

# Nissui Group's History

Founded in 1911 by trawling, Nissui has developed a variety of businesses originating from fisheries.

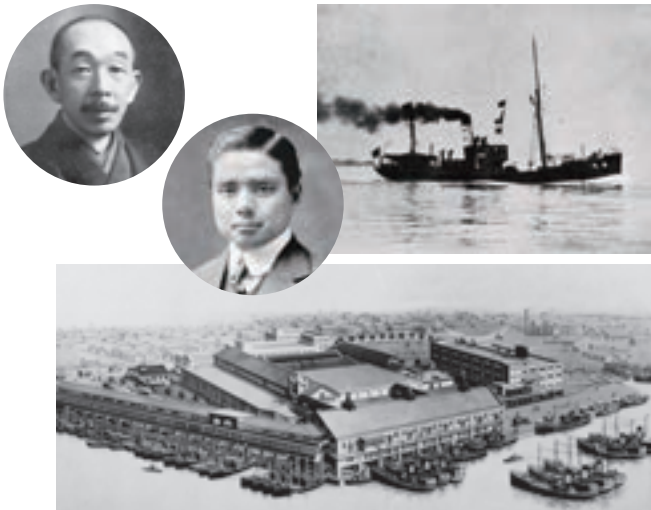
As the days of fisheries came to an end, we strengthened accessibility to marine resources instead and turned marine resources into customer value for global rollout. We have thus achieved growth by shifting our business model.

Changes in the Nissui Group's net sales  
(Unit: 100 million yen)



## Establishment and Growth

## Reconstruction and Expansion



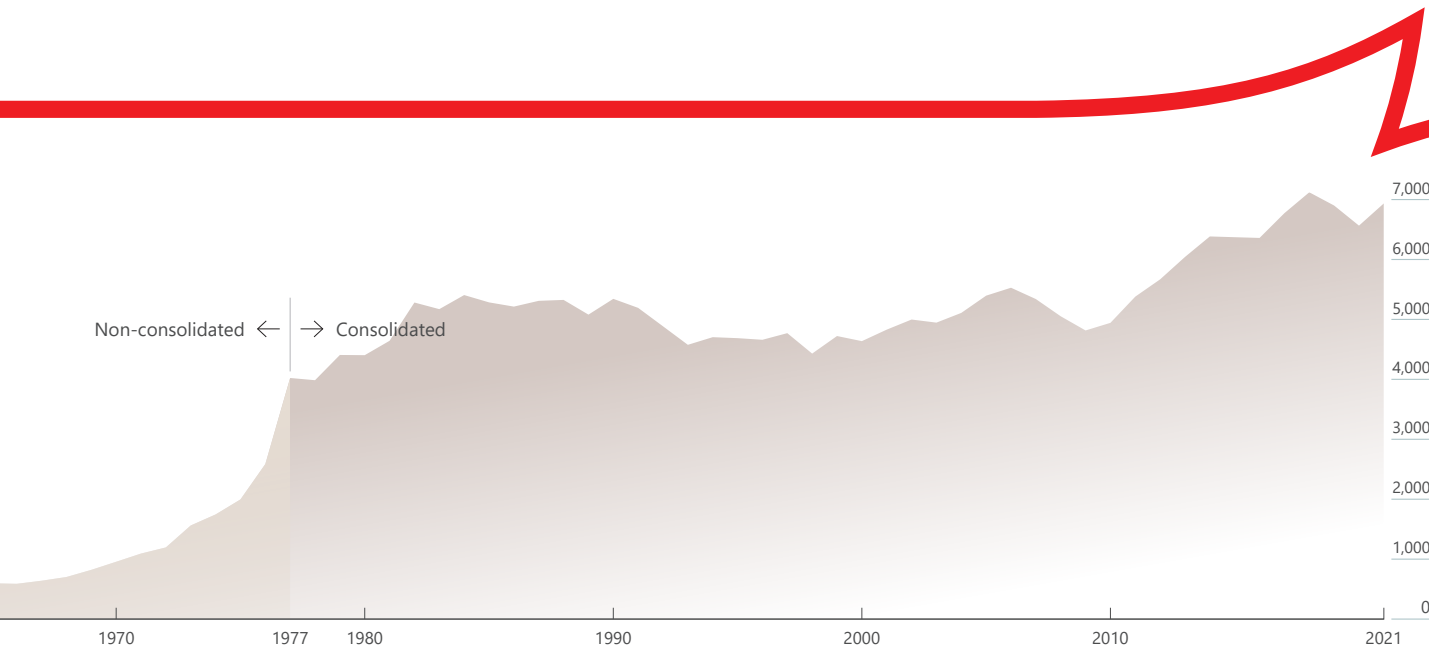
In 1911, capitalist Ichiro Tamura and entrepreneur Kosuke Kunishi built and introduced Minato Maru, a cutting-edge British trawler at the time. They established the Tamura Steamship Fishery Company in Shimonoseki. The company focused on research and development to develop the fisheries business industrially, and materialized deep-sea fishery by installing wireless telegraph equipment, commercializing diesel trawlers, and adopting on-board rapid freezing equipment. The fish caught were not only sold but also processed into fish paste products and fish meal to make full use of the catch. We also created a nationwide refrigerated warehouse network to adjust the supply-demand balance of marine products we caught.

After relocating to Tobata in 1930 to expand the business scale, we grew to become a marine products company that seamlessly engages in fisheries and storage, processing, distribution, and sales of marine products. In 1937, we became part of the Nissan Konzerne.

Under the Fishery Control Ordinance, the fishing business was taken over by Nippon Kaiyo Gyogyo Tosei K.K and the ice-making, freezing and refrigerating, and processing businesses were transferred to Teikoku Suisan Tosei K.K in 1943. During the Pacific War, more than 80% of our fishing boats were requisitioned, which forced our business to slow down.

In 1945, the Fishery Control Ordinance was lifted and we restored the company name Nippon Suisan. We resumed various types of fisheries and the production of fish paste products, canned foods, and other processed foods. Aiming to secure resources and fishing grounds, as well as to build a highly profitable business structure, we enhanced the production function by investing in on-land plants and large trawlers. The company thus advanced through the period of rapid economic growth.

Meanwhile, coastal countries started to declare territorial waters. This cast concerns over such declaration's impact on deep-sea fishery, the pillar of our business at the time. To address the issue, we expanded the processed foods business. Our ways of expanding the business scale included embarking on fisheries at overseas locations and purchasing marine products in Japan and overseas.



Nissui Group's Vision

Management Message

Nissui Group's Value Creation

Sustainability

Governance

Data Section

## Withdrawal and Stagnation



The adoption of the 200 nautical mile system of United States and Soviet Union (at that time) in 1977 forced Japanese deep-sea fishery businesses to withdraw from fishing grounds. Being no exception, Nissui phased out of the fishing business. From the early 1980s, we aspired to be a comprehensive food company and diversified our business. Specifically, we developed locations for better access to overseas marine resources, started research on EPA, made our way into the formula feed and chilled foods businesses, and set up the General Distribution Department. Despite such efforts, we were unable to improve the balance sheet and stopped paying dividends in 1991. Although we withdrew from most of the fishing business, performance remained sluggish.

## Transformation and Evolution



Fighting with our back to the wall, we set the slogan of "selection & concentration" in FY1996 & worked on a fundamental reform. This turned around the company to profitability, and for FY1998, we were able to pay dividends for the first time in nine years. Since FY2001, we have been managing the Group from an increasingly global perspective. To transform marine resources into customer value, we went back to the management philosophy of the founding days. Based on the accessibility to marine resources through fisheries and aquaculture, we promoted a seamless business model, where every process up to processing and sales is completed within the Group, and built global supply chains of Alaska pollock and farmed salmon/trout. Part of the investment, however, did not produce expected results and put a squeeze on profits. We had to give up paying dividends again in FY2012. By restructuring unprofitable businesses and strengthening governance, risk management, and other structures, we resumed dividend payment in FY2014.

Today, drivers for our growth include business expansion in Europe, profitability of aquaculture in Japan, and overseas rollout of the EPA business.

## At a Glance

### Fisheries Business

(Unit: 100 million yen)  
 Net sales **2,877** Operating profit **127**

#### Features

**Global** procurement of white fish



**Value-added** with salmon/trout **food processing**

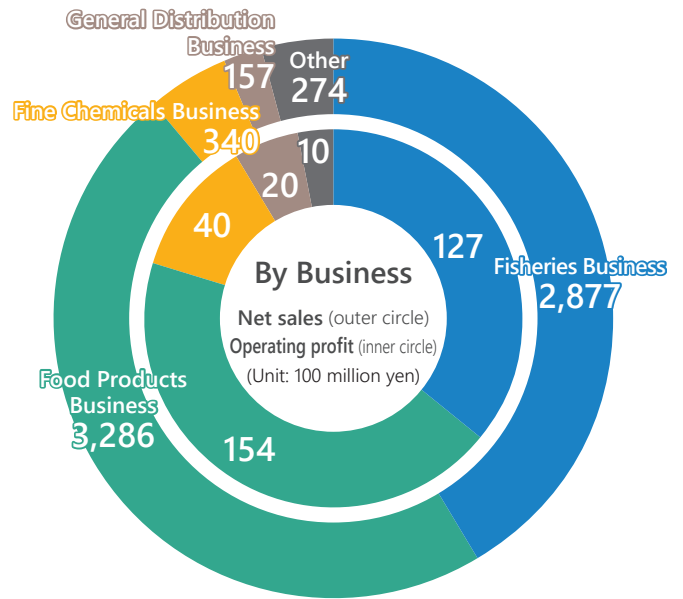


**R&D** for complete aquaculture and onshore aquaculture

Advancing breeding technology, deploying technology to other fish, reducing the usage of antimicrobial



Net sales for FY2021 **6,936**



### Fine Chemicals Business

(Unit: 100 million yen)  
 Net sales **340** Operating profit **40**

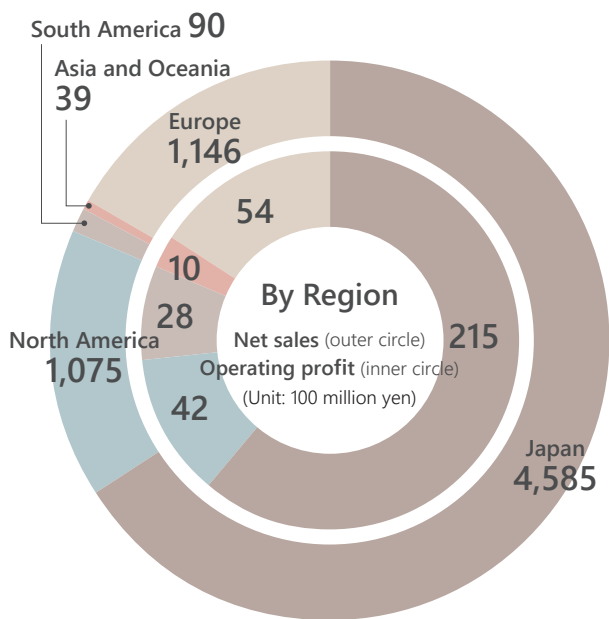
#### Features

Obtained in 1990 the **world's first** approval for manufacturing high-purity EPA as pharmaceutical raw materials



Operating profit **270**

(Unit: 100 million yen)



(Note) Company-wide expenses included in the actual operating profit are excluded from the figures in the operating profit pie chart

## General Distribution Business

(Unit: 100 million yen)

Net sales **157** Operating profit **20**

### Features

Cold/refrigerated storage **23** locations Capacity **420** thousand tons



Osaka Maishima Logistics Center, Nissui Logistics Corporation

## Food Products Business

(Unit: 100 million yen)

Net sales **3,286** Operating profit **154**

### Features

USA

Frozen prepared marine foods for household use

**No. 1** manufacturer share\*1



Japan

Market for household use frozen rice balls

**No. 1** manufacturer share\*2



"Okina Okina Yaki Onigiri" (Jumbo Rice Balls)

Japan

Market for household use chikuwa (processed fish cake with tube-like shape)

**No. 1** manufacturer share\*3



Marugoto Oishii Futotikuwa (Wholly tasty big chikuwa)

Japan

Market for household use fish sausages

**No. 1** manufacturer share\*4



\*1 August 2021–August 2022 monetary amount share in IRI's category of frozen prepared marine foods for household use in the United States  
 \*2 August 2021–August 2022 monetary amount share in INTAGE Inc. SRI+'s category of frozen rice balls for household use  
 \*3 February 2021–August 2022 monetary amount share in INTAGE Inc. SRI+'s category of chikuwa for household use  
 \*4 December 2018–August 2022 monetary amount share in INTAGE Inc. SRI+'s category of fish sausages for household use

## Nissui Group's Value Creation Process

The Nissui Group aims to become by 2030 a **“leading company that delivers friendly foods both for people and the earth.”** To achieve this vision, we have set KPIs for financial value, social value, value in human capital, and environmental value.

