



**TAIHEIYO CEMENT CORPORATION**

BUNKYO GARDEN GATE TOWER,  
1-1-1, Koishikawa, Bunkyo-ku, Tokyo 112-8503, Japan  
<https://www.taiheiyo-cement.co.jp/english>

**Contact Information**

**Investor Relations and Communications Group,  
General Affairs Department**

Tel: 03-5801-0334 Fax: 03-5801-0344  
E-mail: [ir-com@taiheiyo-cement.co.jp](mailto:ir-com@taiheiyo-cement.co.jp)

**Corporate Social Responsibility Group,  
General Affairs Department**

Tel: 03-5801-0335 Fax: 03-5801-0345  
E-mail: [webmaster@taiheiyo-cement.co.jp](mailto:webmaster@taiheiyo-cement.co.jp)



TAIHEIYO CEMENT REPORT 2022

TAIHEIYO CEMENT CORPORATION



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### Scope and Boundaries of this Report Reporting Period



FY2022  
(April 1, 2021 to March 31, 2022)  
It is clearly stated where information about events that occurred outside this period are included in the report.

### Boundary of Reporting Organizations

The report covers Taiheiyo Cement Corporation (non-consolidated) and includes our group companies. "The company" refers to Taiheiyo Cement Corporation (non-consolidated); when information pertains to one of our group companies, the group company's name is explicitly stated.

### Boundary of Reporting Organizations by Quantitative Data

Quantitative data are aggregated on a consolidated basis and under the following two categories. An icon representing the relevant aggregation scope is displayed with data for categories 1 and 2.

Category 1  Taiheiyo Cement Corporation (non-consolidated)
Category 2  Data collected for reporting of GCCA* KPIs. Organizations covered are listed on pages 4-5

\* GCCA: Global Cement and Concrete Association

### Disclaimer Regarding Forward-looking Statements

Plans and prospects included in this report are predictions based on information available at the time of publication and are subject to unpredictable risks and uncertainties. Consequently, there are no explicit or implied guarantees as to actual results, which may materially vary from the projected figures or measures cited in this report.

## Mission of the Taiheiyo Cement Group

Our mission is to contribute to social infrastructure development by providing solutions that are environmentally efficient, enhance our competitive position and bring value to our stakeholders.

## Business Principles Governing the Way the Company Conducts Business

We are committed to maximizing our corporate value by generating synergies among Taiheiyo Cement Group companies.

We aim to manage the environmental impact of our operations while supporting the development of a recycling-based society.

We will act in an ethical manner and abide by the laws and regulations of those countries in which we operate.

We will openly communicate with our stakeholders and proactively report on our business activities in a transparent manner.

We are committed to the ongoing development and application of innovative technologies in order to provide products and services that benefit our customers and society.

We are committed to maintaining an international outlook and conducting our business in accordance with global standards.

We will strive to anticipate the changing business environment to assess new opportunities for growth.

We are committed to achieving our full potential through training and self-development.

We are devoted to providing a safe and healthy working environment where our employees are valued and the human rights of all individuals involved in our business are respected.

Under the Mission of the Taiheiyo Cement Group, which was established in June 2002, the company pledges to focus its management on the triple bottom line of the economy, the environment and society, to realize sustainable development, a shared principle of the GCCA of which we are a member.

In December 2002 we formulated the Business Principles of Taiheiyo Cement, which comprise nine principles for realizing the Mission of the Taiheiyo Cement Group, and are striving to implement them.

### Editorial Policy

In the report, we convey to our stakeholders how we conduct activities to address social issues and sustainably increase corporate value. We aim to deepen mutual understanding through constructive dialog and further evolve management while raising the level of disclosure.

### Guidelines Used for Reference

- The International Integrated Reporting Framework (IIRC)
- Guidance for Integrated Corporate Disclosure and Company-Investor Dialogues for Collaborative Value Creation (Ministry of Economy, Trade and Industry)
- GRI Sustainability Reporting Standards (GRI Standards) 2016/2018
- Environmental Reporting Guidelines 2018 Edition (Ministry of the Environment)
- Environmental Accounting Guidelines 2005 Edition (Ministry of the Environment)
- ISO30414

### Publication Dates

December 2022 (Previous report: November 2021, next report: September 2023)

### Reporting in Accordance with the GRI Standards

The index for the GRI Content core option is available on our website.

### Clarifying Efforts to Achieve SDGs

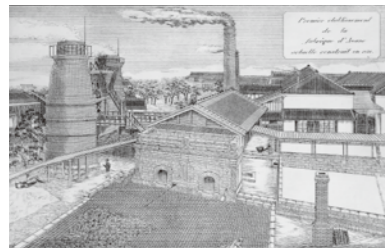
We have analyzed our business risks and opportunities, clarified their relevance to the Sustainable Development Goals (SDGs) and displayed icons representing the relevant SDGs on each page of our activities. We will seek to contribute to the achievement of the SDGs through the group's business activities.

# History of the Taiheiyō Cement Group

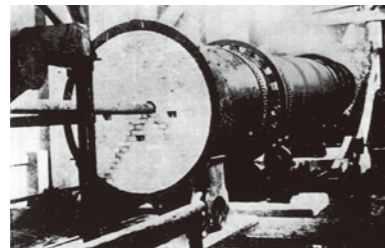
Taiheiyō Cement Corporation was founded in October 1998 through the merger of Chichibu Onoda Cement Corporation and Nihon Cement Co., Ltd., both of which had operated for over 100 years. The Taiheiyō Cement Group continues to support infrastructure development by supplying high quality cement and construction materials and applying advanced technologies at nine cement plants in Japan and nine in the Pacific Rim region, including in the U.S., China and Southeast Asia. We will continue to strive to create a sustainable society by demonstrating the group's overall capabilities.

## Nascent Period of Cement Production in Japan

In 1873 the government constructed a cement production works in Fukagawa, Tokyo. Two years later the works successfully produced and launched sales of domestic cement comparable in quality to foreign products. Following this, Onoda Cement Co., Ltd., Asano Cement Co., Ltd. (predecessor of Nihon Cement Co., Ltd.) and Chichibu Cement Co., Ltd. were founded and underpinned the modernization of Japan.



Cement production works in Fukagawa, Tokyo



Japan's first rotary kiln (DB kiln)

## Launch of Taiheiyō Cement

Taiheiyō Cement Corporation was founded in 1998 via the merger of Chichibu Onoda Cement Corporation and Nihon Cement Co., Ltd. The company has supplied cement for various national construction projects in Japan. In 2000 we completed the construction of the Nghi Son Cement Corporation plant in Vietnam, and then in 2003 made Taiheiyō Cement Philippines, Inc. a wholly owned subsidiary, further expanding the group's global network.

## Commitment to Environmental Issues

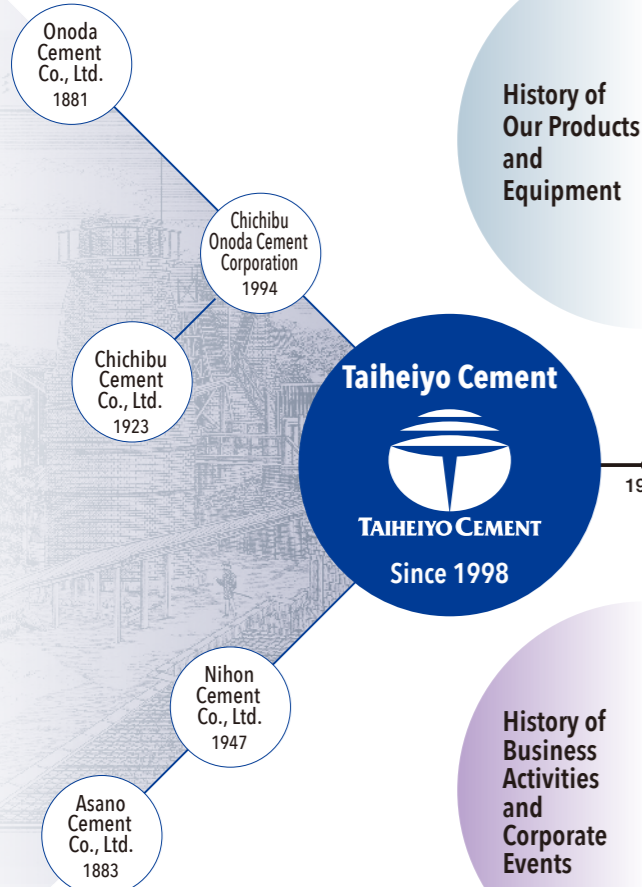
In 2006 we formulated the Taiheiyō Cement Environmentally-conscious Management Policy, which identified an active commitment to environmental issues as a key management challenge. Then, in 2007, we launched the Taiheiyō Brand Cement and Concrete Project and began taking action to boost the value of the group's technological strengths and solutions.

## A Period of Economic Downturn, Earthquakes and Adversity

The group marked its 10th anniversary amid a serious economic downturn in the wake of the 2008 global financial crisis. We then carried out business restructuring for the group in 2010. While the Ofunato Plant and eight of our service stations in the Tohoku region were out of action due to the Great East Japan Earthquake of 2011, our financial structure was bolstered by an increase in capital and we were able to navigate a way through this adversity.

## Making Progress by Fully Deploying Our Capabilities

We formulated our 23 Medium-Term Management Plan as the third step towards realizing our future vision and direction targeting the mid-2020s. All businesses in our group will function together comprehensively and integrally as we aim to become an outstanding leading company.



### History of Our Products and Equipment

- 2000 May: Acquired an exclusive license from three French companies for the inorganic composite material Ductal.
- 2001 July: Started operating a municipal waste incineration ash washing system (Ash Washing System) at the Kumagaya plant.
- 2002 January: Expanded the scale of the coal ash treatment business following completion of the Kanto Ash Center.
- 2002 November: Started operating an AK system to recycle municipal waste as a raw material for cement at the Saitama Plant.
- 2002 December: Started operating a facility to recycle wood as a biomass resource at the Oita Plant.
- 2006 July: Developed Silica Fume Premix Cement for ultrahigh-strength cement.



