|----------|----------|-----------------------------|
| Net sales | 141,041 | 142,652 | 165,183 | 167,045 | 157,992 | 150,166 | 161,692 | 161,599 | 155,503 | 144,757 | 162,526 |
| Operating profit | 5,762 | 6,186 | 8,110 | 8,944 | 12,486 | 13,647 | 11,999 | 12,919 | 12,439 | 11,932 | 11,868 |
| Ordinary profit | 6,958 | 7,266 | 9,212 | 10,278 | 13,294 | 15,341 | 13,866 | 15,205 | 12,704 | 11,999 | 12,771 |
| Profit before income taxes | 6,711 | 6,773 | 8,179 | 9,554 | 11,640 | 13,854 | 12,144 | 7,541 | 11,008 | 10,638 | 10,734 |
| Profit attributable to owners of parent | 3,704 | 4,179 | 4,918 | 5,876 | 6,926 | 10,192 | 9,272 | 5,345 | 7,668 | 7,282 | 6,699 |
| Comprehensive income | 4,370 | 6,565 | 11,071 | 15,341 | 2,627 | 11,196 | 11,356 | (760) | 2,178 | 15,272 | 8,082 |
| Investment in plant and equipment | 12,799 | 9,899 | 7,497 | 10,520 | 14,333 | 13,500 | 13,923 | 10,848 | 8,219 | 10,073 | 9,847 |
| Depreciation | 9,498 | 9,182 | 9,642 | 9,604 | 9,256 | 7,412 | 8,299 | 9,087 | 9,078 | 9,569 | 9,533 |
| Research and development expenses | 4,671 | 4,511 | 4,659 | 5,515 | 5,622 | 5,443 | 5,365 | 5,569 | 5,322 | 5,384 | 5,650 |
| Cash flows from operating activities | 8,872 | 13,293 | 15,769 | 11,518 | 22,625 | 20,416 | 15,710 | 14,603 | 17,232 | 22,300 | 11,328 |
| Cash flows from investing activities | (11,473) | (13,413) | (8,659) | (8,656) | (13,510) | (14,198) | (14,198) | (11,312) | (11,115) | (12,498) | (11,704) |
| Cash flows from financing activities | 42 | 406 | (2,567) | (2,922) | (5,493) | (1,043) | (7,328) | (1,492) | (7,084) | (4,146) | (5,979) |
| Year-end | | | | | | | | | | | (Millions of yen) |
| Total assets | 149,196 | 155,438 | 166,529 | 181,029 | 175,321 | 186,863 | 199,179 | 193,630 | 178,873 | 195,723 | 200,194 |
| Property, plant and equipment | 54,443 | 56,208 | 56,076 | 58,766 | 60,870 | 63,530 | 69,883 | 62,324 | 60,716 | 61,255 | 61,389 |
| Interest-bearing debts | 15,236 | 18,648 | 18,756 | 18,492 | 14,862 | 15,204 | 10,599 | 11,985 | 9,667 | 9,274 | 7,887 |
| Net assets | 90,526 | 94,279 | 103,907 | 117,688 | 118,284 | 127,651 | 136,270 | 132,623 | 130,097 | 142,951 | 147,032 |
| Amount per share | | | | | | | | | | | (Yen) |
| Basic earnings per share | 33.59 | 37.89 | 44.60 | 53.29 | 62.83 | 462.28*1 | 420.57 | 242.50 | 347.87 | 330.34 | 303.76 |
| Net assets per share | 791.46 | 827.72 | 899.24 | 1,014.19 | 1,016.06 | 5,515.51*1 | 5,901.23 | 5,868.58 | 5,789.88 | 6,371.77 | 6,549.60 |
| Dividends per share | 15.00 | 15.00 | 15.00 | 15.50 | 17.00 | 100.00*1 | 110.00 | 125.00 | 140.00 | 150.00 | 170.00 |
| Major indicator | | | | | | | | | | | (%) |
| ROA (Return on assets*2) | 4.8 | 4.8 | 5.7 | 5.9 | 7.5 | 8.5 | 7.2 | 7.7 | 6.8 | 6.4 | 6.5 |
| ROE (Return on equity) | 4.3 | 4.7 | 5.2 | 5.6 | 6.2 | 8.7 | 7.4 | 4.1 | 6.0 | 5.4 | 4.7 |
| Equity ratio | 58.5 | 58.7 | 59.5 | 61.8 | 63.9 | 65.1 | 65.3 | 66.8 | 71.4 | 71.8 | 72.2 |
| ROIC (Return on invested capital*3) | 4.0 | 4.1 | 5.0 | 5.0 | 6.8 | 7.2 | 6.1 | 6.4 | 6.2 | 5.8 | 5.5 |
| Other | | | | | | | | | | | |
| Number of employees | 1,776 | 1,865 | 1,917 | 1,979 | 1,992 | 1,996 | 2,053 | 2,078 | 2,060 | 2,096 | 2,106 |

*1 Sanyo Chemical conducted a reverse stock split at a ratio of one share for every five shares on October 1, 2016. Net assets per share, basic earnings per share, and dividends per share for fiscal 2016 were calculated on the assumption that the said reverse stock split was performed at the beginning of fiscal 2016.