By strengthening business portfolio management and embarking on new businesses, we will maximize value through capital reallocation.

Changes in the external environment

- ▶ **Financial capital**
  - Total assets: **505,700** million yen
  - Free cash flow: **11,800** million yen

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- ▶ **Manufacturing capital**
  - Aquaculture bases: **71**<sup>\*1</sup>
  - GFSI certified business locations: **30**

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- ▶ **Intellectual capital**
  - R&D expenses: **4,700** million yen
  - R&D human capital: **133** persons
  - Tokyo Innovation Center  
Oita Marine Biological Technology Center, Central Research Laboratory

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- ▶ **Human capital**
  - Number of employees (consolidated): **9,662** persons
  - Selected as a Health & Productivity Stock for four consecutive years
  - Selected as a Semi-Nadeshiko Brand

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- ▶ **Social capital**
  - Trust and Nissui brand built on more than **110** years of history

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- ▶ **Natural capital**
  - Sustainable procurement rate of marine resources: **71%**
  - Global supply chain (procurement of marine resources from **48** countries or more)



<sup>\*1</sup> Subjects are subsidiaries, and 1 aquaculture area is counted as 1 base  
<sup>\*2</sup> GFSI (Global Food Safety Initiative): a private consortium of global food companies collaborating and working together to improve food safety and strengthen consumer confidence in food products through initiatives such as certification of food safety management standards



### KPIs for 2030

#### Financial Value

Capital strength to compete in the world

- Sales: **1** trillion
- Operating income: 50,000 million yen
- ROIC  $\geq$  **7.0%**
- Ratio of global sales: **50%**

#### Social Value

Solve health problem

- Sales of Health Category Products: Expanded by **300%**
- Responsible procurement
- Assessment of Tier-1 suppliers: **100%**

#### Value in Human Capital

Diverse human capital playing an important role

- Employee engagement score\*: Improved by **20%**
- Ratio of female manager\*: **20%**

#### Environmental Value

Sustainability of marine resources

- Procurement of sustainable marine resources: **100%**
- Actions toward climate change and ocean environment
- CO<sub>2</sub> emissions (Scope 1, 2): Reduced by **30%**
  - Achieve carbon-neutral in **2050**
  - Usage of plastics\*: Reduced by **30%**

\*Figures are for Nissui only

mission

(vision toward 2030)



### Marine Products

Certified marine products (ASC, MSC, BAP, MEL), etc.

Business portfolio management and new business endeavors

### Fine Chemicals

Pharmaceutical ingredients, etc.

### Food

Health Category Products, etc.

Finance

Materiality

Healthy lifestyle with safety and security

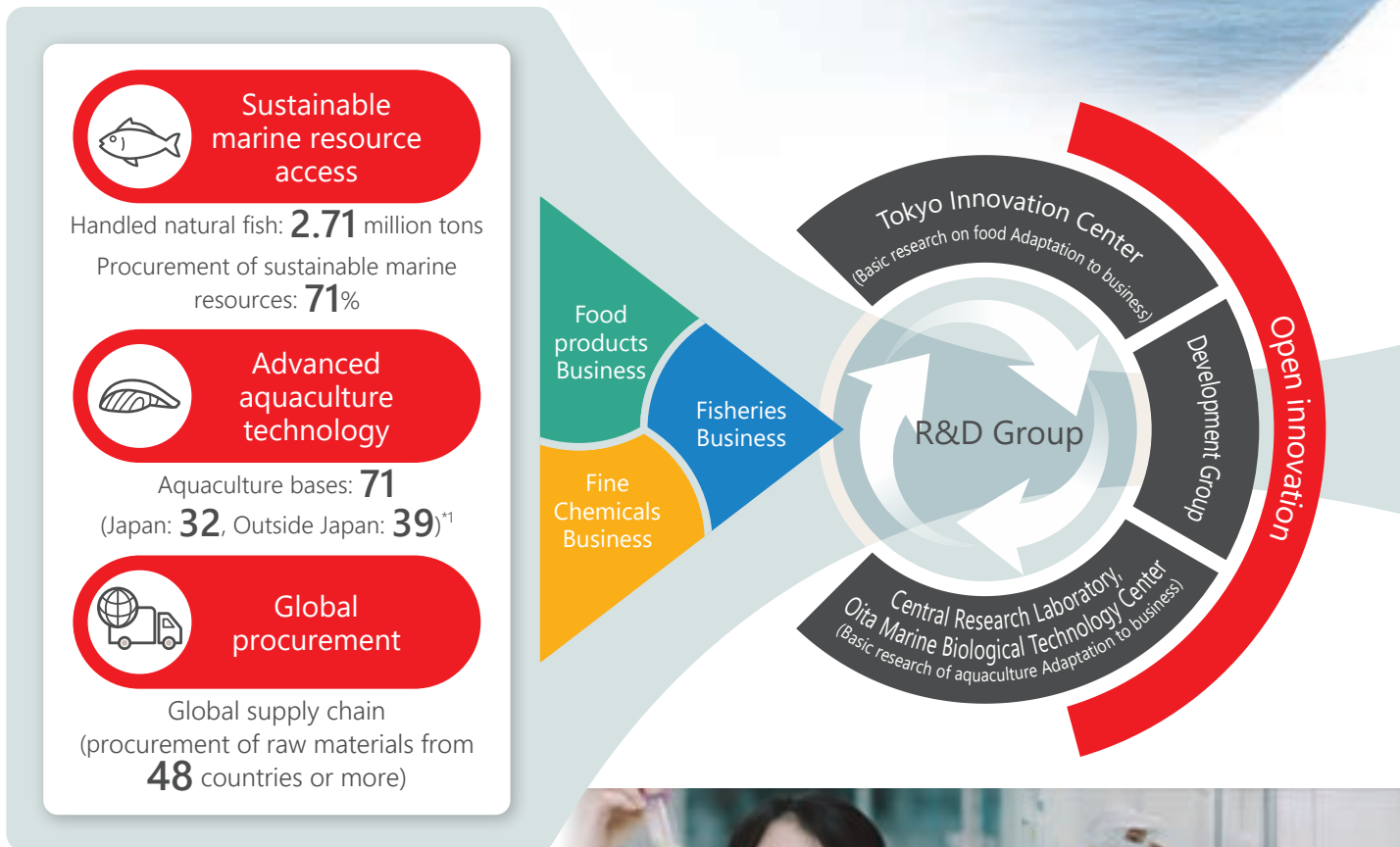
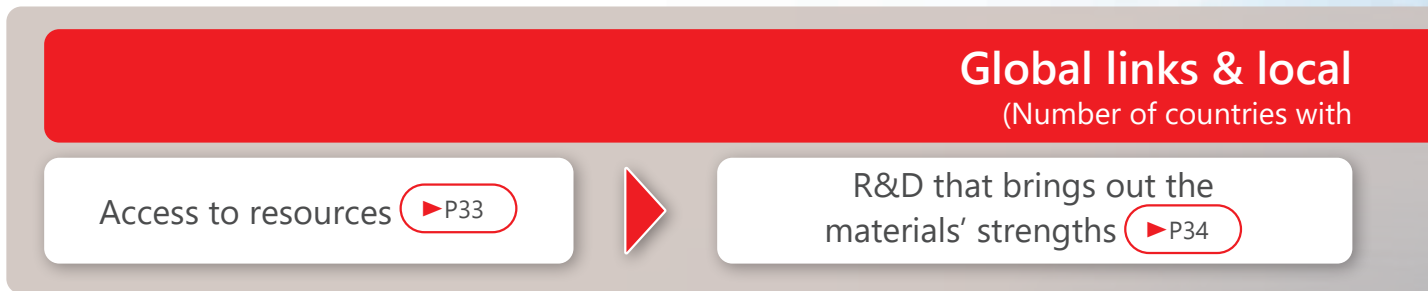
Aim to be a company where diverse human capital play an important role to address the social agenda

Contribution of Sustainability

Strategies and Five Genes

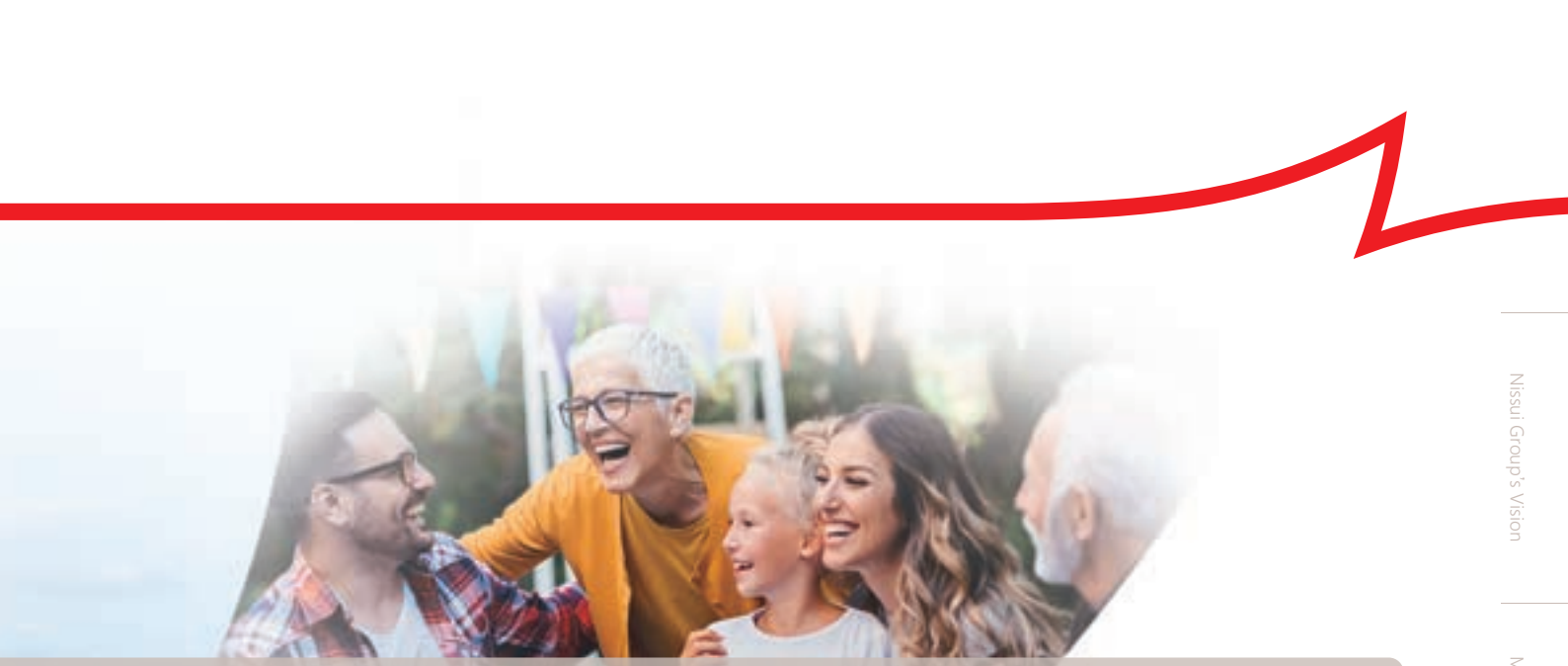
## Nissui Group's Strength: Value Chain

The Nissui Group's strength lies in its value chain, which includes processing, production, quality assurance, and a wide range of product rollout channels. Our accessibility to resources allows us to procure marine products and other materials from around the world, and our R&D brings out the potential of materials for adding higher value. Through the synergy of our three main businesses – Fisheries, Food, and Fine Chemicals –, we will maximize the value of our materials and provide innovative food solutions to people worldwide.