The Kyoto Protocol comes into force

The Global Financial Crisis of 2008

The Great East Japan Earthquake

Adoption of the Paris Agreement

COVID-19 spreads

### History of Business Activities and Corporate Events

- 1998 October: Taiheiyō Cement founded.
- 1999 May: Obtained ISO 14001 certification at six directly operated cement plants in Japan.
- 2000 October: Acquired the management rights to Grand Cement Manufacturing Corporation in the Philippines (currently Taiheiyō Cement Philippines, Inc.)
- 2000 November: Completed construction of Nghi Son Cement Corporation (Vietnam).
- 2001 July: Completed construction of Itoigawa Power Station and launched an electric power supply business.
- 2002 June: Formulated the Mission of the Taiheiyō Cement Group.
- 2003 April: Grand Cement Manufacturing Corporation made a wholly owned subsidiary. Company name changed to Taiheiyō Cement Philippines, Inc. in June 2003.
- 2003 April: Launched a business to recycle construction soil as a raw material for cement.
- 2005 April: Launched an electric power supply wholesale business at the Tosa Power Station.
- 2006 January: Formulated the Environmentally-conscious Management Policy of the Taiheiyō Cement Group.
- 2008 October: Marked the 10th anniversary of the company.
- 2009 April: Registered company-wide ISO 14001 integrated certification at six directly operated plants.



- 2007 August: Commenced selling DENITE, a heavy metal immobilizer.
- 2007 December: Ductal was used in the pier slabs of Haneda Airport Runway D.
- 2010 November: Launched a phosphor material, ChiccaLight, for LEDs.
- 2011 March: Suspended operations at the Ofunato Plant due to damage from the Great East Japan Earthquake.
- 2012 June: Resumed full operations at the Ofunato Plant.



- 2014 August: Harumi Onoda Remicon Co., Ltd. completed construction of an environmentally sound (indoor) plant.
- 2018 May: Water purification material Ceraclean obtained ETV mark certification from the Ministry of the Environment.
- 2019 May: Developed AI technology for predicting concrete slump.
- 2019 December: Started operating a municipal waste incineration bottom ash washing system at the Kumagaya Plant.



- 2020 January: Started commercial operations of a biomass power station at the Ofunato Plant.
- 2021 February: Successfully developed Nanolithia, a cathode material for lithium-ion batteries.
- 2022 August: Started construction of a production line at Taiheiyō Cement Philippines, Inc. (TCPI)



- 2010 March: Announced business restructuring for the group.
- 2010 April: Second production line of Nghi Son Cement Corporation came into operation.
- 2013 July: Their Majesties the Emperor Akihito and Empress Michiko of Japan visited the Ofunato Plant.



- 2015 May: Formulated the CSR Objectives for 2025.
- 2015 June: Acquired the Oro Grande plant (California, U.S.)
- 2018 May: Jointly established the Global Cement and Concrete Association (GCCA) with the world's leading cement companies.



- 2018 October: Marked the 20th anniversary of the company.
- 2019 June: Supported the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).
- 2021 January: Concluded the agreement on capital alliance with the Semen Indonesia (SI) Group.
- 2022 March: Established technology development roadmap and 2030 Interim Targets for the Carbon Neutral Strategy 2050.
- 2022 May: Signed the UN Global Compact.
- 2022 June: Acquired the Redding Plant and ready-mixed concrete business assets (California, U.S.A.)

# Taiheiyo Cement Group Business Network

The Taiheiyo Cement Group deploys production and logistics sites in Japan and overseas, and establishes systems to ensure stable supplies of cement and mineral products. In addition, we utilize our world-leading environmental cement production technologies to contribute to the creation of a recycling-based society and countermeasures to mitigate climate change.

Taiheiyo Cement Group Profile	
<b>Net sales</b>	Consolidated: 708.2 billion yen Non-consolidated: 287.5 billion yen
<b>Number of employees</b>	Consolidated: 12,542 Non-consolidated: 1,874 (not including seconded staff)
<b>Subsidiaries</b>	176 (including 112 consolidated subsidiaries and 5 equity-method subsidiaries)
<b>Affiliates</b>	101 (including 38 equity-method affiliates)

- Holding company
- ◆ Cement plant\*
- ◇ Clinker grinding plant\*
- ▲ Representative office
- △ Distribution terminal

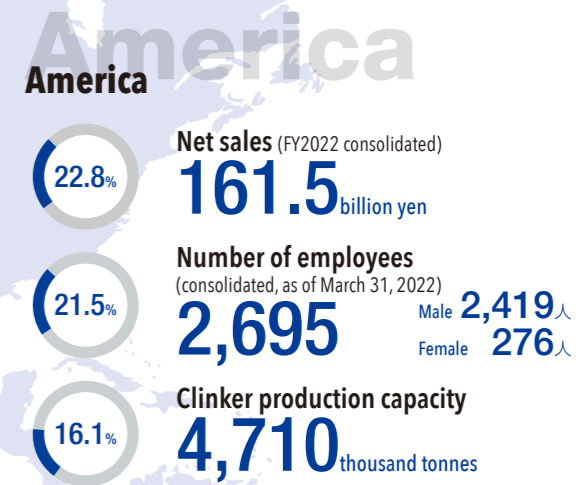
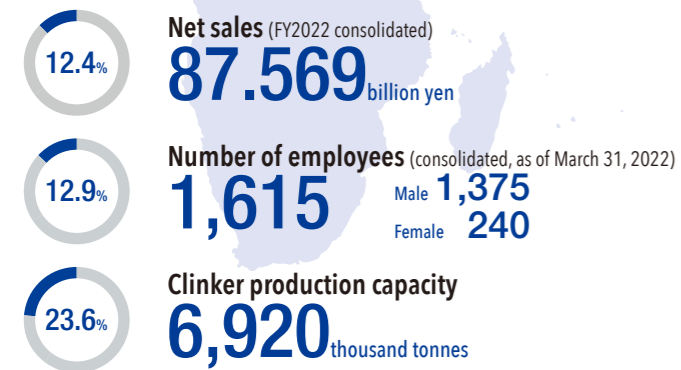
\* Business locations where data for GCCA KPIs are collected (FY2022)

## TAIHEIYO CEMENT (CHINA) INVESTMENT

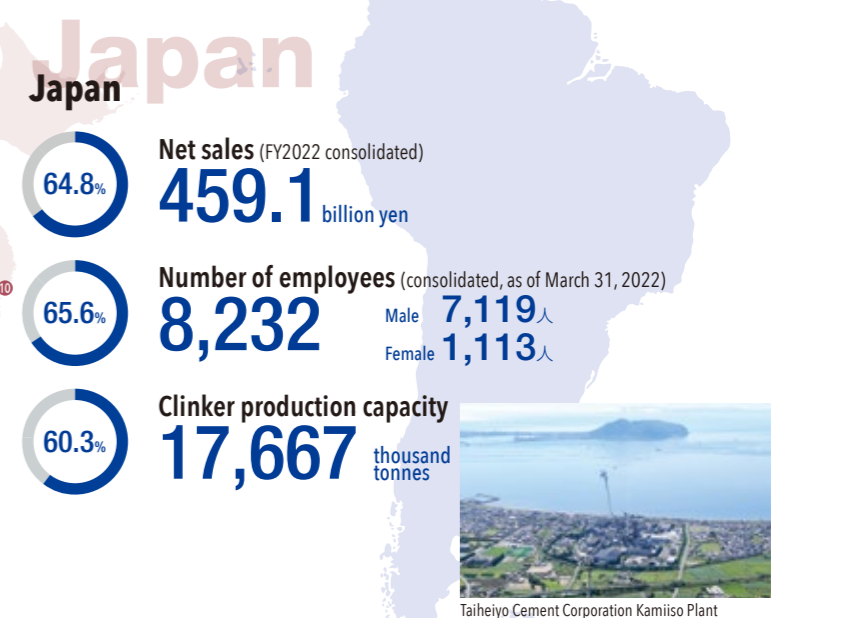


## TAIHEIYO SINGAPORE

## Other areas



- Headquarters/Branches**
  - 1 Hokkaido Branch
  - 2 Tohoku Branch
  - 3 Headquarters/Tokyo Branch
  - 4 Kanto Branch
  - 5 Chubu Hokuriku Branch
  - 6 Kansai Shikoku Branch
  - 7 Chugoku Branch
  - 8 Kyushu Branch
- Research Center**
  - 15 Central Research Laboratory
- Cement Plants\***
  - 9 Kamiiso Plant
  - 10 Ofunato Plant
  - 11 Kumagaya plant
  - 12 Saitama Plant
  - 13 Fujiwara Plant
  - 14 Oita Plant
- Group Production Plants\***
  - 16 DC Co., Ltd.
  - 17 Myojo Cement Co., Ltd.
  - 18 Tsuruga Cement Co., Ltd.



Dalian Onoda Cement Co., Ltd. Taiheiyo Cement Corporation Fujiwara Plant (Dalian, China)  
Jiangnan-Onoda Cement Co., Ltd. (Nanjing, China)



Nghi Son Cement Corporation (Nghi Son, Vietnam)  
Taiheiyo Cement Philippines, Inc. (Cebu, Philippines)  
PNG-Taiheiyo Cement Limited (Lae, Papua New Guinea)



Taiheiyo Cement Corporation Ofunato Plant  
Taiheiyo Cement Corporation Kumagaya Plant  
Taiheiyo Cement Corporation Saitama Plant  
Taiheiyo Cement Corporation Fujiwara Plant



Taiheiyo Cement Corporation Oita Plant  
DC Co., Ltd.  
Myojo Cement Co., Ltd.  
Tsuruga Cement Co., Ltd.