*2 ROA (Return on assets) is calculated based on ordinary profit.

*3 Operating profit \times (1 - tax rate) \div (interest-bearing debts + equity) \times 100

Stock Information (As of March 31, 2022)

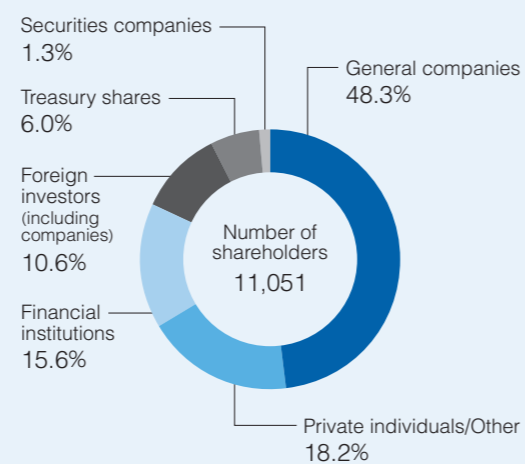
| | |
|---|--|
| Stock exchange listings | Prime Market of Tokyo Stock Exchange (Securities code: 4471) |
| Total number of stocks authorized | 51,591,200 |
| Total number of stocks issued | 23,534,752 |
| Total number of shareholders at end of period | 11,051 (Up 1,220 from end of previous period) |

Major shareholders (Top 10)

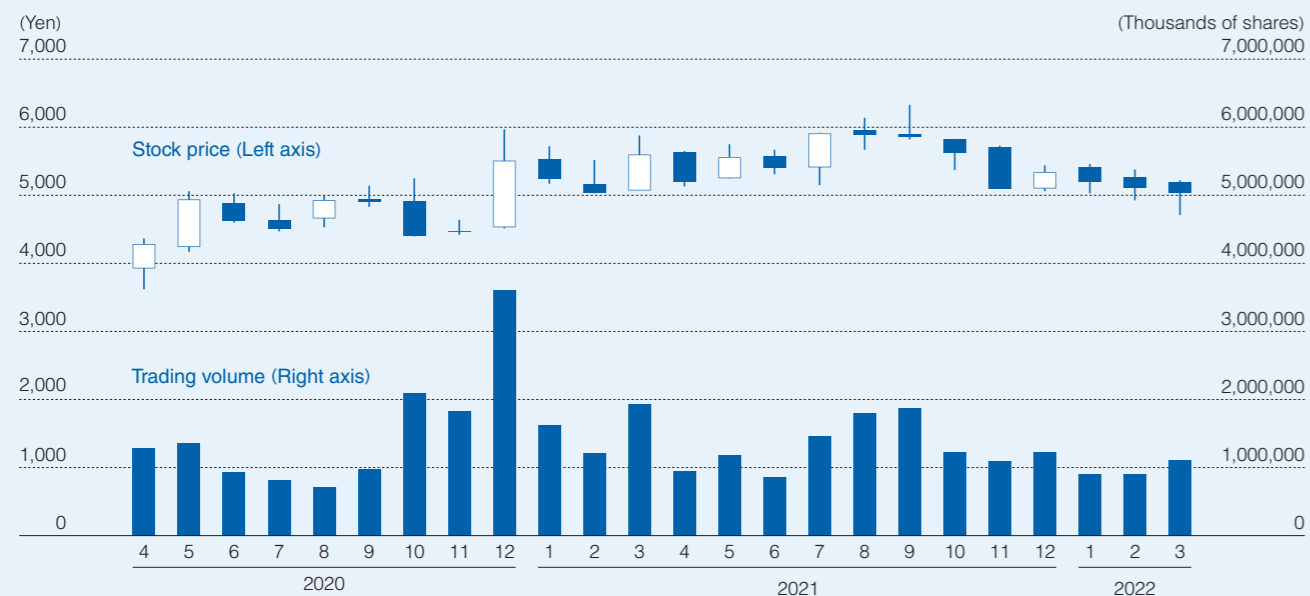
| Name | Number of shares held (Thousands of shares) | Percentage of shares held (%) |
|---|---|-------------------------------|
| Toyota Tsusho Corporation | 4,286 | 19.4 |
| Toray Industries, Inc. | 3,826 | 17.3 |
| The Master Trust Bank of Japan, Ltd. (Trust Account) | 2,173 | 9.8 |
| Nippon Shokubai Co., Ltd. | 1,105 | 5.0 |
| ENEOS Holdings, Inc. | 1,061 | 4.8 |
| Custody Bank of Japan, Ltd. (Trust Account) | 915 | 4.1 |
| Sanyo Chemical Employees' Stock Ownership Association | 538 | 2.4 |
| Government of Norway | 323 | 1.5 |
| DFA INTL SMALL CAP VALUE PORTFOLIO | 207 | 0.9 |
| THE BANK OF NEW YORK MELLON 140042 | 172 | 0.8 |