\*1 Subjects are subsidiaries, and 1 aquaculture area is counted as 1 base  
\*2 Goma Tonyu Jitate no Minna no Mikata DHA (DHA-Contained Drink with Sesame Soy milk Flavor)





## links

affiliated companies: 28)

▶ P29~32

### Advanced technology and knowledge that support the value chain

(Processing & producing, logistics, quality assurance) ▶ P35~40



Surimi

Fillet and pickled fish

Fresh fish

Fish paste-based foods  
(eg: crab sticks, fish cakes)

Health Category Products  
(eg: Protein of Fast-twitch skeletal muscles)

Alternative proteins

Frozen foods

Chilled foods

Functional foods  
(eg: IMARK, sesame soymilk \*2)

Functional lipids  
(EPA/DHA)

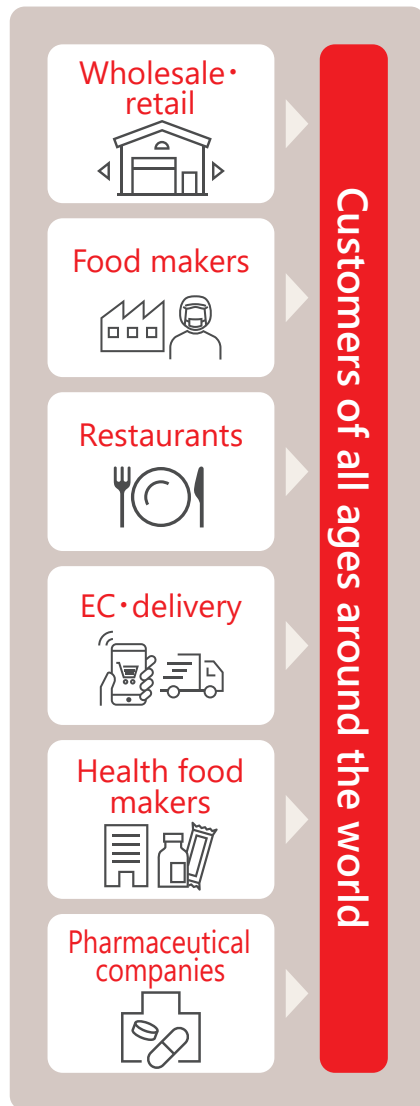
Pharmaceutical raw materials

**Logistics**  
(All-temperature logistics, marine product handling)

**Processing & producing**

**Quality Assurance**  
GFSI certified business locations: **30**

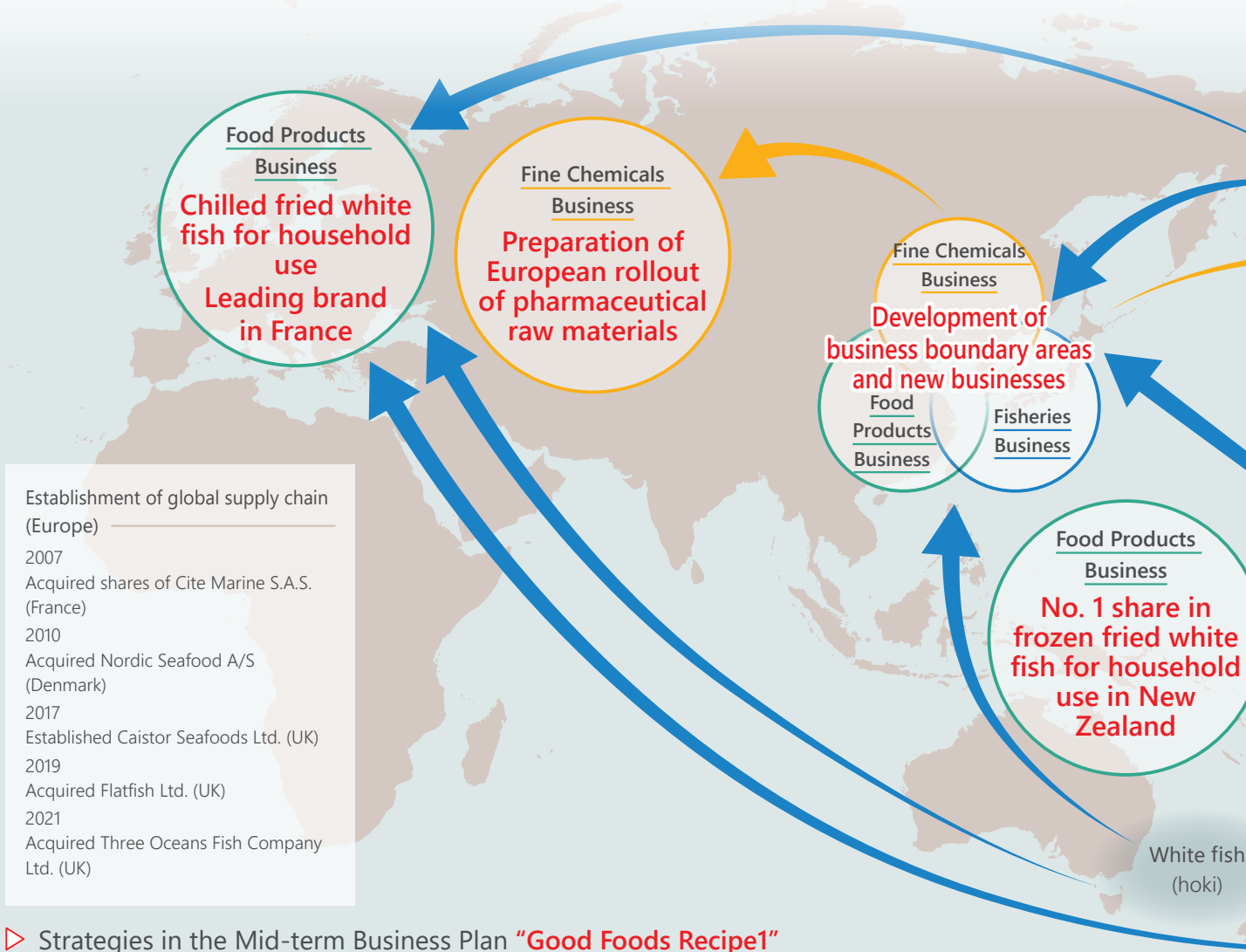
Fish oil/  
Fish meal



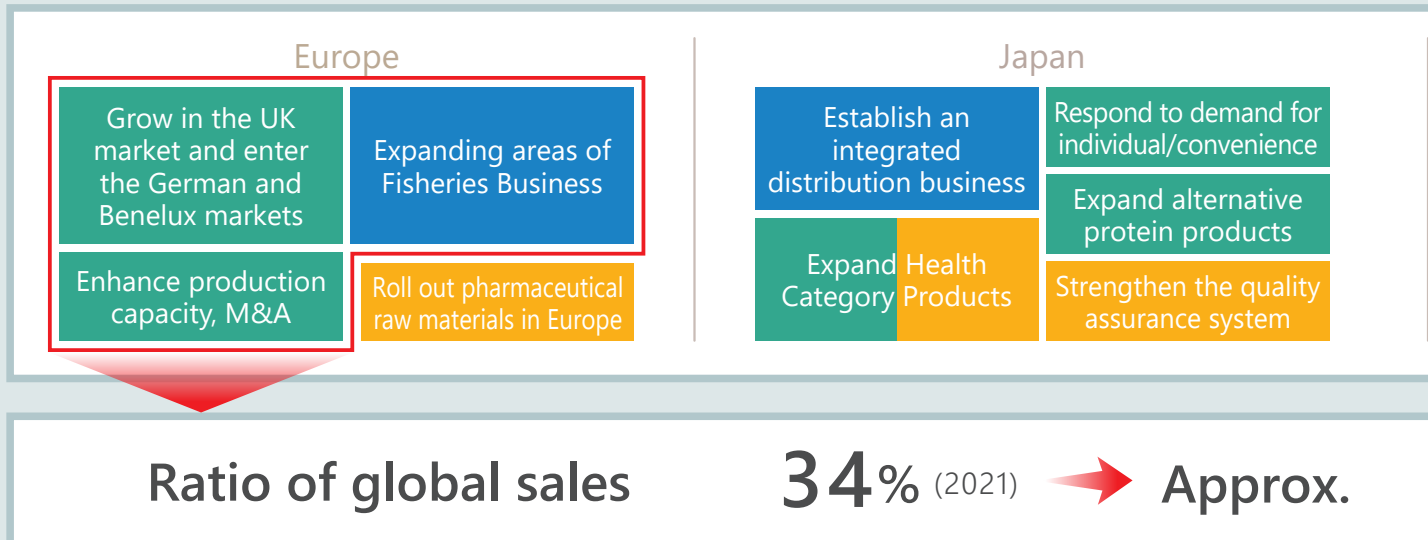


## Nissui Group's Strength: Value Chain

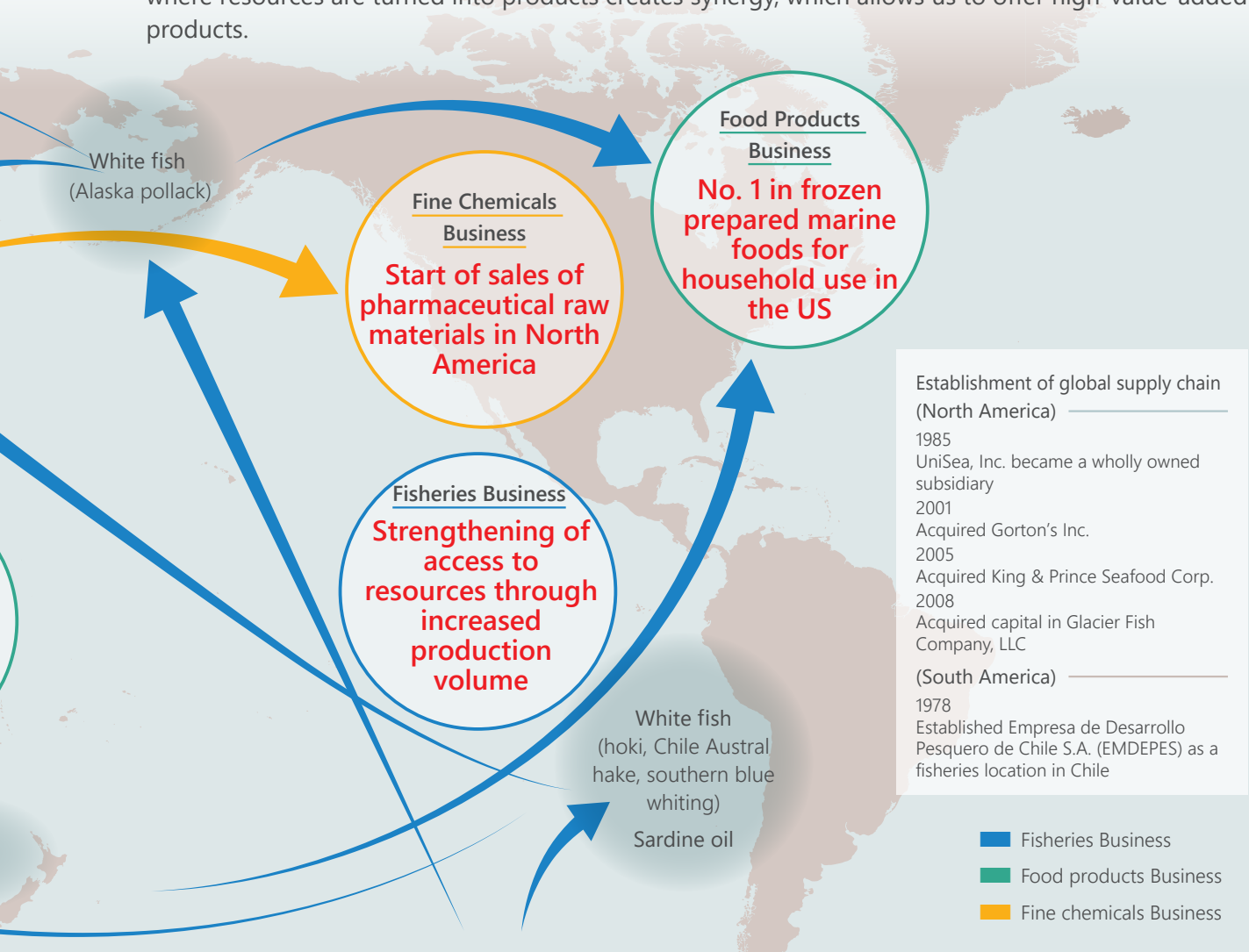
### Global Value Chain Delivers innovative food solutions to the World Across Borders and Business Boundaries



▷ Strategies in the Mid-term Business Plan "Good Foods Recipe1"



Nissui Group has established "global links," a vertically integrated global value chain where access to marine resources through fisheries and aquaculture, as well as processing and sales, is completed within the Group, and "local links" that connect regional functions with one another. The process where resources are turned into products creates synergy, which allows us to offer high-value-added products.