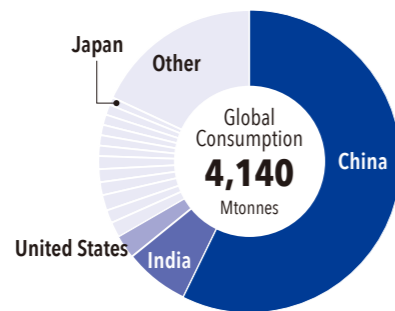
# Cement Industry and Taiheiyo Cement

## Global Cement Industry

### ① Trend in Global Cement Demand

Global cement demand in 2020 was impacted by the COVID-19 pandemic in the January-March quarter, but declined by only 0.2% year-on-year to 4.14 billion tonnes due to growth in housing demand and the economic stimulus measures implemented by governments around the world. Of this, China's demand stands out at 2.37 billion tonnes, accounting for about 57% of total global demand. This is followed by India at 280 million tonnes and the United States at 104 million tonnes.

Demand is expected to recover to 4.33 billion tonnes in 2021 as economic activity resumes and is expected to rise to 4.44 billion tonnes in 2022. However, the COVID-19 pandemic that has no end in sight, as well as the soaring coal and other energy prices caused by the war in Ukraine, leave uncertainty in the global demand trend.



Source: Global Cement Report, 14th Edition

### ② World Cement Production Volume

Global cement production in 2021 was 4.4 billion tonnes, an increase of 4% from the previous year, which is in line with the recovery of the global economy. By country, China leads with 2.5 billion tonnes, followed by India with 330 million tonnes, Vietnam with 100 million tonnes, the United States with 92 million tonnes, and Turkey in fifth place with 76 million tonnes.

### ③ Cement Production Volume of the Taiheiyo Cement Group

The Taiheiyo Cement Group's domestic cement production volume for FY2021 was 19.3 million tonnes, down 2.5% year-on-year due to the impact of the COVID-19 pandemic. In FY2022, despite the impact of the prolonged pandemic, it will remain almost flat at 19.1 million tonnes (down 1% year-on-year). The Taiheiyo Cement Group's domestic production volume is the largest in Japan, accounting for approximately 36% of Japan's production volume.

On the other hand, the group's overseas production volume in FY2021 was 13 million tonnes (down 6.8% year-on-year) due to the transfer of a Chinese consolidated subsidiary, and in FY2022 it will remain almost the same as the previous fiscal year at 12.9 million tonnes (down 0.5% year-on-year). Going forward, we aim to further expand our overseas business by proceeding with the rebuilding of our overseas business portfolio and seeking to expand into countries and regions we have not yet entered where economic development is strong and demand for cement is expected to grow on the one hand, while increasing our production and supply capabilities in countries where we already have a presence.

### ● Top 15 Countries by Cement Consumption (2020)

Rank	Country	Volume (Unit: M tonnes)
1	China	2,377.3
2	India	288.7
3	United States	104.2
4	Iran	63.3
5	Indonesia	62.7
6	Vietnam	62.1
7	Brazil	60.5
8	Turkey	58.4
9	Russia	56.0
10	Saudi Arabia	51.1
11	Korea	47.0
12	Egypt	46.0
13	Pakistan	43.2
14	Mexico	40.3
15	Japan	39.2
	Other	740.0
	<b>Global Consumption</b>	<b>4,140.0</b>

### ● Top 5 Countries by Cement Production (2020)

Rank	Country	Volume (Unit: M tonnes)
1	China	2,500
2	India	330
3	Vietnam	100
4	United States	92
5	Turkey	76
...		
11	Japan	52
	<b>Global Production Volume</b>	<b>4,400</b>

Source: US Geological Survey, Mineral Commodity Summaries, January 2022

### ● Taiheiyo Cement Group Cement Production Volume (past three years)

Volume	GCCA (Unit: M tonnes)		
	FY2020	FY2021	FY2022
Total	33.8	32.3	32.0
Domestic	19.8	19.3	19.1
Overseas	14.0	13.0	12.9

## Japanese Cement Industry

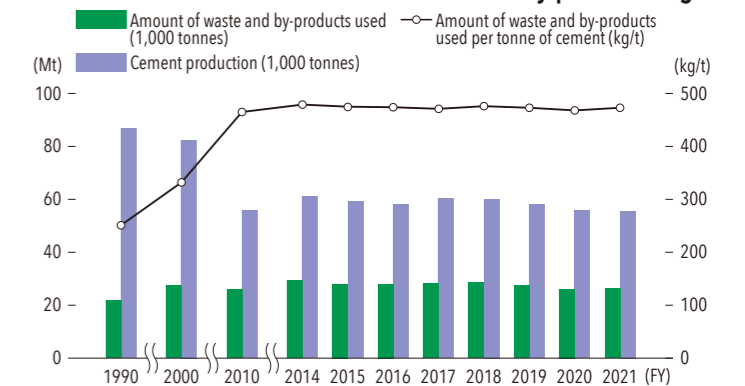
### ① Trend in Domestic Cement Demand

Following its peak at 86 million tonnes in FY1991, domestic cement demand continued a declining trend until FY2011, which was caused by various adverse factors such as the global financial crisis. Demand subsequently turned upward for three consecutive years from FY2012 due to the reconstruction demand and national resilience policy following the Great East Japan Earthquake. FY2020 demand remained at more than 40 million tonnes, but has since fallen for two consecutive years to about 38 million tonnes due to the outbreak of the COVID-19 pandemic in FY2021 and the effects of the delta strain of the virus in FY2022.

### ② Changes in Waste Usage in the Cement Industry

The cement industry employs various environmental technologies cultivated through cement production to reuse a wide variety of waste and by-products as raw materials and fuel for cement. In Japan, approximately 540 million tonnes of waste is generated annually, of which 238 million tonnes is reused; of this, the cement industry reuses approximately 26 million tonnes, equivalent to 11% of the total. Cement production has continued to decline since its peak in the latter half of FY1991, but the amount of waste and by-products used per tonne of cement production has increased, reaching 468 kg in FY2021.

### ● Trends in Cement Production and Waste and By-product Usage

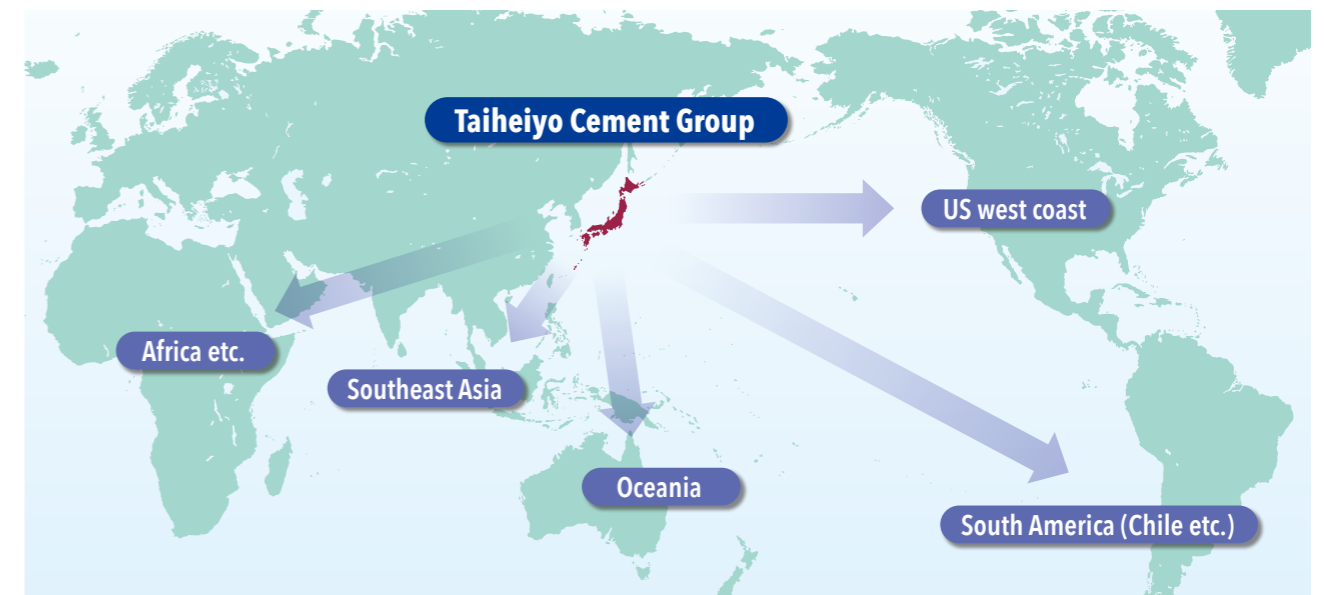


Source: Cement Handbook 2022 (The Japan Cement Association)

### ③ Overseas Expansion of the Taiheiyo Cement Group

Since the latter half of the 1980s, we have expanded into the United States and China where we manufacture and sell cement locally, and since the 2000s we have expanded our area of operations to Southeast Asian countries such as Vietnam and the Philippines where there is strong economic development. Furthermore, we entered Indonesia in FY2021 where we are working to establish a business foundation.

In addition, there are three pillars to our trading business: the export of cement and clinker through direct trade that does not involve a trading company, trilateral trade mainly to meet the demand of our overseas group companies, and our bulk materials business in materials such as gypsum and slag. We aim to build a new logistics network that includes Indonesia in the future.



Expanded Areas of the Taiheiyo Cement Group

## Message from the President

# Continuing our growth towards an outstanding leading company that fulfills its mission in an essential industry

Domestic demand for cement stayed above 40 million tonnes in the 2010s, but declined to around 38 million tonnes in both FY2021 and FY2022 due to the impact of COVID-19. However, the fact that demand was reduced by only 2 million tonnes, or about 5% in this unprecedented situation, means that the cement industry provides an indispensable material that supports the foundation of people's safe and secure lives, and was able to continue operating because it is valued by society as an essential industry that supports local employment. As the impact on operations was limited in the United States and also Southeast Asia, I was once again inspired by the weight of the responsibility of supporting this essential industry.

I believe that the social responsibility of the cement industry will continue to increase as the national resilience plan progresses, which includes disaster prevention and mitigation measures to prepare for the intensification of climate phenomena. Furthermore, the delivering of carbon neutrality is the most important issue for the cement industry, which we will definitely achieve through pioneering action.