(Notes) 1. Treasury shares are not included in the number of shares owned by the shareholders listed in the table above. Treasury shares (1,418,817 shares) are excluded in calculating "Percentage of shares held."
 2. The Company's shares (56,600 shares) held by the trust whose beneficiaries are directors of the Company and established in line with the introduction of the stock-based compensation plan for Directors, etc., are included in shares (915,800 shares) held by Custody Bank of Japan, Ltd. (Trust Account) and not included in treasury shares (1,418,817 shares).

Breakdown of shareholders by type



Trend of stock price and trading volume



Company Overview (As of March 31, 2022)

| | |
|----------------------------------|--|
| Company Name | Sanyo Chemical Industries, Ltd. |
| Date of Establishment | November 1, 1949 |
| Head Office | 11-1 Ikkyo Nomoto-cho, Higashiyama-ku, Kyoto 605-0995, Japan |
| Consolidated number of employees | 2,106 |

Domestic bases

| | |
|---------------------------|--|
| Head Office | Head Office (Kyoto) |
| Research laboratories | Research Laboratory (Kyoto), Katsura Research Laboratory (Kyoto) |
| Branch Offices | Tokyo and Osaka |
| Sales & Marketing Offices | Nagoya Area Sales & Marketing Office (Aichi), Chugoku Area Sales & Marketing Office (Hiroshima), and Nishi-Nihon Area Sales & Marketing Office (Fukuoka) |
| Factories | Nagoya (Aichi), Kinuura (Aichi), Kashima (Ibaraki), and Kyoto |

Group companies

Performance Chemicals Group

SDP Global Co., Ltd.
 SAN NOPCO LIMITED
 San Chemical Co., Ltd.
 San-Apro Ltd.
 San-Petrochemicals Co., Ltd.
 Sanyo Kasei (Thailand) Ltd.
 Sanyo Kasei (Nantong) Co., Ltd.
 San-Dia Polymers (Nantong) Co., Ltd.
 SANYO CHEMICAL (SHANGHAI) TRADING CO., LTD.
 Sanyo Kasei Korea, Ltd.
 SANYO KASEI (TAIWAN) LTD.

*Renamed from SANAM Corporation on April 1, 2022.

Logistics & Service Group

Sanyo Chemical Logistics Co., Ltd.
 Shiohama Chemicals Warehouse Co., Ltd.

Editorial policy

Organizations covered

As a rule, this report covers the entire Sanyo Chemical Group, which comprises a total of 26 companies (as of March 31, 2022)—specifically, Sanyo Chemical Industries, Ltd., 20 subsidiaries, and 5 affiliates.

Period covered

Fiscal year 2021
 (From April 1, 2021 to March 31, 2022)
 However, some disclosures and business activities undertaken after April 2022 are included.

Reference materials

In editing this report, we have referred to the International Integrated Reporting Framework advocated by the International Integrated Reporting Council (IIRC) and the World Intellectual Property Organization's (WIPO) Intellectual Property Assets Initiative (WIPI), and the Guidance for Collaborative Value Creation published by the Ministry of Economy, Trade and Industry of Japan.

For more details of the financial report in the Sanyo Chemical Group Integrated Report 2022, please refer to the securities report.
 Securities report URL: https://www.sanyo-chemical.co.jp/ir_info/annual_report (Japanese only)

For the sustainability report, please visit the following website.
 Sustainability report URL: <https://www.sanyo-chemical.co.jp/eng/sustainability>

Sanyo Chemical Industries, Ltd.

11-1, Ikkyo Nomoto-cho, Higashiyama-ku, Kyoto, 605-0995, Japan

TEL: +81-75-541-4311

URL: <https://www.sanyo-chemical.co.jp/eng/>



This Integrated Report is made of LIMEX, a new material mainly made from limestone.