Asia and Oceania

Develop the market for commercial use products

America

Further strengthen access to resources

Increase categories and expand shares

Enhance production capacity, M&A

Expand sales of pharmaceutical raw materials in North America

38% (2024 plan) → 50% (2030 target)

(Note) Sales from the Fine Chemicals Business are not included in the ratio.

## Nissui Group's Strength: Value Chain

### Local Links That Accommodate Diverse Values and Cultures Around Food and Governance Framework that Supports Global Growth

Different countries and regions have different values and food cultures, depending on climate, religion, and long-standing customs and cultures. In some parts, delegating to local management can be more effective than applying a standardized management style, but management with a strong central grip is important for sound global growth. In March 2022, we established International Business Group, which supervises the overall international business. Taking advantage of the diversity in Nissui Group, we will accelerate global business development while maintaining the balance between delegation and centralization.

Europe Business

▶ **Expansion of the Food Products Business in Europe**


In Europe, France is the largest marine product consuming country on an annual basis, followed by Spain, Italy, the UK, and Germany. The Spanish, German, and Benelux markets, therefore, provide large business opportunities for Nissui Group.

France-based Cité Marine S.A.S. is the core company in Europe that engages in the fried white fish and alternative protein businesses, manufacturing chilled and frozen foods from marine and agricultural products. We will enhance the company's production capacity and make a foray into and develop the Spanish, German, and Benelux markets.


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Cité Marine S.A.S.'s expansion of sales channels in Europe


Fried white fish



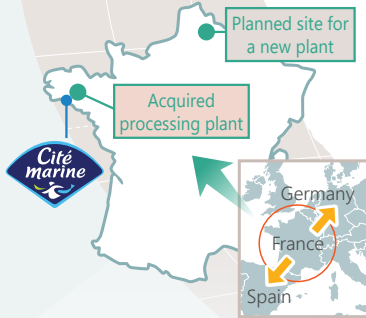
Alternative protein products



- The company acquired a processing plant and will construct a new plant to increase the production capacity of fried white fish and alternative protein products, thereby expanding sales channels of such products to outside France, mainly Germany.



Aim to increase the production capacity by roughly 20% to meet growing demand



Planned site for a new plant

Acquired processing plant


Germany, France, Spain

Asia and Oceania Businesses

▶ **Expansion of the Food Products Market in Asia**

- We will expand the fried shrimp and fried white fish businesses to the fast food industry in Asian countries, with Thai Delmar Co., Ltd., a supplier of MSC certified fried white fish to global hamburger franchises, at the center.

Asia Oceania



### Group Governance That

Strengthen management

Improve the effectiveness of subsidiaries' Boards of Directors

To achieve growth toward higher level , accelerating global development is essential. We will establish a framework to promote the international business, strengthen access to resources, and work to expand the processed foods business that has high profitability and growth potential.

**Masahide Asai**

Board Member, Executive Officer  
International Business Operating  
Officer, General Manager of Business  
Supervisor in South America, In charge  
of International Business Development  
Department, Strategic Sales  
Department (joint), President of  
Nippon Suisan America Latina S.A.  
(N.A.L.)



**North  
America  
Business**

▶ **Strengthening of access to resources**

The sea around Alaska is subject to strict resource and fishery management. We will strengthen access to marine resources in the area, which are considered as sustainable resources.

**North America**

▶ **Expansion of the Food Products Market in North America**

The market size of marine products has been growing for household and commercial use in the US. The markets for processed white fish and shrimp still have significant room for expansion.

Nissui Group has established a supply chain that includes catching, procurement, processing, and sales of white fish. Local links between primary white fish processors UniSea, Inc. and Glacier Fish Company, LLC and frozen prepared marine foods producers and sellers Gorton's, Inc. and King & Prince Seafood Corp. show synergic effects and deliver safe and secure seafood of high quality.

**Gorton's, Inc.'s market share**

Frozen prepared marine foods for household use

**No. 1 share in the US**

**Produces and sells MSC certified fried white fish for global hamburger fast-food restaurants.**

Frozen prepared marine foods for household use under the BlueWater Seafoods brand

**No. 2 share in Canada**

\*June 2021–June 2022 monetary amount share in Nielsen's category of frozen prepared marine foods for household use in Canada

● Expand shrimp product market share with the strong Gorton's brand

● Expand commercial use product market share through the expansion of seafood products and Asian foodstuffs



**North America**

**South  
America  
Business**

▶ **Strengthening of access to resources**

In addition to strengthening the fishing business for white fish, we will improve our aquaculture technology to supply highly demanded salmon/trout in a stable manner.

Furthermore, we will maximize value and enhance profitability through processing (food processing) that is easy for customers to handle.

**South America**

**Supports Global Growth**

Strengthen audits of outside Japan subsidiaries

Strengthen investment management

## Nissui Group's Value Creation

### Strengthening of Access to Resources

Climate change raises concerns over changes in natural marine resources' habitats, as well as decreases in such resources. Unstable supply may cause significant market price fluctuations and affect the procurement of raw materials for our products. To achieve stable raw material procurement and highly profitable marine products business that can adapt to climate change, we work toward the sustainable use and procurement of natural resources and advancement of aquaculture technology.

#### Natural Marine Resources

##### ▶ Strengthening of Access to Alaska Pollack Resources

Although the sea around Alaska is subject to strict fisheries management, we will strengthen access to resources in the area and work toward stable procurement.

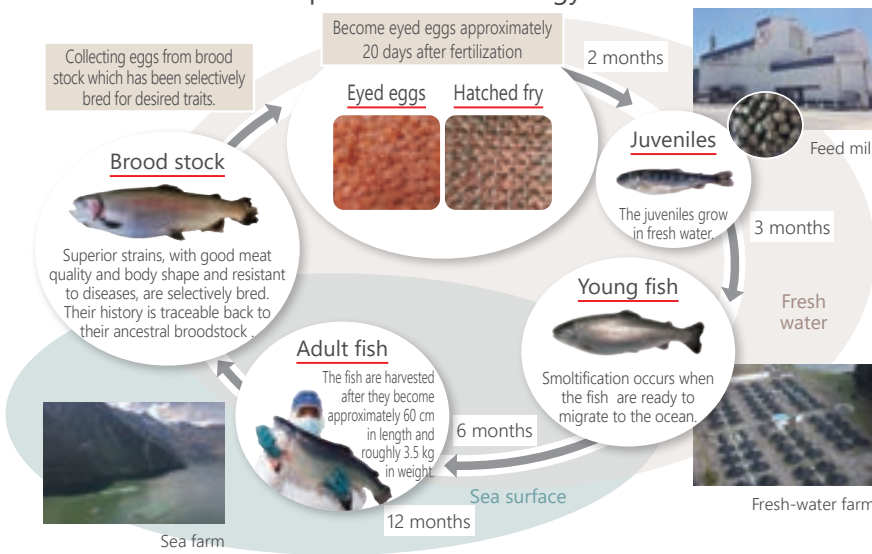
##### ▶ Survey of Procured Marine Resources Sustainability ▶P57

Survey of marine resources sustainability and handling of certified products

Marine Eco-Labels  
▶ <https://nissui.disclosure.site/en/themes/170>

#### Aquaculture

##### ▶ Advancement of Aquaculture Technology



##### Initiatives for Onshore aquaculture

**Aquaculture research facility in Ei\*\***  
Target species: Vannamei (whiteleg) shrimp  
70 tons/year  
Biofloc farming system (recirculating aquaculture system)

**Yonago Onshore Aquaculture Center\*\***  
Target species: Chub mackerel, trout  
250 tons/year  
Recirculation aquaculture that uses underground seawater

**Danish Salmon A/S**  
Target species: Atlantic salmon  
2,570 tons/year  
Closed circulating aquaculture  
\*\*Under demonstration experiment

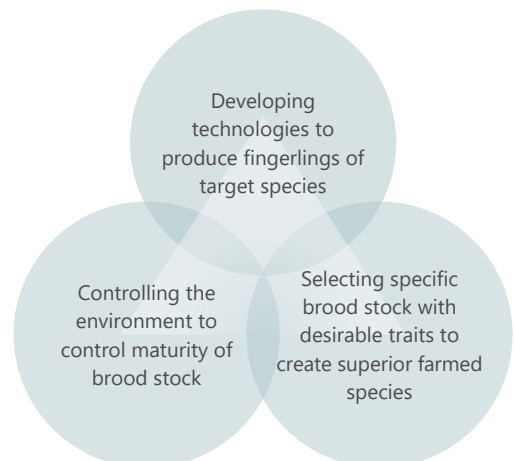
### Research on Cutting-Edge Fish Rearing to Produce Better Farmed Fish

In many cases, aquaculture depends on fingerlings obtained from natural resources. To minimize dependence on natural resources for aquaculture, we are working on the development of maturity control technologies to artificially extract gametes (eggs and sperm) from target species brood stock. In addition, we are advancing research on genetics and breeding.

Nissui also conducts research and development to identify and select individuals with desirable traits for farmed fish, control fish broodlines through DNA analysis and develop efficient methods for rearing fish using genetic analysis.



Brood stock are reared in large tanks whose water temperature, daylight length and other conditions can be controlled.



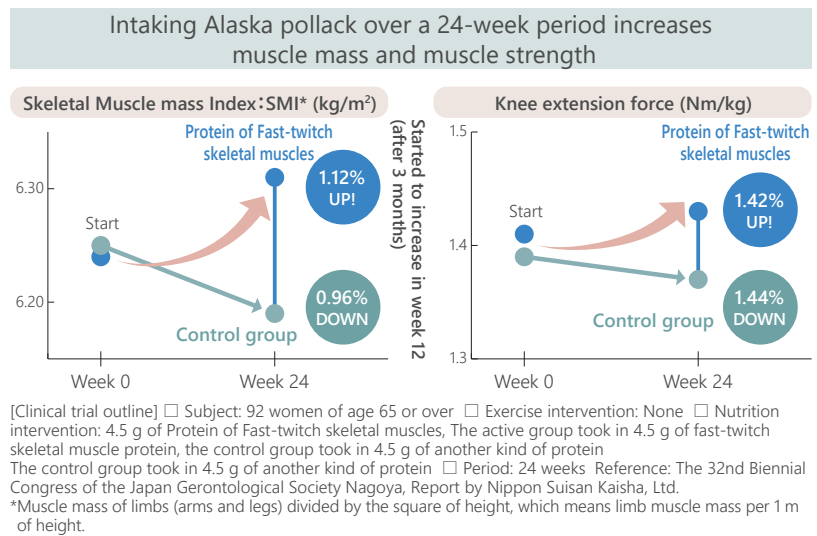
## R&D That Brings Out the Potential of Materials ▶P51

We have laid emphasis on R&D since the establishment. Accumulated knowledge and know-how have created high entry barriers and produced a variety of results. To create innovative food solutions, we are advancing technology development in the fields of fisheries and aquaculture, food products, and fine chemicals. This takes place through open innovation with Japanese and overseas companies and research institutions.