President and Representative Director

**Masafumi Fushihara**

## 2022 in Review

In our main domestic cement business, we expected that the COVID-19 pandemic would gradually come to an end in FY2022, urban redevelopment projects would become active and demand would recover after the Tokyo Olympics and Paralympics. But, by contrast, the progress of construction was affected by the increase in positive cases and close contacts among workers at construction sites. In addition, regarding public sector demand, there were unsuccessful bids due to the impact of soaring material prices. Furthermore, the price of coal used in cement production continued to rise since the beginning of the year, increasing to more than double the average procurement price of the previous year in the space of a few months. In October, we determined that we could not absorb these cost rises through our own efforts alone, so we decided to raise the prices of cement and cement-based soil stabilizers by 2,000 yen per tonne for shipments from January 2022. However, we were unable to absorb the sudden cost increase in the short-term which resulted in decreased profit. On the other hand, although the overseas cement business was affected by lockdowns due to the spread of COVID-19 in Southeast Asia and the stagnation of construction work in China due to concerns about electric power supply stability due to rising coal prices, our main market in the United States drove an increase in profit. In the non-cement business, we were able to record profit at the same level as the previous year despite the difficult business environment. Under these business circumstances the group's net sales for this fiscal year declined from the previous fiscal year to 708.201 billion yen and operating income decreased to 46.701 billion yen.

Related articles:  
[Key Business Strategy Themes](#)  
 → P.40-55

Related articles:  
[Medium-Term Management Plan](#)  
 → P.24-25

## 23 Medium-Term Management Plan

### Summary of the plan and current business environment

The Taiheiyo Cement Group is diligently implementing the 23 Medium-Term Management Plan covering the three-year period from FY2022 to FY2024. Under the 23 Medium-Term Management Plan we will construct a new business model where all businesses in our group function together comprehensively and integrally, with the aim of becoming an outstanding leading company. Our business targets for FY2024, the final year of the plan, are an operating income on net sales of 11% or more, and an ROE of 10% or more. We have adopted the following indicators as guidelines for achieving those targets.

- Net sales: 750 billion yen or more
- Operating income: 85 billion yen or more
- EBITDA: 145 billion yen or more
- Net debt/equity ratio (DER): Around 0.4 times
- Net interest-bearing debt/EBITDA: 1.5 or less

We plan to generate a cash flow of 330 billion yen over the three-year period of the 23 Medium-Term Management Plan by means of our operating cash flow and asset sales. We intend to use this to fund new investments aimed at sustainable growth and enhancing shareholder returns while maintaining a net DER ratio of around 0.4 times and a sound financial structure. In addition, we plan to invest a total of 300 billion yen over the next

decade, which includes the three years covered by the 23 Medium-Term Management Plan, consisting of 100 billion yen investments in initiatives towards the delivering of carbon neutrality, the strengthening of plant facilities, and the development of quarries.

However, operating cash flow in FY2022, the first year of the 23 Medium-Term Management Plan, decreased to below the plan. However, because we do not have that much time left to deliver carbon neutrality, strengthen plant facilities and develop quarries, we will strive for prompt profit recovery without making major changes to our medium to long-term vision and policies. First of all, in order to secure an appropriate profit in the domestic cement business, which has fallen into the red due to the high energy costs associated with Russia's invasion of Ukraine and the cost of switching from Russian coal, we decided to once again revise the prices of cement and cement-based soil stabilizer products for shipments from October 2022 in the form of selecting either a "coal price surcharge" or a "fixed price revision". We will explain this carefully so that customers can understand that this measure is essential for the sustainable development of the cement industry.

### Sustained growth investments

Domestic cement demand continues to remain at around 38 million tonnes. Although the COVID-19 pandemic has suppressed demand and we do not believe that we have entered a period of declining demand, we cannot expect an environment in which demand will grow again in the future. On the other hand, if we look overseas, there are many countries and regions where demand for cement continues to grow, so this is the center of our attention when it comes to looking for growth opportunities.

Since the latter half of the 1980s, we have expanded into the United States and China, where we manufacture and sell cement locally, and since the 2000s we have expanded our area of operations to Southeast Asian countries such as Vietnam and the Philippines, where there is strong economic development. Currently, about 40% of our cement production capacity comes from our overseas plants, and have grown to the point where more than half of our consolidated operating income comes from overseas subsidiaries. With the Biden administration having passed an infrastructure investment bill worth more than US\$1 trillion and the 2028 Los Angeles Olympics and Paralympics approaching, we consider the United States a suitable growth investment destination as it appears certain that cement demand will continue to grow in the future. In Southeast Asia we would like to expand our operations in the Philippines and Vietnam, where we have already a presence. Specifically, we believe that measures such as increasing production capacity and enhancing the distribution networks will be effective to enable us to achieve a 10% market share in each country.

Under this policy, during the period of the 20 Medium-Term Management Plan we decided to transfer our equity in our Chinese cement manufacturing and sales subsidiary to our partner, renovate the production line at the cement plant in Cebu, the Philippines, and enter into a capital and business alliance with the Indonesian government-owned cement manufacturer Semen Indonesia Group. Furthermore, during the period of the 23 Medium-Term Management Plan, we are steadily progressing our overseas growth investments, including the decision to acquire cement-related business assets in the United States.

In addition, our growth investments are not solely focused on overseas markets and there should be plenty of opportunities for growth in Japan as

Related articles:  
[Message from the officer in charge of finance](#)  
 → P.54-55

Related articles:  
[Reconstructing the overseas business portfolio](#)  
 → P.30-31

[Cement Business \(Overseas\)](#)  
 → P.44-45



SI Group Tuban Plant (Indonesia)

well. We are currently discussing at length, with an open mindset and without any restrictions on business area, to explore new business opportunities open to Taiheiyo Cement Group in Japan. However, no matter what field it is, there is no chance of winning if we are a latecomer to the market and expect to use existing methods, so we believe that an approach based on the theme of resource recycling, which is one of our strengths, will be effective.

We also have technology and know-how that has been cultivated through cement manufacturing and the handling of limestone and other mineral products. We will make maximum use of this technology and know-how for the development of new materials.

Related articles:

[Delivering Carbon Neutrality](#)

➔ P.26-29

### Delivering Carbon Neutrality

We also regard carbon neutrality as a strategy for growth. For the cement industry, carbon neutrality is an initiative necessary for survival and is our biggest management challenge for which we must overcome all obstacles. The entire company is working as one, with the Vice President taking the lead, and we have already launched the Carbon-Neutral Technology Development Project Team to develop innovative technologies that will contribute to carbon neutrality in the production process. At our Kumagaya Plant, from December 2021 we have been demonstration testing technology to capture and reuse CO<sub>2</sub> emitted from cement kilns. This project, subsidized by NEDO (New Energy and Industrial Technology Development Organization), is progressing well. We are also progressing with the "Development of Cement Production Processes that Capture CO<sub>2</sub>" which, in January 2022, was adopted as a NEDO Green Innovation Fund Project (GI Project). Specifically, in the GI Project, we have started work on the development of our own unique and world-first "CO<sub>2</sub> capture calciner", comprising compact equipment that can capture CO<sub>2</sub> efficiently from the preheater. We also plan to develop a methanation system suitable for the cement manufacturing process, which will convert the captured concentrated CO<sub>2</sub> to methane (CH<sub>4</sub>) by reacting it with hydrogen. If CO<sub>2</sub> can be reused as thermal energy for cement production through this methanation system, it will be possible to significantly reduce the consumption of fossil fuels such as coal. In addition, we have partnered with a city gas company to commence a feasibility study on using the synthesized methane as part of the city gas supplied to households. Until now, it was thought that even if CO<sub>2</sub> could be captured it would have to be stored at a considerable cost, but if it is possible to supply it as part of the city gas the CO<sub>2</sub> will have new value. Similarly, because high purity CO<sub>2</sub> (over 99%) can be captured by the amine method, which is being demonstrated at the Kumagaya Plant, it has the potential to be reused as something even more valuable. We will steadily implement these projects.

### Towards resilience to support sustainable growth

In addition to growth investments, over the next decade until 2030, which includes the three years covered by the 23 Medium-Term Management Plan, we will invest 100 billion yen in the strengthening of plant facilities and the development of quarries. All of our cement plants in Japan have been in operation for over 60 years and, while we have strengthened our preventive maintenance activities and endeavored to extend the life of equipment to ensure continuous operation, in recent years there have been unforeseen breakdowns. As we believe that cement production and sales will remain our core business in the future, we will work to strengthen our facilities, including the replacement of principal equipment that has been put off until

Related articles:

[Strengthening plant facilities](#)

➔ P.32-33

now. In addition, we will progress the upgrade of equipment management in anticipation of the automation of cement plant operation using AI and IoT.

On the other hand, limestone is the lifeblood for our Group, so we will also work on the development of quarries. Limestone is a natural resource for which Japan can be 100% self-sufficient, but we must always keep in mind that we are digging up the nation's land and conduct quarrying carefully and systematically, with maximum consideration given to environmental impacts such as biodiversity and water resources. If one limestone quarry is developed, it is possible to secure 100 years' worth of raw materials for a cement plant, but it requires an investment of 10 billion yen and a development period of tens of years. A decision to undertake a development of this scale comes with the determination to continue the cement business into the future. We have continued to develop quarries even during periods when our financial structure has been vulnerable and, in April 2021, we completed the development of the Horoshi area of the Ofunato Quarry. Over the next 10 years we will develop the Yato area, which will be the next raw material quarry for the Oita Plant, our group's largest cement plant. Through this development, we will be able to secure a 100-year supply of limestone for cement production at the Oita Plant, and we plan for it to commence operations from around 2029.

## Promotion of Human Capital Management

People are a company's greatest asset that does not appear on its balance sheet. Whether or not these assets have vitality has a great impact on the company's performance. We take into account the safety and health of our employees with the belief that "we will not make our employees unhappy or their families sad". We must keep in mind that no matter how many measures we take at manufacturing sites such as cement plants and limestone quarries, we can never assume that such safety measures are sufficient. I continue to tell the top management of our group companies that we must always cherish people and think about business operations based on that. I believe that valuing each and every employee will lead to the sustainable growth of the company and create innovation, and we aim to be a company where our human assets function with vitality.