### Nissui's R&D Generates New Value

#### ▶ Protein of Fast-twitch skeletal muscles

We have been focusing our attention on the functionality of white fish and conducting joint research with the academia on muscle increase effects of fast-twitch skeletal muscles protein from Alaska pollack. Effects of the protein contained in Alaska pollack have been unveiled one after another, and basic research on fisheries over the years is generating high added value.



#### ▶ Open Innovation

##### Developing a sustainable next-generation aquaculture system

Japan Science and Technology Agency's JST-Mirai Program

The project targets mackerel, which is consumed in Japan and overseas and highly nutritious. By linking fish rearing with feed development and designing a platform that takes full advantage of the link, we aim to create a system that can halve the period until catching mackerel to six months. This system can be applied to other fish species. It is expected to help not only ensure protein intake but also maintain Japan's fish consumption culture, where people enjoy a variety of fish in each season.

##### Supporting young researchers

Leave a Nest Grant Nissui Award

We have set up a grant system to support young researchers, and solicit a wide variety of research projects that create innovative food solutions. In FY2021, the Nissui Award was given to a project by Ms. Kazue Ojiro from the University of Shizuoka. The project conducts a comprehensive analysis of human gustatory and olfactory receptors to establish a high-sensitive technology that visualizes tastiness.

### Delving into Research for Finding New Functionality

In 2022, Dr. Zhi-Hong Yang, one of our researchers, won the Orloff Science Award for her research on the role of intracellular complement in human inflammatory diseases.

Dr. Zhi-Hong Yang is a member of the Lipoprotein Metabolism Laboratory in the U.S. National Institutes of Health (NIH). The laboratory is led by Dr. Alan T. Remaley, a leading expert in the field of lipid science. In cooperation with various research institutions, she continues to publish results of a number of research projects in the fields related to functional lipids.



Left, Nissui's researcher won the Orloff Science Award at the National Heart, Lung, and Blood Institute (NHLBI) in NIH.  
Right, Dr. Zhi-Hong Yang from Nissui delivering a lecture when she won an award from the American Oil Chemists' Society in 2018.

## Fisheries Business

We have built a value chain of marine products, which covers the process from fishing and aquaculture to processing and sales.

By strengthening access to resources and improving profitability through food processing, we will maximize the value of marine resources and achieve sustainable growth.



### Seiji Takahashi

Representative Board Member, Senior Managing Executive Officer

Commissioned Fisheries Business Operating Officer

#### FY2021 Overview

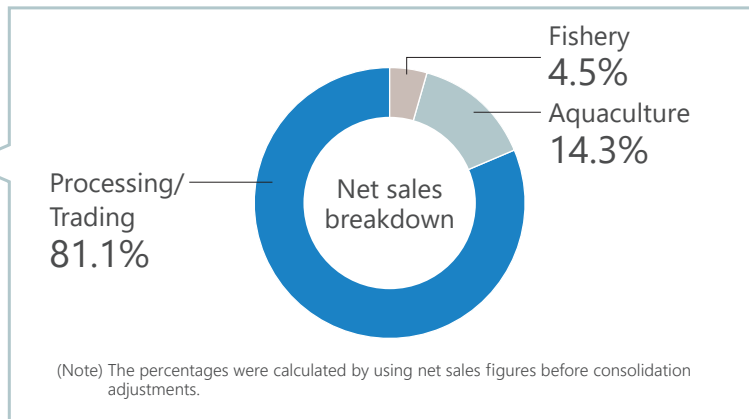
(Unit: 100 million yen)

Net sales

**2,877**  
(up 15.2% YoY)

Operating profit

**127**  
(up 116.0% YoY)



#### Summary

In FY2021, performance of the aquaculture business improved in and outside Japan. Sales of marine products also improved following the recovery of economic activities.

Meanwhile, profit from the fisheries business decreased due to rising fuel prices, although the catch was strong. Sales and profit from the Alaska pollock processing business in North America increased substantially thanks to rebound consumption and strong fish prices, despite some struggles.

#### Business Environment

Risks	Opportunities	Strategies
<ul style="list-style-type: none"> <li>Global warming changes the state of marine resources. This may lead to decreases in catches and stricter fishing restrictions imposed by countries seeking to secure resources</li> <li>Typhoons, red tides, and other natural disasters undermine aquaculture performance</li> <li>Rising feed and crude oil prices increase production costs</li> </ul>	<ul style="list-style-type: none"> <li>Demand for marine products increases in response to higher awareness toward health worldwide</li> <li>Aquaculture business that does not depend on natural resources attracts more attention</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen accessibility to resources through active capital investments and M&amp;A</li> <li>Establish an aquaculture business that yields stable profit</li> <li>Promote "food processing" to meet diverse needs</li> <li>Expand sales channels by acquiring marine product certifications</li> </ul>

▶ Mid-term Business Plan

Good Foods Recipe1

Stabilize and expand the aquaculture business

Kurose Buri (Yellowtail)

- Achieve 100% full life cycle farming
- Expand by shifting to large tanks
- Achieve the shipment of two million artificial fingerlings
- Gain market share around the world by expanding export

Aim to double the operating profit to **4,000 million yen** for the aquaculture business in Japan (compared with FY2021)

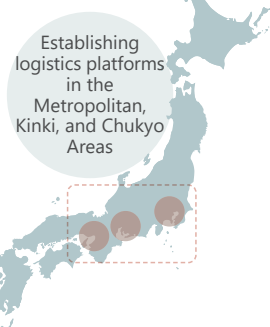
Promote food processing

Salmon/trout farming business in South America

- Enhance profitability by improving productivity and establishing a structure for fillet production increase

Initiatives in Japan

- Establish logistic platforms in the Metropolitan, Kinki, and Chukyo Areas and further promote "food processing" as requested by the market



Integrated logistic business

Marine product counters in mass retailers and delivery businesses are increasingly outsourcing the processing of fillets, raw fish, and other marine products. This is due to a decrease in fresh fish processing workers and difficulty in passing down the skills. In addition, rapidly expanding e-commerce requires the logistics functions, such pickup and delivery.

Nissui has such functions within the Group. We therefore aim to achieve a low-cost operation by establishing a "distribution platform" that brings these functions together and centrally managing the platform with information technology.

By optimally and efficiently operating diverse functions in need, such as processing, pickup, and delivery, we will smoothly supply marine products and other foods and contribute to society through innovative food solutions.

Expanding business opportunities by offering functions retailers need in an integrated manner

Undertake marine product logistic functions as a package

Engage in a series of functions on behalf of customers, from inventory management to delivery

- **Product storage function** to manage inventory
- **Processing function** to process marine products on behalf of back rooms
- **Pickup function** to collect and ship on behalf of logistics centers

Advantages

In addition to the income for undertaking the above functions, we intend to expand the handling of Nissui Group marine products and promote food processing in the future.



Aim to raise the rate of food processing to **40% or more by FY2030**



## Food Products Business

We offer tasty and convenient processed foods based on an accurate understanding of changes in society and customers' lifestyles. We thus aim to create friendly and innovative food solutions for both people and the earth.



### Koji Umeda

Board Member, Managing Executive Officer  
Commissioned Food Products Business Operating Officer, in charge of Marketing Planning Department, Strategic Sales Department (joint)

### FY2021 Overview

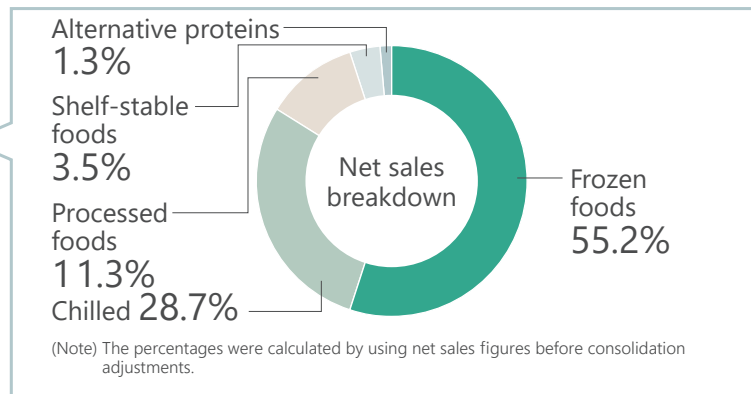
(Unit: 100 million yen)

Net sales

**3,286**  
(up 9.1% YoY)

Operating profit

**154**  
(up 9.9% YoY)



### Summary

In FY2021, markets for both household and commercial use products expanded in America and Europe, and sales and profit exceeded the level before the COVID-19 pandemic. In Japan, lift of restrictions on activities turned around the performance of commercial use products, and production of chilled products was optimized. Despite strong sales, costs increased due to rising raw material prices, soaring crude oil prices, and the impact of exchange rates.

### Business Environment

Risks	Opportunities	Strategies
<ul style="list-style-type: none"> <li>Raw material prices soar due to abnormal weather, decrease in harvests and catches, etc.</li> <li>Political and economic changes and conflicts push up raw material prices and disrupt logistics</li> <li>Spread of infectious diseases decreases demand for foods for the food service industry</li> </ul>	<ul style="list-style-type: none"> <li>Demand for food increases in countries around the world</li> <li>Needs for individual and convenience grow substantially</li> <li>Awareness toward health grows worldwide</li> </ul>	<ul style="list-style-type: none"> <li>Roll out a new category of products in response to needs for individual and convenience, which are growing substantially under the COVID-19 pandemic</li> <li>Expand Health Category Products that take advantage of the functionality of marine resources in which we have a competitive advantage</li> <li>Restructure and strengthen the production function of food plants in Japan</li> </ul>

▶ Mid-term Business Plan

Good Foods Recipe1

**Meet diverse needs**

- Develop products by taking advantage of our know-how in frozen and chilled products and expanding the frozen/chilled meal (Q-DISH) category
- Promote convenience with the assembly category, such as fish and frozen vegetables with sauces

**Expand Health Category Products** ▶ P51

- Pursue functionality of materials and deploy product strategies focusing on health
- Expand the sales of Health Category Products by 130%




**減塩**





Foods labeled as functional foods

Q-DISH Business

Our lifestyles have changed due to the COVID-19 pandemic in the past two years, characterized by the so-called stay-at-home demand and an increase in opportunities to drink at home. This has been expanding the market for ready-made foods in sealed packages distributed at chilled temperatures. These foods are convenient because one package contains one serving, and they are popular among consumers for long shelf lives and tastiness.

Convenience stores are expanding their sales floors for such foods, in order to offer a wider range of products. Businesses other than convenience stores are also showing increasing interest.

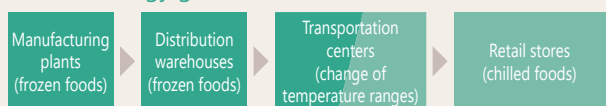
By combining the strengths of our conventional processed foods business at frozen and chilled temperatures, the Q-DISH Business will realize innovative food solutions that are tasty, easy to prepare, and convenient.

Providing innovative food solutions by taking advantage of know-how in chilled and frozen foods

**I Offer a variety of menus, including Japanese, Western, and Chinese foods, in packages that contain one serving each**

- **Meet growing demand for eating at home** with easy-to-prepare, microwave-heated meals
- **Improve taste** by reducing additives
- Long shelf lives **reduce food waste**

Combine the strengths of food processing technology developed in the Chilled Business and freezing technology gained in the frozen foods business



Q-DISH product samples



## Fine Chemicals Business

Our strength lies in the R&D capabilities developed since the founding, as well as in innovation.

Nissui's unique and advanced refining and processing technologies deliver Health Category Products, mainly functional lipids (EPA, DHA), to people of all generations in the world.



### Shinya Yamashita

Board Member, Managing Executive Officer  
 Commissioned Fine Chemicals Business Operating Officer,  
 in charge of R&D Group

#### FY2021 Overview

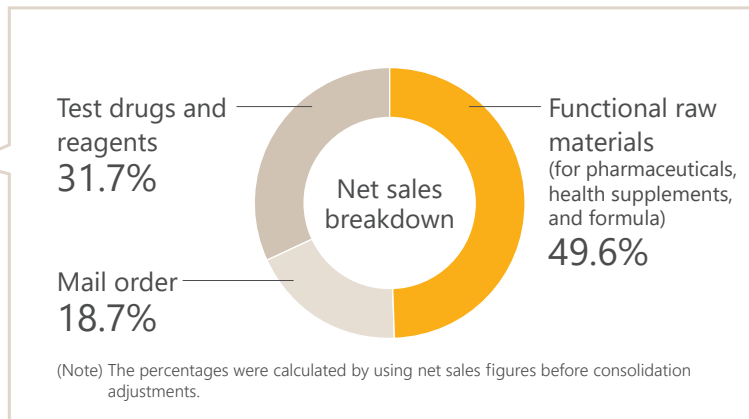
(Unit: 100 million yen)

Net sales

**340**  
 (up 30.8% YoY)

Operating profit

**40**  
 (up 69.7% YoY)



#### Summary

In FY2021, we obtained the FDA certification, which had been delayed due to the COVID-19 pandemic, and started to export pharmaceutical raw materials to North America. Mail-order sales, especially sales of "Goma Tonyu-shitate Minna no Mikata DHA" functional food (helps maintain memory) remained strong and contributed to profit. Sales of PCR testing agents also grew substantially from the previous year.

#### Business Environment

Risks	Opportunities	Strategies
<ul style="list-style-type: none"> <li>Catch of anchovies, source of fish oil ingredients, decrease due to climate change</li> <li>Political and economic changes, conflicts, etc. push up raw material prices and disrupt logistics</li> </ul>	<ul style="list-style-type: none"> <li>Demand for unwellness (health supplements/nutritional products) and treatment (pharmaceuticals) is expected to continue to grow</li> </ul>	<ul style="list-style-type: none"> <li>Ensure stable procurement of raw materials by taking advantage of strong relationships with suppliers and world-class stockpiling capacity</li> <li>Achieve cost leadership with advanced refining technology and mass production</li> <li>Continue with post-EPA research and development</li> </ul>

## Mid-term Business Plan

## Good Foods Recipe1

### For pharmaceutical raw materials

- Prepare for the European Medicines Agency (EMA) certification, with an eye on shipment to Europe
- Conclude long-term contracts with priority customers
- Introduce systems that meet international standards for quality management and production management

### Health Category Products

- Produce highly refined fish oil as raw materials suitable for adding to foods. The oil is rich in highly unsaturated fatty acids EPA and DHA, which oxidize quickly and are difficult to handle
- Launch a series of functional Health Category Products that capitalize Nissui's know-how in food manufacturing technology



## Overseas rollout of pharmaceutical raw materials

In 2018, the results of REDUCE-IT, a large-scale clinical trial concerning the effects of EPA for pharmaceuticals, were published in the United States. The results proved that pharmaceuticals with an EPA purity of 96.5% prevents the expression of cardiovascular diseases. In light of aging populations and increases in chronic diseases across the world, the market for pure EPA pharmaceuticals is expected to expand especially in the field of cardiovascular diseases.

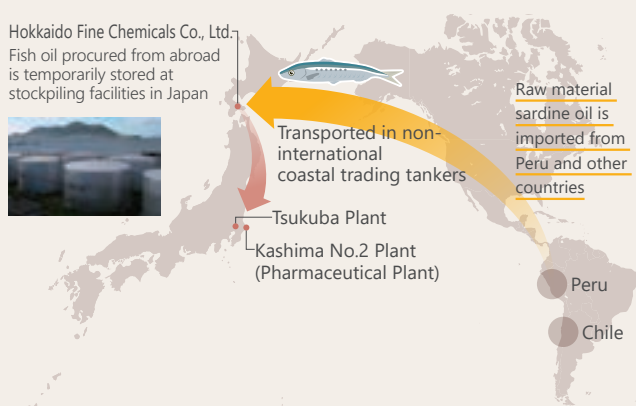
Nissui has obtained the cGMP certification essential for supplying pharmaceuticals to the United States, and started to export pharmaceutical raw materials in 2021. With an eye on Europe as the next market, we are preparing for the European Medicines Agency (EMA) certification. To sell EPA in the global pharmaceutical market, we have been working to strengthen the quality assurance function by establishing the Pharmaceutical Quality Assurance Department.

### <Pharmaceutical raw materials> Strengths that support stable growth of global sales

#### Procurement of raw materials

- Nissui procures both fish oil and meal. This is benefits for local fish oil suppliers. Therefore, Nissui can build strong relationships with them
- Our facilities in Japan can stockpile roughly three years' worth of fish oil, which enables stable procurement and storage of raw material oil

Hokkaido Fine Chemicals Co., Ltd.  
Fish oil procured from abroad is temporarily stored at stockpiling facilities in Japan



#### Cost competitiveness

- We have established a seamless production system that covers the entire process from raw material procurement to commercialization of active pharmaceutical ingredients. Without intermediate procurement costs, we can achieve cost leadership through mass production



#### Combination of technology with production output

- Our technology to achieve high EPA recovery rate ensures cost advantage of mass production
- We operate two production plants to be prepared for contingencies: Fine Chemicals General Plants Tsukuba Plant and Kashima No.2 Plant

## Engagement with Investors

# To Build a Strong, Sustainable Business Model

We invited Ms. Setsuko Yano, ESG Macro Research Analyst in the Equity Investment Group of Asset Management One Co., Ltd., to sit down with Nissui's CEO, Shingo Hamada, and CFO, Shinya Yamamoto for a three-way discussion about building a strong, sustainable business model.



### Ten years to achieve a financial position that enables stable profits

**Yano:** My current position is ESG Macro Research Analyst, but prior to that, I spent over 20 years looking at Nissui as an analyst assigned to the food industry. Because you make a conscious effort to listen to investors' feedback, and you work diligently to enhance corporate value, yours is the kind of company that makes me want to cheer you on. I know that you went through some difficult times, but I think it is wonderful that you have started giving careful explanations about volatility, and that, even if you post poor single-year results, you are now able to bounce back.

**Hamada:** After the 200 nautical mile system was enforced in 1977, things were very tough for us for some time. From the early 2000s, we accelerated our outside Japan expansion, and we have been able to build up the global connections that are now our strength. Some of our investments at that time failed to meet expectations, and it is true that there was major volatility. However, over the past ten years, we have wound up those investments and we finally have a structure that allows us to make stable profits.

**Yano:** I imagine the improvement of your business model involved much hardship. I have a strong image of Nissui as a company that takes on challenges, and I am

impressed by your foresight in developing an international perspective. However, I do believe that you have potential to take your profitability to the next level. Moreover, companies these days are being called on to step up their disclosures of non-financial information, and, what's more, those disclosures need to be of a highly convincing quality based on global standards. My feeling is that Nissui has room to raise external recognition of your ESG efforts.

### Changing gears toward innovative food solutions

**Yamamoto:** Ms. Yano, you have always given us valuable feedback. In recent times, questions and comments from investors have started to shift from short-term perspectives to more medium- to long-term perspectives regarding substantive corporate value enhancement. From an investor's viewpoint, what is your view of the recent changes in the equity market?

**Yano:** My view is that it is in a period of transition. The equity market is shifting toward the belief that, together with companies, it needs to engage more than ever on the enhancement of environmental and social sustainability. There is an expectation that companies' philosophies and strategies should, to a certain extent, be consistent with global values.

**Hamada:** We have long held a sustainability approach in our global business. We believe that, if we are not serious about sustainability, we will not be accepted outside Japan, and for this reason, we have made sustainability a pillar of our newly established mission and our long-term vision toward 2030.

**Yano:** I feel a great empathy toward your new mission and long-term vision. I also sense your strong ambition to change gears. When companies only have their eyes on Japanese society, there is a tendency to overlook changes in the global external environment. Because you have a global value chain, I believe that you are aware of the gap between Japan and the world as an issue, and the way that you have incorporated the opinions of future generations and your outside Japan subsidiaries in the process of formulating your mission has, I believe, made that mission even more valid. In the process of building sustainable food systems, new and existing players will be jumbled together, and the industry map will be redrawn through innovation. That situation is bound to present both risks and opportunities.

**Hamada:** I completely agree. There are still so many more possibilities in food, as well as things that are not yet visible to us. By declaring innovative food solutions as our mission, we want to offer innovative foods, approaches, and functions of foods.

### Acceleration of business portfolio management

**Hamada:** When viewed from an investor's perspective, what do you see as the challenges for the Nissui Group?

**Yano:** I am excited about your aquaculture and fine chemicals businesses, but the reality is that there are major variations in profitability and volatility among your individual businesses and subsidiaries. In the course of improving volatility, if you want to become a company that can compete in the world, I do think that you need to take your uniqueness to new heights.

**Hamada:** Because we are a company that deals in marine resources, our prices tend to be governed by market conditions. However, we have improved volatility through reforms to our business model, such as raising profit margins by increasing the percentage of those resources that are turned into food products. Some of our businesses will generate larger profits by increasing their scale to a certain extent, while others will become more profitable by developing value-added products that will win the support of customers. As an example of these value-added products, our brand, Kurose Buri (Yellowtail), is a delicious, farmed yellowtail that we supply even in spring and summer, which has been extremely well received by customers. Increasing our profitable products, processing methods, and raw

materials within our existing businesses is something that we will pursue in our Mid-term Business Plan. Currently, our three core businesses are Fisheries Products, Food Products, and Fine Chemicals, but in preparation for various changes in the environment, our challenge will be the development of new businesses, by seeking out the seeds of new business pillars and nurturing them. On the other hand, it is important to consider investment timeframes, so we hope to strengthen our portfolio management using CCC and ROIC.

**Yano:** Sharing CCC and ROIC with investors would be beneficial. Businesses that have high capital efficiency absolutely have a competitive advantage. In your mid-term business plans to date, you have probably thought in cumulative terms, such as achieving X billion yen with A, B, and C, but to compete globally, it is crucial that you continue to refine your competitive advantages that will ensure sustainable growth. In that respect, I would ask you to be more cognizant of efficiency indicators as a yardstick for measuring those advantages, and that you be more discerning about results.

### Demonstrating uniqueness in climate action as well

**Yano:** In your long-term vision, you have also declared goals for environmental value, social value, and value in human capital. There is much that overlaps between the core materiality of my company and the themes that Nissui has declared.

**Hamada:** We have declared our goal of becoming carbon neutral by 2050. As well as sustainability targets, we have taken every opportunity to explain the new long-term vision and mid-term business plan to our outside Japan subsidiaries directly. They were surprised by our carbon-neutral goal at first, but they have agreed with it. In Japan as well, I have explained our goals directly to our employees at what we call "One Table Meetings." Many employees are keen to be actively involved in this goal, which I find very heartening. By explaining things steadily and surely, I have gained a sense that our culture will change. Taking action against climate change involves risks for the Nissui Group, but at the same time, it also presents major opportunities, which is why we have commenced TCFD disclosures from this year.

**Yano:** Compared with other sectors, my impression has been that many companies in the food industry were initially slightly reluctant to commit to becoming carbon neutral. In that respect, I think your declaring goal of becoming carbon neutral is a wonderful expression of your commitment. I also found your TCFD disclosures very satisfying to read, as they convey clearly what kind of risks and opportunities you face. In terms of concrete

## Engagement with Investors



strategies for solutions, there are some things that you are already working on, such as on-land aquaculture and alternative proteins. Having said that, when it comes to the stage of raising profit margins, I did find your disclosures to still lack persuasiveness. In those areas where you talk about radicalization and evolution, I hope you will share with investors more concrete milestones, such as “what volume by when and how.” Also, ideally, it would be good if you could show your uniqueness, that is, what makes you different from other companies.