### Human resource development

Even among the employees involved in cement manufacturing, specialists are assigned to roles such as quarry development, equipment management and maintenance, manufacturing processes and energy management. Looking at the group, our business fields are broad and include railways, power generation and chemicals, and I feel proud that the specialists we have in each field are a reservoir of talent. We will push ahead with human resource development to further enhance this human capital.

First, we will thoroughly pass on the techniques and know-how that we have inherited from our predecessors to the younger generation. As places of learning, we have also established "Techno Schools" for mid-career engineers at each plant to intensively learn specialized knowledge related to cement production, and "Maintenance Dojo" for the employees of contractors to learn to improve their equipment maintenance and inspection skills. Seminars for the development of engineers are also held at the Cebu Plant in the Philippines. Furthermore, for practical experience, we are actively dispatching

Related articles:

[Quarry Development](#)

➔ P.34-35



Horoshi area of the Ofunato Quarry

Related articles:

[Occupational health and safety](#)

➔ P.78-81

Related articles:

[Enhancing Management Foundations - Human Capital](#)

➔ P.36-37



An engineer training seminar



Related articles:

**Human Capital**  
Human Resource Development  
Respect for human rights  
Diversity

→ P.82-87

young engineers to the renovation of the production line at the cement plant in the Philippines. Because opportunities to be involved in the construction of an integrated cement plant are very rare, we believe that it is our responsibility as a leading company to have people gain experience in this kind of practical work, develop human resources who are capable of designing and managing the construction of an integrated cement plant, and pass on that experience and technology to future generations.

### Diversity & Inclusion

The attributes, lifestyle, and values that each employee has is a perfect representation of the saying “to each their own”, and the diversity continues to expand. We believe that diversity and inclusion are initiatives that integrate our diverse human resources and are linked to the creation of new value. The diversity targets of our CSR Objectives for 2025 include a ratio of female recruits in career-track positions of at least 30%, a ratio of female employees of at least 10%, and a ratio of newly appointed female managers of at least 10%. In addition, we are also further progressing the employment of foreign-national employees and employees with disabilities. We also invite outside lecturers to provide training on unconscious bias and LGBT issues, and hold diversity forums to foster a corporate culture that recognizes diverse values. Furthermore, we have formulated an action plan based on the Act for Advancement of Measures to Support Raising the Next Generation and the Act for Promotion of Women’s Participation and Advancement in the Workplace, to respect the values of each employee and improve work-life balance.

### Health and Productivity Management (H&PM)

We prioritize health and safety above all else, and promote H&PM with the aim of creating a workplace where every employee can work in good health and with vitality. I believe that employees working in a healthy state of both mind and body leads to improved safety and performance, which not only can be expected to improve business performance for the company, but also contribute to solving social issues such as improving the healthy life expectancy of the people and optimizing national medical resources. We revised the Taiheiyo Cement Group Health-Conscious Management Declaration in 2022 and are progressing various initiatives.

### Human rights

In 2015, we formulated the Basic Policy Concerning Human Rights and Labor Practices based on the idea that respect for human rights is essential for the development and survival of a company, and that it is a responsibility that all companies should fulfill. Prior to that, we have been working to raise awareness of human rights among employees, including those within the group, through workshops held by the Human Rights Awareness Promotion Office. In addition, we have distributed to all employees a behavior handbook, highlighting prohibited behavior such as sexual harassment and bullying, and take thorough measures aimed at creating a workplace free of harassment.

In order to further deepen these efforts, the group signed the UNGC in May 2022. By endorsing and adopting the 10 principles in the four areas of human rights, labor, the environment and anti-corruption defined in the UNGC, we will further implement the business activities set forth in the Mission of the Taiheiyo Cement Group and contribute to the realization of a sustainable society. It is also important to protect human rights, not only of our Group

employees, but also the people in our supply chain. Cement is manufactured using natural resources such as limestone and coal, and it is necessary to ensure that the mining and transportation of these natural resources does not include behavior that violates human rights, such as the use of child labor or conflict resources. We are currently planning human rights due diligence in our diverse supply chains.

### Aiming to be a Company Trusted by All Stakeholders

Cement is the foundation of our business and, considering that it is an industry which can only exist by protecting the environment, including biodiversity and water resources, I can say that our group's business is supported by a wide range of stakeholders. We are protecting the areas where quarries and plants are located, coexisting and moving forward together with residents by supporting employment and contributing to the local economy. Furthermore, we will work to provide environmentally sound products and build a recycling-based society by maximizing the utilization of the strengths of our group, namely the “stable supply of cement and mineral resource products”, “world-class environmental cement production technologies” and “domestic and global networks”, and will pursue the further possibilities of cement and concrete.

Through our business activities, we are striving to solve global social issues with the aim of achieving a sustainable society, including environmental conservation, resource recycling, measures against climate change and contributing to the common global goals set out in the SDGs.



Pamphlet of prohibited behavior 2.0

UN Global Compact (UNGC)

→ P.119



# Value Creation Process

Input

Business Activities

Output

Outcome

**[Materiality]**

**E: Environment**

- Delivering of carbon neutrality
- Response to climate change
- Contribution to a recycling-based society
- Conservation of the global environment
- Conserving and Restoring biodiversity
- Reduction of the company's own waste generation
- Appropriate use of water resources
- Appropriate management of chemicals

**S: Society**

- Creating a safe and secure workplace
- Diversity and inclusion
- Value Chain Management
- Respect for human rights
- Work arrangement reform
- Human resource development
- Engagement with local communities
- Quality and Safe Products
- Stakeholder engagement

**G: Governance**

- Compliance
- Group governance
- Risk management (information security, intellectual property protection)

**[Capital]**

**Financial Capital**

Credit rating (as of September 2022)  
**A** (JCR)  
**A-** (R&I)

**Manufacturing Capital**

Domestic clinker production capacity (FY2022)  
**17,667** thousand tonnes  
 Overseas clinker production capacity (FY2022)  
**11,630** thousand tonnes

**Intellectual Capital**

Patents held (as of the end of FY2022)  
**1,335** in Japan  
**261** overseas

**Human Capital**

Number of employees (as of the end of FY2022)  
**12,542**

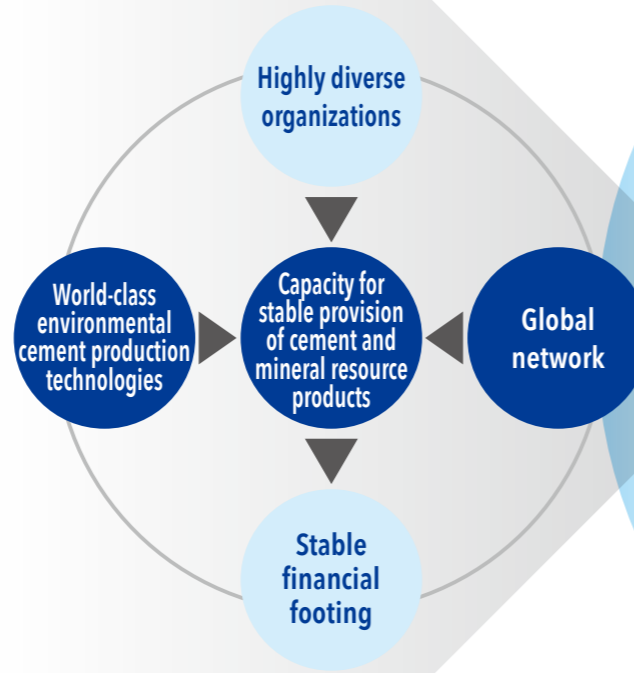
**Social and Relationship Capital**

Engagement with local communities (FY2022)  
 Events: **2,135**  
 IR Activities (FY2022)  
 Cases: **179**

**Natural Resources Capital**

Limestone quarries of the group (as of the end of FY2022)  
**17**  
 Utilization of waste and by-products (FY2022)  
**405.2** kg/t-cement

**[Strengths]**

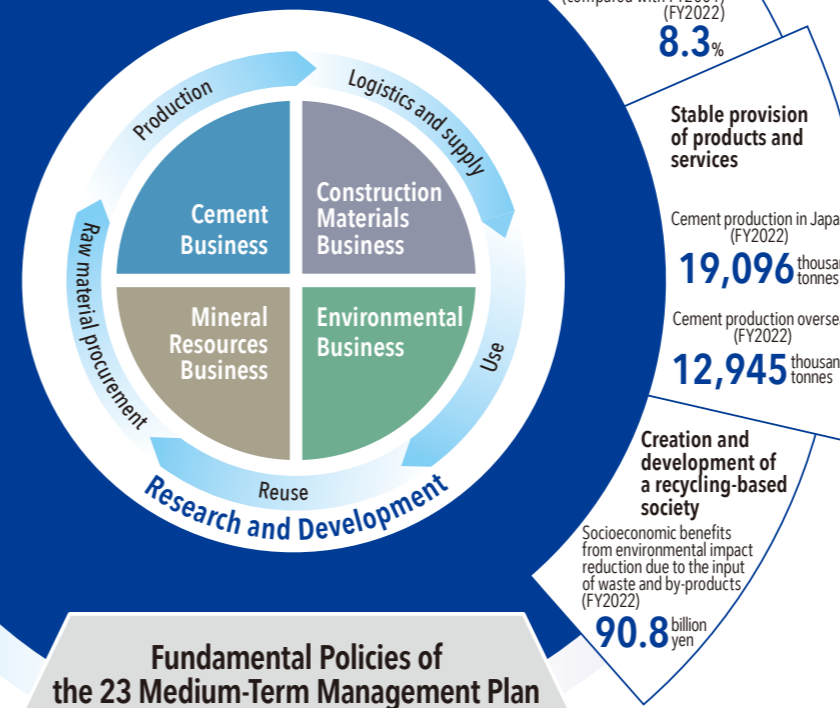


**[Business Activities]**

**Aiming to become an outstanding leading company**

We will construct a business model unique to us, where all businesses in our group function together comprehensively and integrally to achieve our aim of being "outstanding."