**Hamada:** You’re right. Our explanations have lacked concreteness in that regard. We hope to make improvements in our disclosures next year and beyond. The Group’s business is highly reliant on natural capital, particularly marine resources. To identify not just the risks but also the business opportunities, we believe that it is important to conduct sustainability surveys of marine resources. We have conducted such surveys twice in the past, in 2016 and 2019, releasing the results of the 2016 survey in 2018 and the results of the 2019 survey in 2021. We have confirmed that resources controls are being conducted on 71% of wild-caught marine products procured, but we will continue to conduct these surveys and make use of them in our strategies.

**Yano:** Your surveys of the state of resources of the marine products you handle have rated highly in ESG surveys conducted by evaluation agencies. How do you put these survey results to use?

**Hamada:** Naturally, we use them internally, but we also present them at SeaBOS\*, which is an initiative of the world’s major marine products companies, and they have been praised highly by SeaBOS member companies. Instead of keeping the survey data to ourselves, we make it available not only to SeaBOS members, but to anyone in the industry, so they can see what the resources status of certain species is in certain sea zones.

**Yano:** That’s wonderful. The provision of facts about natural resources that are evaluated by global criteria is precisely what is needed today. There are still many elements of natural capital-related facts that have not been elucidated. Under these circumstances, the fact that you make this data so widely available is also of immense significance in terms of promoting the sustainability of society as a whole. I am sure that this kind of leadership initiative will help to elevate the value of the Nissui brand globally. Next year, the TNFD framework will be finalized, and I hope that you will use your facts and data as a TNFD initiative as well.

\* SeaBOS (Seafood Business for Ocean Stewardship) An initiative for promoting the sustainable fisheries business. Nissui is a founding member of SeaBOS.

### Human capital development is a challenge for the realization of the vision

**Hamada:** Human capital has been attracting increasing attention in recent years, hasn’t it? This is an area that we also see as a challenge, which is why we set KPIs for value in human capital in our long-term vision.

**Yano:** What is important in the use and enhancement of human capital is to tie it to management strategies. I believe that you have many brilliant people working for Nissui. However, I would recommend that you take the time to check whether you have the right people working in the right positions for you to achieve the strategies you want to pursue. You should also draw up a skills map to make the skills that each person possesses visible and check whether your personnel strategies are consistent with your business strategies. It is also important to increase the number of people who possess management-oriented thinking by giving them management experience from an early stage.

**Hamada:** I agree that it is extremely important to give people management experience. However, to be honest,

we are still at the stage of exploring how and where we should make investments in that regard. We do have many excellent, hard-working people. We have made a start on the skills visualization process, but there may be people who possess skills but have not been able to demonstrate them, and the empowerment of our female employees is also a major challenge. Human capital development is the most time-consuming and difficult of challenges, but it is also the most important. We hope to keep working steadily on this theme.

**Yano:** Strategic investment in human capital is also crucial. There is a particularly strong need for people skilled in digital (DX) technologies, so you will need to engage in reskilling and nurture these people more and more on the ground.

**Yamamoto:** Skills visualization is also imperative for considering which people to reskill and how. I also think that there is room for productivity improvements in many different areas, so we plan to work actively on DX.

### Meticulous dialogue with investors is important

**Hamada:** In the course of accelerating our global expansion, at the same time, Group governance has become a challenge. We have established the frameworks, but could I ask what points investors look at when evaluating governance?

**Yano:** Investors look at whether a company has set up the frameworks and mechanisms for realizing their long-term visions and goals, and we then evaluate them from the dual angles of “executive mechanisms” and “risk avoidance mechanisms.” Governance is not something that can be evaluated simply by ticking boxes on a checklist, such as it being okay as long as a company has

a majority of outside directors. We see potential in companies that are convincing in terms of what areas of governance they have viewed as “challenges” to date in working toward their goals. In dialogues with investees, if they speak frankly about their order of priority in business strategies and their challenges, the governance challenges also materialize, which makes it easier for us as investors to express constructive opinions. That kind of dialogue is critical.

### Toward the creation of innovative food solutions

**Hamada / Yamamoto:** This discussion has allowed us to view the various risks and challenges from slightly different angles than we have to date. We will properly evaluate the advantages and faults of our businesses and business models and what we have done so far, and, hopefully, bring a better sense of variety and balance to our business by implementing business portfolio management. We would love the opportunity to hold this kind of dialogue again in the future and to hear your views.

**Yano:** I have great hopes for your mission of innovative foods. Our corporate message is “Creating a sustainable future through the power of investment,” and I hope that, by continuing to hold constructive dialogue into the future, together we can create the future you envisage and a sustainable society.



**Setsuko Yano**  
ESG Macro Research Analyst  
Equity Investment Group  
Asset Management One Co., Ltd.



**Shingo Hamada**  
Representative Board Member and President  
Chief Executive Officer (CEO)



**Shinya Yamamoto**  
Board Member, Managing Executive Officer  
Chief Financial Officer (CFO), In charge of  
Corporate Administration Group



## Value Creation for a Sustainable Society

# Actions to the Risks and Opportunities Arising from Climate Change



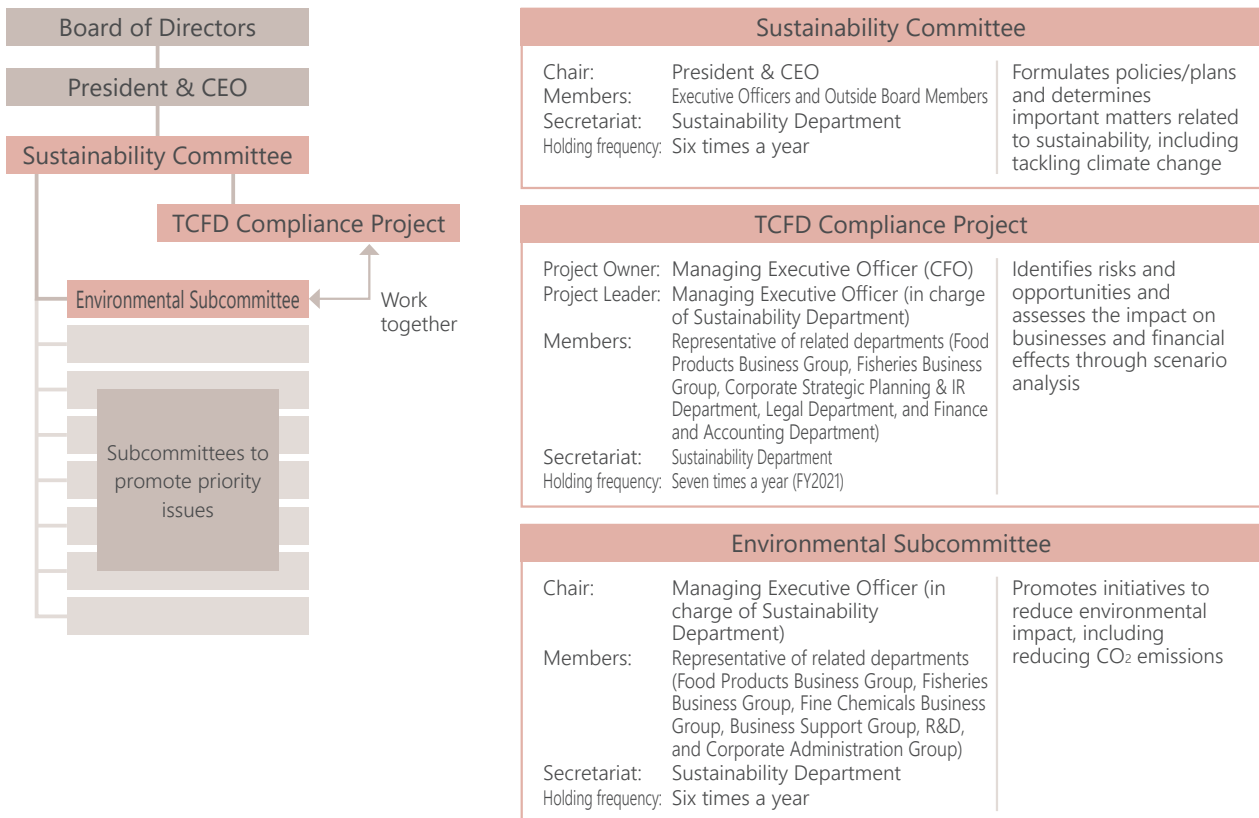
The basic corporate stance of Nissui, whose business relies on the bounty of nature, is to respect natural resources and interact with the earth and sea with gratitude. Conservation of the global environment is indispensable for business continuity, among others. In November 2021, we declared its support for recommendations by the Task Force on Climate-related Financial Disclosures (TCFD) and joined the TCFD Consortium with the understanding that tackling climate change is an important management issue. We will identify the risks and opportunities related to climate change, assess the impact on businesses as well as financial effects through scenario analysis and take countermeasures to enhance business sustainability.

### Governance ▶P69

The Nissui Group is promoting sustainability management aimed at realizing sustainable growth and higher corporate value. As an organization serving as its driving force, we established the Sustainability Committee, which consists of all Executive Officers and Outside Board Members and is chaired by the President & CEO.

In each of the eight subcommittees set up on a theme-by-theme basis under the Sustainability Committee, the subcommittee's chairperson (i.e., Executive Officer) designated by the Committee's chairperson and members appointed by the subcommittee's chairperson address each sustainability-related issue in a cross-departmental manner. At the meeting of the Sustainability Committee, which is convened six times a year, specific targets, policies and measures for sustainability-related issues are examined based on reports and proposals made by each subcommittee, and the Board of Directors' opinions and advice are reflected in its initiatives through periodic reports made to the Board of Directors.

In regards to the climate change problem, risks and opportunities are analyzed and countermeasures are studied in the "TCFD Compliance Project," which was launched in FY2021 as a cross-departmental project in which the Managing Executive Officer (CFO) serves as the project owner. Findings of its studies are reported to the Board of Directors following deliberation at the Sustainability Committee, and the Board of Directors' opinions and advice are reflected. A meeting of the TCFD Compliance Project was convened seven times in FY2021. As for measures to mitigate climate change, such as reducing CO<sub>2</sub> emissions, the Environmental Subcommittee under the Sustainability Committee promotes initiatives of the Nissui Group as a whole. Also, we revised its officers' compensation system in FY2022 to fulfill its vision targeted in 2030 and its business plan, adding the level of achievement of sustainability targets—such as the sustainability of marine resources and the reduction of CO<sub>2</sub> emissions at the Nissui Group's business locations—to the list of performance indicators for Executive Board Members' variable compensation component.



## Strategy

In FY2021, we conducted an analysis of two climate change scenarios based on the TCFD recommendations with respect to the Fisheries Business Group and the Food Products Business Group, identified climate change risks and opportunities, assessed the financial impact and looked into countermeasures against them. We will take countermeasures against significant risks and opportunities that have been clarified to help reduce risks and steadily seize opportunities in pursuit of a climate change resilient state.

### ► Overview of Scenario Analysis in Strategy

In 2021, we conducted a climate change scenario analysis in accordance with the TCFD recommendations. We broadly analyzed the value chain as a whole, focusing on the Fisheries Business Group and the Food Products Business Group. Using a 1.5°C/2°C temperature-rise scenario and a 4°C temperature-rise scenario for the world, we identified the risks and opportunities, assessed the financial impact in 2030 and looked into countermeasures against them.

As a result, we found that in the 1.5°C/2°C scenario, operating costs attributable to the introduction of carbon tax serve as an obstacle to business growth, but efforts to proactively reduce greenhouse gas emissions and improve the efficiency of production activities and the acquisition of new customer demand can translate into business growth. In the 4°C scenario, we found that the physical risks associated with the increasing severity of natural disasters serve as an obstacle to business growth, giving rise to the need to minimize the impact on earnings by dealing with such risks through initiatives to make the aquaculture business more sophisticated. Moving forward, we plan to proceed with analysis by expanding its scope to include other businesses.