**Boost the Group's Total Capabilities**



**Efforts to mitigate and adapt to climate change**

Reduction rate of specific net CO<sub>2</sub> emissions (compared with FY2001) (FY2022)  
**8.3%**

**Stable provision of products and services**

Cement production in Japan (FY2022)  
**19,096** thousand tonnes  
 Cement production overseas (FY2022)  
**12,945** thousand tonnes

**Creation and development of a recycling-based society**

Socioeconomic benefits from environmental impact reduction due to the input of waste and by-products (FY2022)  
**90.8** billion yen

**Fundamental Policies of the 23 Medium-Term Management Plan**

Become a corporate group that never stops moving forward.  
 As part of the social infrastructure industry, contribute to the establishment of a safe and stable society.  
 Strengthen our earnings foundation and steadily carry out growth investment.

**Mission of the Taiheiyo Cement Group**

Our mission is to contribute to social infrastructure development by providing solutions that are environmentally efficient, enhance our competitive position and bring value to our stakeholders.

Corporate Governance and Compliance

**FY2022 Net Sales & Operating Income by Segment (Consolidated basis)**

**Cement Business**

Net sales: 463.2 billion yen  
 Operating income: 24.1 billion yen  
 → P.42~45

**Mineral Resources Business**

Net sales: 77.1 billion yen  
 Operating income: 6 billion yen  
 → P.46~47

**Environmental Business**

Net sales: 72.3 billion yen  
 Operating income: 6.6 billion yen  
 → P.48~49

**Construction Materials Business**

Net sales: 65 billion yen  
 Operating income: 3.4 billion yen  
 → P.50~51

**Other**

Net sales: 89 billion yen  
 Operating income: 6.9 billion yen  
 Transportation and warehousing business, engineering business, chemical product business, information processing business, etc.

**Research and Development**

Patent applications: 136 (FY2022)  
 → P.114~115

**[Economic Value]**

**23 Medium Term Management Plan Goals**

- Operating income on net sales: 11% or more
- ROE: 10% or more

**Shareholder Returns**

- Total return ratio: around 33% (one third of the net profit for the year attributable to parent company shareholders)

**Maintain and improve financial soundness:**

- Maintain a net DER of around 0.4

**[Social Value]**

**Qualitative**

- Build safe and secure social infrastructure
- Deliver carbon neutrality
- Deliver a recycling-based society

**Quantitative**

- CO<sub>2</sub> emissions reduction
- Occupational health and safety
- Zero occupational accident

# Strengths of Taiheiyo Cement

## Management Capital

### Financial Capital

Credit rating (as of September 2022)

**A** (JCR)  
**A-** (R&I)

We will implement financial strategies to support growth investments and strengthen investments under the 23 Medium-Term Management Plan, while maintaining financial soundness. We have maintained a Japan Credit Rating Agency (JCR) rating of A since 2020 and a Rating & Investment Information (R&I) rating of A- since 2018, which are indicators of financial soundness.

### Manufacturing Capital

Domestic clinker production capacity (FY2022)

**17,667** thousand tonnes

Overseas clinker production capacity (FY2022)

**11,630** thousand tonnes

Including group companies, we have nine cement plants in Japan and boast the highest domestic production capacity in the industry. We have also built a solid foundation for transportation and supply, with 106 service stations (distribution bases) and 35 cement tanker vessels. Overseas, we have nine cement plants in the Pacific Rim region, including the west coast of the United States, China and Southeast Asia, and are developing a global network with a view to building the optimal distribution network.

### Intellectual Capital

Patents held (as of the end of FY2022)

**1,335** in Japan  
**261** overseas

Intellectual property, research and development, and business divisions are working together to develop activities that support sustainable development based on our basic policy to create intellectual assets that will underpin our businesses, supply valuable information via intellectual property solution activities based around data analysis and enhance the intellectual property capabilities of the entire group. In recent years, we have been focusing on information analysis, promoting the development of applications for developed technologies and the search for new technological fields.

### Human Capital

Number of employees (as of the end of FY2022)

**12,542**

People are the greatest asset of a company and we are striving to create a safe and secure workplace, as well as promoting human resource development to increase the value of each employee. Our basic policy for promoting diversity is to promote innovation based on the ideas and values of diverse human resources which will lead to further improvement of corporate value, and we are working to promote "work-life management" to improve retention and productivity.

### Social and Relationship Capital

Engagement with communities in which we do business (FY2022)

Events: **2,135**

Individual meetings with investors (FY2022)

Events: **179**

Each of our business sites in Japan and overseas contribute to building relationships of trust with local communities and growing together with them by fulfilling our social contribution in the regions where we have business sites. In addition, we are striving to disseminate information through various media in accordance with our information disclosure policy in order to gain the understanding and trust of our stakeholders, including shareholders and investors.

### Natural Resources Capital

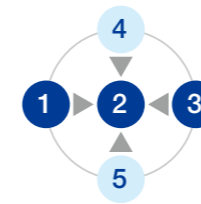
Limestone quarries of the group (as of the end of FY2022)

**17**

Utilization of waste and by-products (FY2022)

**405.2** kg/t-cement

The group owns 17 limestone quarries in Japan and overseas, which supply all of the limestone material necessary for our cement production. But there are also other uses for limestone such as for steel, chemicals and aggregates for ready-mixed concrete, so we are planning the more effective use of our limestone resources. In addition, by effectively using industrial waste and by-products in cement production as substitutes for raw materials and fuel, we are contributing to the conservation of natural resources and the reduction of greenhouse gas emissions.



## Strengths

**1**

### World-class environmental cement production technologies

In addition to using industrial waste and by-products, household waste and incinerated ash as raw materials and fuel for cement, in recent years we have utilized waste from natural disasters to fulfil our contribution to building a recycling-based society. Furthermore, based on the recognition that carbon neutrality is the most important issue for the cement industry, we have formulated the "Carbon Neutral Strategy 2050", which includes interim goals for 2030 and the prompt establishment of carbon-neutral technologies that can be implemented in society, and we are accelerating our efforts.



**2**

### Stable supply of cement and mineral resource products

The group has 11 limestone quarries in operation in Japan, with an annual volume extracted of more than 40 million tons, and we boast the largest volume of limestone resources in Japan. Furthermore, over the next decade until 2030, which includes the period covered by the 23 Medium-Term Management Plan, we will invest 100 billion yen in strengthening our quarries and aim to build a stable supply system with a view to the next 100 years. Overseas, we are progressing the expansion of our business and the construction of an optimal distribution network to ensure a stable supply of cement and mineral resource products.



**3**

### Domestic and global networks

We continue to support infrastructure development by supplying high quality cement and construction materials, and applying advanced technologies at nine cement plants in Japan and nine in the Pacific Rim region, including in the west coast of the United States, China and Southeast Asia. Going forward, we aim to enhance our networks by building a new overseas business portfolio and expanding our trading business in the global market.



**4**

### Highly diverse organizations

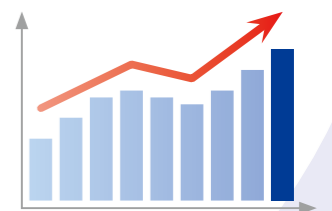
Based on the idea that people are a company's greatest asset that does not appear on its balance sheet, we are creating a workplace that gives highest priority to the safety and health of our employees. In addition, we consider diversity and inclusion to be initiatives that integrate our human resources and are linked to the creation of new value, and are promoting human resource development that enables each employee to play an active role through various initiatives, including promoting the active participation of women.



**5**

### Stable financial footing

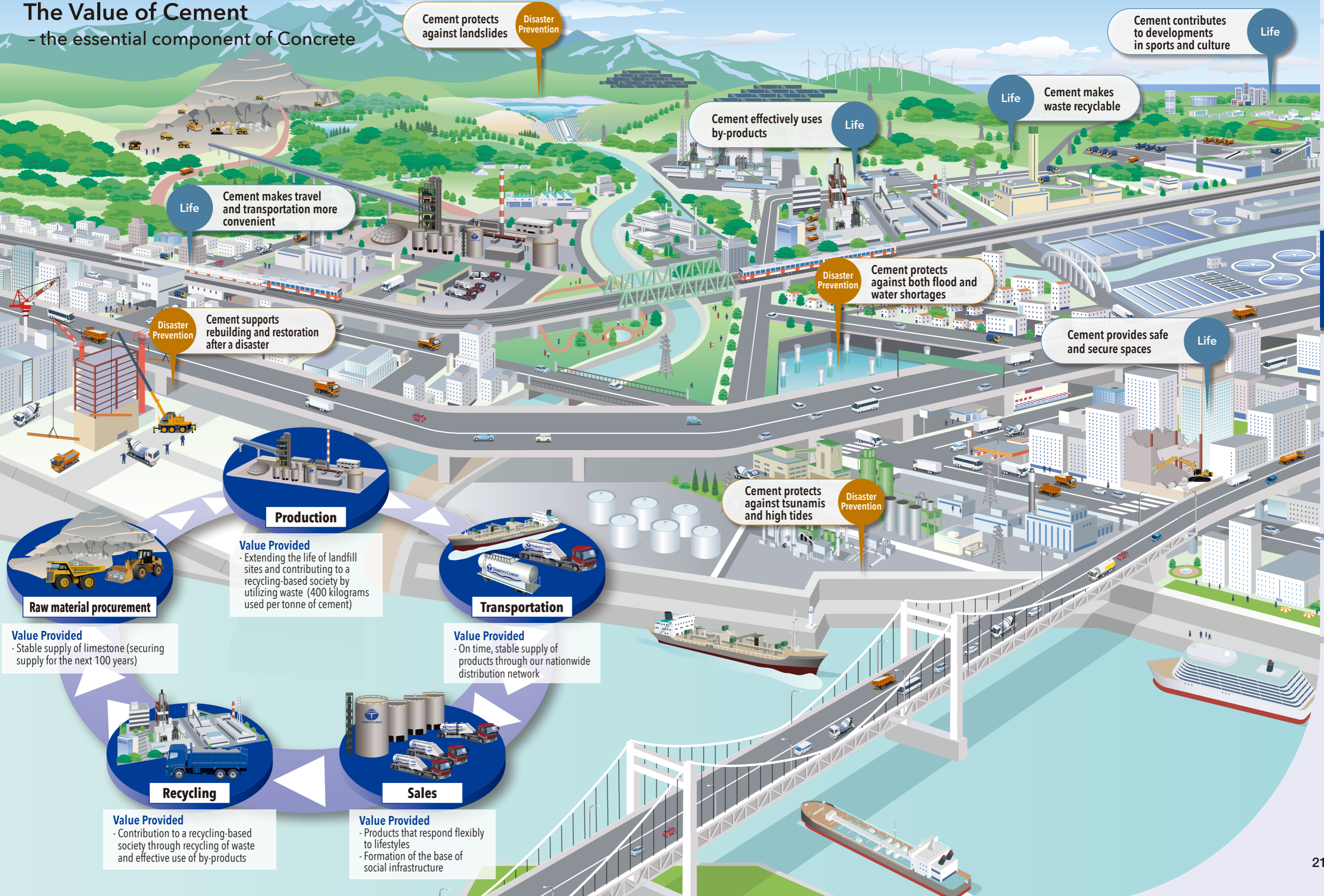
Although the group had a weak financial structure at the time of the merger in 1998, we have improved our profitability to the extent of recording operating income of 60 billion yen or more for eight consecutive years from FY2014 to FY2021, and have maintained the issuer credit rating of A that we acquired in 2018. In addition, by the end of FY2021, the final year of the 20 Medium-Term Management Plan, our financial structure had improved to an equity ratio of over 45% and a net debt/equity ratio (DER) of 0.4 times. Going forward, we will strive to maintain and improve our financial soundness.



# Value Creation in the Value Chain

## The Value of Cement

- the essential component of Concrete



Value Creation Process

Strengths of Taiheyo Cement

Value Creation in the Value Chain

Risks and opportunities, Materiality

Medium-Term Management Plan

Business Strategies

# Risks and Opportunities

## Summary of the Collection, Evaluation and Identification of Company-wide Risks

- Step 1** Compile anticipated changes in social and environmental conditions over the next ten years.
- Step 2** Evaluate the impact of the identified changes on the group.
- Step 3** Review the results of the evaluation of the impact.
- Step 4** Review company-wide material risks (Risk Management & Compliance Committee).
- Step 5** Determine company-wide material risks (CSR Management Committee)

We collect, evaluate and identify company-wide risks, including those of group companies, every three years and conduct an annual review of those risks. We carried out a company-wide risk review in FY2020. The purpose of identifying risks is to identify the impact of anticipated changes in social and environmental conditions over the next ten years in relation to uncertainty of group management, and then formulate measures to avoid and reduce that uncertainty.

**Maximizing the group's corporate value will contribute to the establishment of safe and stable social infrastructure**

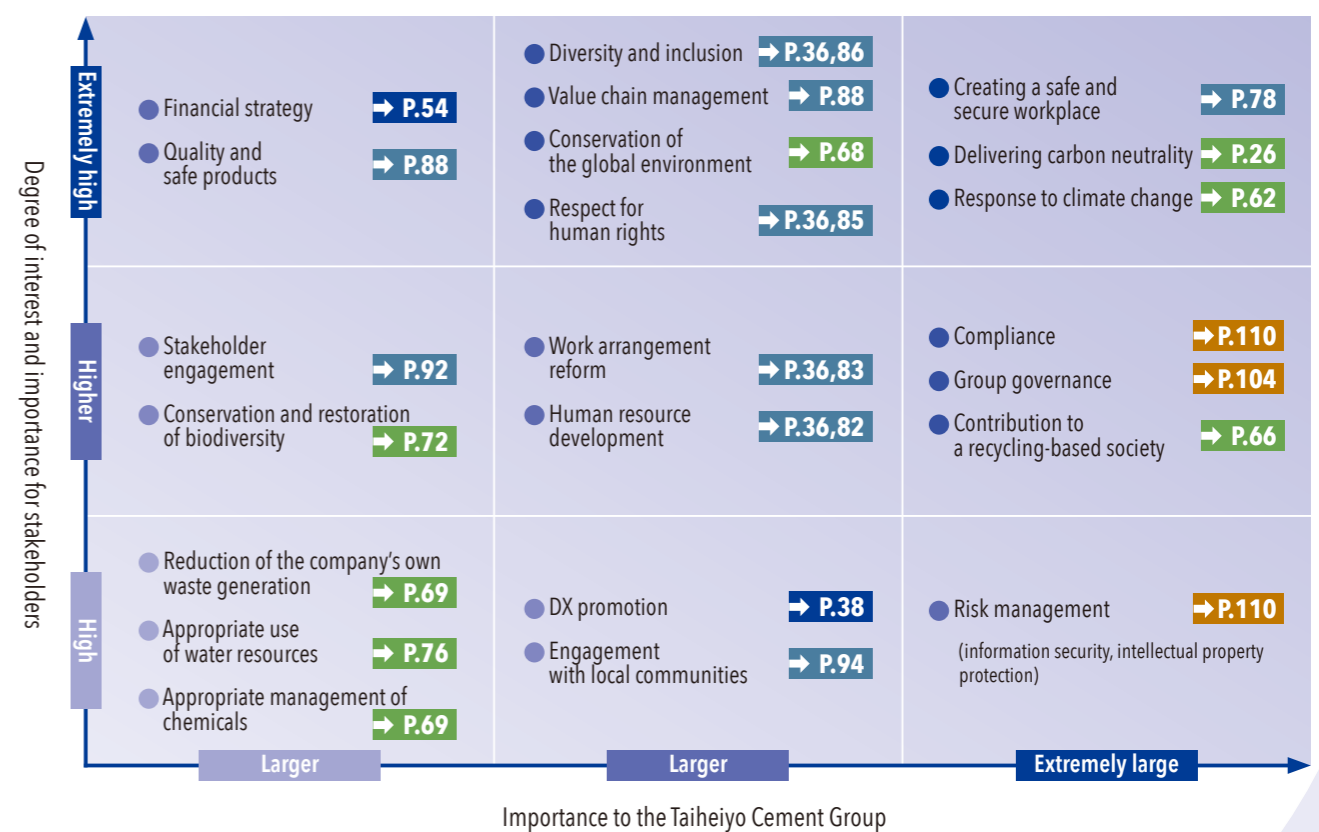
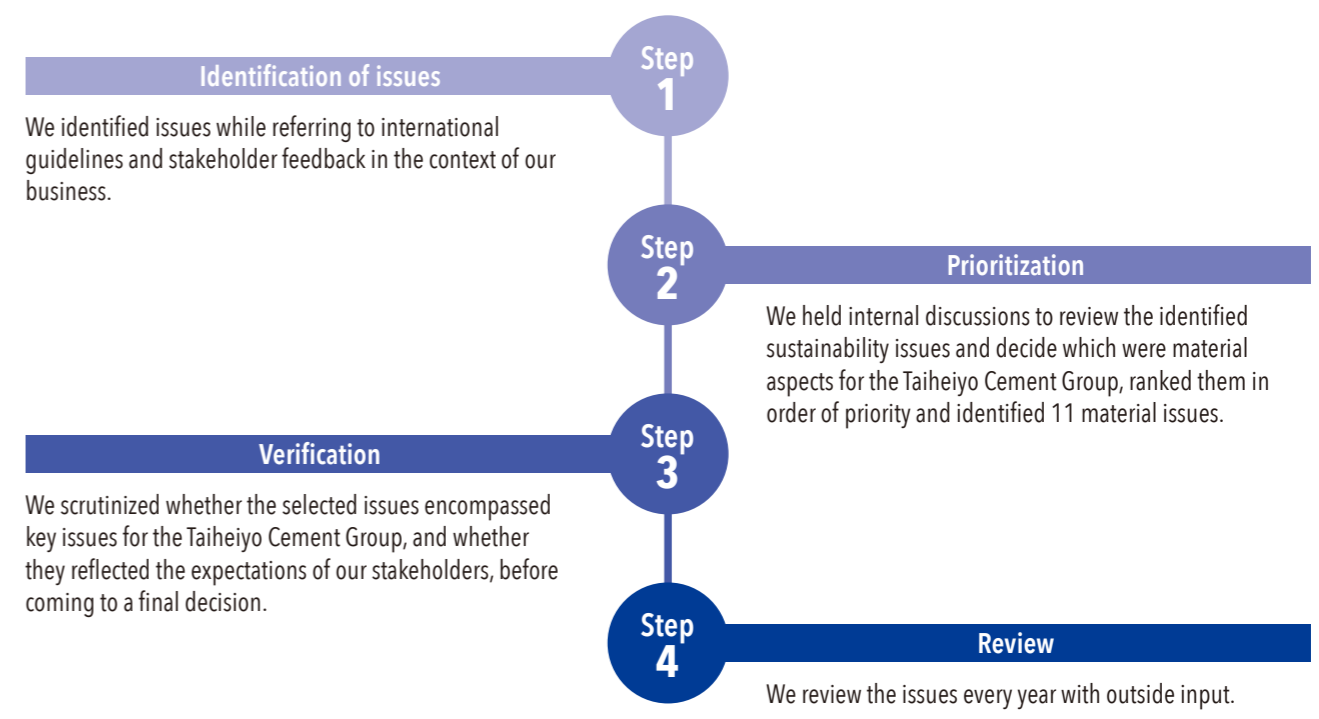
Risks		Opportunities	Strategies			
Risk category	Item	Business opportunities	Business strategies based on results of the company-wide risk review	Connection with our strengths		
				Stable supply of cement and mineral resource products	Environmental technologies in cement production	Domestic and global networks
Change	<b>Environmental aspects</b> - Climate change: Increasingly extreme weather events and dramatic increase in weather related disasters - Climate change: Stricter regulations - Increase of environmental pollution and developments related to its impact: Regulations - Geological and biological events: e.g. occurrence of massive earthquakes	- Increasing demand for environmentally sound products (with low CO <sub>2</sub> emissions) - Acceleration of initiatives to strengthen urban areas and protect them from natural disasters - Reconstruction in disaster stricken areas	Contributing to the delivering of carbon neutrality		●	●
	<b>Social aspects</b> - Technological innovation - Changes in economic conditions - Continuity and development related to declining birth rates and aging populations: Declining labor forces	- Provision of technologies and technical guidance to emerging economies		Contributing to the enhancement of national resilience	●	
Company-specific	- Waste treatment - Aging facilities	- Shift to a recycling-based society (wide variety of recycled raw materials and fuels)	Contributing to a recycling-based society	●	●	●
Compliance	- Maintenance and improvement of the governance system - Respect for human rights - Occupational safety and health - Accident prevention (including in relation to products and services) - Prevention of misconduct (including in relation to products and services) - Response to impacts of external accidents - Participating in and respecting local communities	For more details, please see: - Corporate Governance: P.104~ - Risk Management and Compliance: P.110~				