Scenario	Description of Outlook of the World
1.5°C/2°C scenario (RCP2.6)	<ul style="list-style-type: none"> <li>● Social demand for decarbonization leads to tougher regulations and stronger requests to take action for decarbonization targeting the corporate sector and value chains as a whole</li> <li>● Social demand for decarbonization gives rise to the need to procure raw materials produced through carbon-free processes and engage in sustainable fishery and aquaculture operations</li> <li>● Due to changes in preferences among consumers and retailers, low-carbon manufacturing/products and transaction and sale of items from sustainability-conscious sources are required</li> </ul>
4°C scenario (RCP8.5)	<ul style="list-style-type: none"> <li>● In conjunction with the increasing severity of natural disasters, aquaculture, manufacturing, logistics and other business sites are at a higher risk of being struck by disasters, and there is a higher risk of suspension of supply/operation, etc. in the event that they are struck by disaster</li> <li>● Changes in flora and the marine environment brought about by the increasing severity of natural disasters and the rise in temperature lead to a higher risk of the harvest of crops and the catch /production volume of marine resources decreasing</li> <li>● Frequent occurrence of natural disasters leads to higher demand for disaster foods, and changes in temperature lead to deterioration in people's health, making them want more products that meet their needs in terms of health</li> </ul>

### 1.5°C/2°C Scenario

Risks / Opportunities	Classification	Main risks and opportunities that are expected	Impact on business	Timing of impact	Financial impact	Main countermeasures
Transition risk	Regulations	Impact of tougher environmental regulations	Increase in costs of dealing with introduction of carbon pricing	Medium-term	High	<ul style="list-style-type: none"> <li>● Set emissions reduction target for each business location</li> <li>● Introduce renewable energy sources more widely, invest in energy-saving equipment</li> <li>● Reduce plastics in containers and packaging</li> <li>● Execute modal shift and improve transportation efficiency</li> <li>● Consider introducing ICP (Internal Carbon Pricing)</li> </ul>
			Increase in costs of dealing with tougher regulations on energy-saving, greenhouse gas emissions, etc.			Short-term
	Growing requests to become Fluorocarbon-free due to tougher regulations against Fluorocarbon	Short-term	High	<ul style="list-style-type: none"> <li>● Set CO<sub>2</sub> emissions reduction target, including emissions up to Scope 3</li> <li>● Proactively disclose information on action against climate change</li> </ul>		
Opportunities	Products and services			Changes in consumers' purchasing behavior (greater environmental awareness, consideration for sustainability)	Increase in demand for sustainability-conscious products	Short-term
		Increase in demand for alternative protein sources due to growing demand for low-carbon products	Medium-term		High	<ul style="list-style-type: none"> <li>● Develop and expand alternative protein products</li> </ul>
		Increase in demand for marine resources as a low-carbon food source	Long-term		Medium	<ul style="list-style-type: none"> <li>● Conduct LCA (Life Cycle Assessment) and proactively disclose information</li> </ul>

Timing of impact was divided into short-term (within 3 years), medium-term (3 to 10 years) and long-term (10 to about 20 years).

## Value Creation for a Sustainable Society

### 4°C Scenario

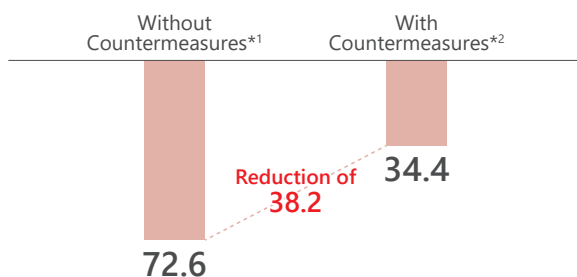
Risks / Opportunities	Classification	Main risks and opportunities that are expected	Impact on business	Timing of impact	Financial impact	Main countermeasures
Physical risk	Acute	Increase in business suspension risk and administrative costs due to increasing severity of wind and flood disasters	Damage due to manufacturing/logistics sites being struck by disaster	Short-term	High	<ul style="list-style-type: none"> <li>Hedge risks by dispersing bases</li> <li>Review the content of insurance to prepare against physical damage</li> <li>Review BCP and conduct in-house drills</li> </ul>
			Damage due to destruction of aquaculture facilities	Short-term	Low	<ul style="list-style-type: none"> <li>Introduce submersible fish cages and reinforce facilities</li> <li>Enhance on-land aquaculture solutions</li> </ul>
		Procurement risk of raw materials due to abnormal climate	Higher cost of procurement of raw materials	Short-term	Medium	<ul style="list-style-type: none"> <li>Reduce risks by dispersing places of production and diversifying suppliers</li> </ul>
	Chronic	Procurement risk of marine resources due to changes in marine environment	Decrease in catch of wild-caught fish and farmed fish	Medium-term	Medium	<ul style="list-style-type: none"> <li>Build procurement networks</li> <li>Enhance on-land aquaculture solutions</li> <li>Develop high-temperature-tolerant breeds and explore places suited to aquaculture</li> </ul>
Decrease in catch and increase in procurement cost of fish serving as the ingredient for aquaculture feed			Medium-term	Medium	<ul style="list-style-type: none"> <li>Develop alternative feed (low-fishmeal formula feed)</li> </ul>	
Opportunities	Products and services	Increase in demand through products and services for dealing with disasters and climate change	Increase in aquaculture demand in association with decrease in natural resources	Short-term	High	<ul style="list-style-type: none"> <li>Enhance on-land aquaculture solutions</li> <li>Develop high-temperature-tolerant breeds and explore places suited to aquaculture</li> </ul>
			Decrease in costs based on smart aquaculture solutions	Short-term	Medium	<ul style="list-style-type: none"> <li>Improve efficiency and save labor by utilizing AI and IoT</li> </ul>
		Greater awareness of health in association with temperature rise	Increase in demand for products that meet demand for health	Short-term	Medium	<ul style="list-style-type: none"> <li>Expand sales of health category products</li> <li>Pursue functionality of marine products</li> </ul>

Timing of impact was divided into short-term (within 3 years), medium-term (3 to 10 years) and long-term (10 to about 20 years).

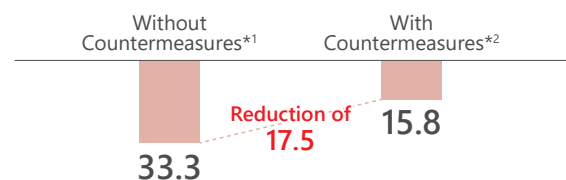
### Impact of Carbon Pricing

For carbon pricing, whose impact was particularly large in terms of financial impact, estimates were made on the premise of the following basis of calculation. Future CO<sub>2</sub> emissions (Scope 1 and Scope 2) were calculated based on the sales forecast for 2030, and the amount of impact in terms of operation cost was calculated by multiplying it with the carbon price according to IEA's forecast with respect to each scenario, i.e., 2°C scenario and 4°C scenario. This revealed that a reduction in total CO<sub>2</sub> emissions by 30%, which is our target for 2030, will translate into a Group-wide reduction amounting to 3,820 million yen in the 2°C scenario and 1,750 million yen in the 4°C scenario.

2°C Scenario (operation cost reduction in 100 millions of yen)



4°C Scenario (operation cost reduction in 100 millions of yen)



Carbon tax: Assumed to be USD120/t-CO<sub>2</sub> in the 2°C scenario and USD55/t-CO<sub>2</sub> in the 4°C scenario, assuming an exchange rate of USD1.00=JPY115 in both scenarios

\*1 Without Countermeasures: With respect to Scope 1 and Scope 2 emissions, per-unit CO<sub>2</sub> emissions released are assumed to be at a similar level as in the base year, i.e., FY2018.

\*2 With Countermeasures: With respect to Scope 1 and Scope 2 emissions, CO<sub>2</sub> emissions are assumed to be reduced by 30% from the FY2018 level through the achievement of the 2030 target.

## Reflection in Strategy

In response to the scenario analysis results, we have been reflecting the countermeasures—starting with high-priority ones—in its Mid-term Business Plan “Good Foods Recipe1” to ensure consistency with its strategy.

Basic Strategy	Item	Description
Sustainability Strategy	Reduction of greenhouse gas emissions	<ul style="list-style-type: none"> <li>● Switch fuels, utilize renewable energy sources, promote energy-saving and promote modal shift</li> <li>● Shift from designated CFCs to natural refrigerants</li> <li>● Expand sale of alternative protein products</li> </ul>
	Reduction of plastics	<ul style="list-style-type: none"> <li>● Switch all aquaculture floats to a lower risk of outflowing out into the ocean</li> <li>● Reduce plastics in containers and packaging, switch to biomass-based materials, etc.</li> <li>● Reduce plastics in distribution materials, promote recycling</li> <li>● Suppress release of waste plastics associated with business activities</li> </ul>
	Sustainable use of marine resources	<ul style="list-style-type: none"> <li>● Survey on sustainability of marine resources</li> <li>● Enhance acquisition rate of various marine eco-label certifications and expand handling of certified raw materials</li> </ul>
	Boosting appeal in terms of health	<ul style="list-style-type: none"> <li>● Expand health category products</li> <li>● Pursue functionality of materials</li> </ul>
Global expansion strategy	Business growth centering on the U.S. and Europe	<ul style="list-style-type: none"> <li>● Enhance ability to access resources</li> </ul>
New business development strategy	New businesses	<ul style="list-style-type: none"> <li>● Expand health category products</li> <li>● Expand alternative protein products</li> </ul>
	Enhancement of existing businesses	<ul style="list-style-type: none"> <li>● Commercialize on-land aquaculture</li> </ul>
Innovations of productivity strategy	Differentiation in priority growth fields	<ul style="list-style-type: none"> <li>● Refine aquaculture business model</li> <li>● Shift to smart factories</li> </ul>

## Risk Management ▶ P69

We have established the risk management rules to prevent risks that may hinder business activities from arising, minimize the occurrence of losses and make best efforts to preserve its management resources and continue its businesses. The Risk Management Committee, which is chaired by the President & CEO, builds and operates a risk management system and periodically makes reports to the Board of Directors. Significant business risks, including the impact of climate change (global temperature rise), are deliberated and updated by the Board of Directors each year.

## Metrics and Targets

In our long-term vision “Good Foods 2030,” we have presented our aim to reduce total CO<sub>2</sub> emissions by 30% in 2030 compared to the FY2018 level and realize carbon neutrality by 2050. To fulfill the target on a Group-wide, global scale, we will engage in initiatives proactively by formulating a CO<sub>2</sub> emissions reduction plan, such as implementing energy-saving measures at each business location, replacing equipment with highly efficient units with low energy usage, and using renewable energy sources. We calculated Scope 3 emissions by dividing emissions into 15 categories in accordance with the guidelines by the Ministry of the Environment, which are consistent with the Greenhouse Gas Protocol. Going forward, we will pursue greater accuracy of data, look into ways to reduce Category 1 emissions -which are large in volume- and make other such efforts to further promote the reduction of CO<sub>2</sub> emissions in the Nissui Group.

Furthermore, we will promote initiatives also with respect to wild-caught marine resources to be procured, plastics, food loss and waste, water, etc. by announcing their respective targets and measures to realize sustainable use.

### ○ CO<sub>2</sub> Emissions (Scope 1 and Scope 2) Reduction Target: Compared to FY2018/Total Emissions

Reduce CO<sub>2</sub> emissions by **30%** by 2030 → **Achieve carbon neutrality by 2050**

### ○ Targets and Measures to Realize Sustainable Use

Long-Term Vision

▶ [https://www.nissui.co.jp/english/ir/management\\_policy/policy.html](https://www.nissui.co.jp/english/ir/management_policy/policy.html)

The vision Targeted in 2030

▶ <https://nissui.disclosure.site/en/themes/150>

Calculating CO<sub>2</sub> Emissions for the Entire Supply Chain (Scope 3)

▶ <https://nissui.disclosure.site/en/themes/88>