- Change risks: Arising from changes in the social environment
- Company-specific risks: Arising from the characteristics of our business and capital, including all types of capital such as mining rights and human resources
- Compliance risks: Related to organizational infrastructure

**We referred to the following risk information:**  
 - "Global Risk Report (2019)" World Economic Forum  
 - "Regional Risks for Doing Business (2018)" World Economic Forum  
 - "Enterprise Risk Management (2018)" COSO/WBCSD  
 - "Top Risk 2019 (2019)" Eurasia Group  
 - "10 for 2019: Systemic Risks Loom Large (2019)" Sustainalytics  
 - SDGs

# Materiality

## Steps in the Review



# Medium-Term Management Plan

## Looking Back at the 17 and 20 Medium-Term Management Plans

**First step**

**17 Medium-Term Management Plan**  
(FY2016 to FY2018)

The 17 Medium-Term Management Plan covered the three years from FY2016 to FY2018 and is regarded as the first step towards realizing our future vision and direction. It aimed to maximize our corporate value.

**Fundamental Policies**

- To become a corporate group that preempts future changes in the environment and seeks innovations in all fronts, thereby progressing on a growth path.
- To contribute to the establishment of a sense of safety and security in society through the provision of materials and technological development, furthering national resilience as a member of the social infrastructure industry.
- To vigorously push ahead with further strengthening our earnings base and financial structure aiming at sustainable development by strengthening businesses through exhaustive cost-cutting.

**Performance**

**Profitability**

- Operating income on net sales: 7.5%
- Return on assets (ROA): 6.3%
- Growth investments: 100 billion yen
  - Acquisition of the Oro Grande plant (U.S.A.) and construction of its new mill
  - Construction of the Ofunato Power Plant (biomass power plant)
  - DC Co., Ltd. made a wholly owned subsidiary

**Financial structure**

- Net debt/equity ratio (DER): 0.6 times
  - Net interest-bearing debt of 234.8 billion yen (end of FY2018)

**Shareholder Returns**

- Increased dividends and purchased treasury shares.
  - Payout ratio: 18% (3-year average)
  - Total return ratio: 26% (3-year average)
  - Treasury shares purchased: 10 billion yen

**Second step**

**20 Medium-Term Management Plan**  
(FY2019 to FY2021)

We built on the results of the business and financial strategies implemented in the first step, the 17 Medium-Term Management Plan, and continued addressing the remaining issues to open up a path on which we could move on to the next step by ensuring the implementation of new initiatives and establishing a solid business foundation for future sustainable growth.

**Fundamental Policies**

- To become a corporate group that anticipates future changes in the business environment and seeks innovations on all fronts, thereby advancing along a pathway of growth.
- To contribute to the establishment of a sense of safety and security in society through the stable provision of high quality products, solutions and advanced technology development, in order to build national resilience as a member of the social infrastructure industry.
- To push ahead with the strengthening of our earnings foundation for businesses and further improve our financial structure through cost reductions as well as by actively executing investments in promising fields that will contribute to the group's sustainable growth.

**Performance**

**Profitability**

- Operating income on net sales: 7.4%
- Return on assets (ROA): 6.3%
- Growth investments: 100 billion yen
  - Investment in the SI Group
  - Renovation of TCPI's production line
  - Construction of new waste heat recovery power generation system (Saitama Plant)

**Financial structure**

- Net debt/equity ratio (DER): 0.4 times
  - Net interest-bearing debt: 175 billion yen (end of FY2021)

**Shareholder Returns**

- Steady dividend payments and purchase of treasury shares.
  - Payout ratio: 19% (3-year average)
  - Total return ratio: 30% (3-year average)
  - Treasury shares purchased: 15 billion yen

**23 Medium-Term Management Plan**

**Review**

**Achievements**

- Although domestic demand for cement is decreasing, operating income stayed in the 60 billions of yen range.
- Maintained shareholder returns (total return ratio) of 30%.
- Achieved our target of a net DER of 0.4 times or less ahead of schedule.
- Growth investments proceeding according to plan.

**Challenges**

- Sustained growth investment
- Initiatives to deliver Carbon Neutrality
- Strengthening of plant facilities and quarry development
- Restructuring our businesses in Japan

**Third step**

**23 Medium-Term Management Plan**  
(FY2022 to FY2024)

**"Aiming to become an outstanding leading company"**  
We aim to construct a business model unique to us, where all businesses in our group function together comprehensively and integrally. In other words, to become an outstanding leading company

**Fundamental Policies**

- Strive for sustainable growth.
- As part of the social infrastructure industry, contribute to the establishment of a safe and stable society.
- Strengthen our earnings base for businesses and steadily carry out growth investments.

**Profitability**

- Operating income on net sales: 11% or more
- Return on equity (ROE): 10% or more

**Plan for FY2024**

- Net sales\*1: 750 billion yen or more
- Operating income: 85 billion yen or more
- EBITDA\*2: 145 billion yen or more
- Net debt/equity ratio (DER): Around 0.4
- Net interest-bearing debt/EBITDA: 1.5 or less

**Investment Strategy and Shareholder Returns**

- Cash flow from operating activities and assignment of assets etc. (3-year cumulative total): 330 billion yen
  - New investment aimed at sustainable growth: Capital expenditure, and investment and financing: 280 billion yen (including growth investment: 120 billion yen)
  - Shareholder returns: Total return ratio around 33% (one third of the net profit for the year attributable to parent company shareholders)
  - Maintain and improve financial soundness: Maintain a net DER of around 0.4

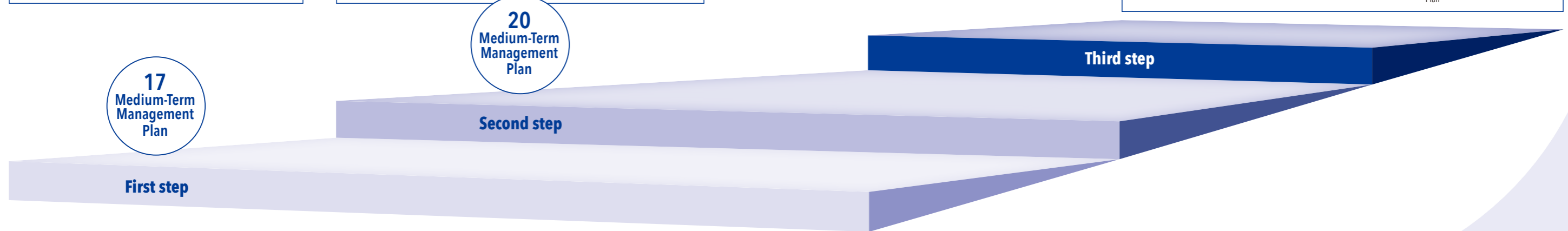
**Key Strategies**

- Sustained growth investment**
- Initiatives to deliver carbon neutrality**
  - Initiatives to deliver carbon neutrality by 2050 (Growth strategy)
- Strengthening plant facilities**
  - In order to establish a production and supply system with long-term stability by 2030, we will renew key machinery, upgrade production and equipment management and deploy AI.
- Quarry Development**
  - We will establish a long-term stable supply system for limestone resources by 2030

**23 Medium Term Management Plan**

20 billion yen	10 billion yen	35 billion yen	Growth investment
			Carbon neutrality 100 billion yen
			Strengthening plant facilities 100 billion yen
			Quarry development 100 billion yen

FY2022 ~ FY2031



# 23 Mid-Term Business Plan Key Strategies

## 1 Delivering Carbon Neutrality

### Formulation of Carbon Neutral Strategy 2050

#### Significance of Carbon Neutrality in the Group's Mission

The Taiheiyo Cement Group does not underestimate the challenge to address climate change and realize a decarbonized society. However, for the group's sustainable growth, it is essential to deliver carbon neutrality while fulfilling the group's mission. We have an important growth strategy of quickly establishing carbon-neutral technologies that can be implemented in society.

In the 2023 Mid-Term Management Plan released on May 13, 2021, we announced the Carbon Neutral Strategy 2050 under which the group aims to deliver carbon neutrality throughout its supply chain by 2050. In addition, on March 24, 2022, we developed specific measures for the Carbon Neutral Strategy 2050, including the Technology Development Roadmap towards carbon neutrality and a 2030 Interim Target.

### Initiatives for 2030 and 2050

#### 1. Target for 2030

##### Domestic and overseas group targets (compared to 2000)

2030 Interim Target\*: Reduce CO<sub>2</sub> emissions intensity by 20% or more throughout the supply chain\*<sup>1</sup>

\* Reduction of CO<sub>2</sub> emissions (domestic): 40% or more compared to 2000

- (1) Develop and introduce technologies to deliver carbon neutrality
  - Maximum use of existing technologies (energy conservation, low-CO<sub>2</sub> energy and cement\*<sup>2</sup>)
  - Completion of innovative technology development (CO<sub>2</sub> capture and utilization)
- (2) Investment of 100 billion yen towards carbon neutrality

#### 2. Delivering carbon neutrality by 2050

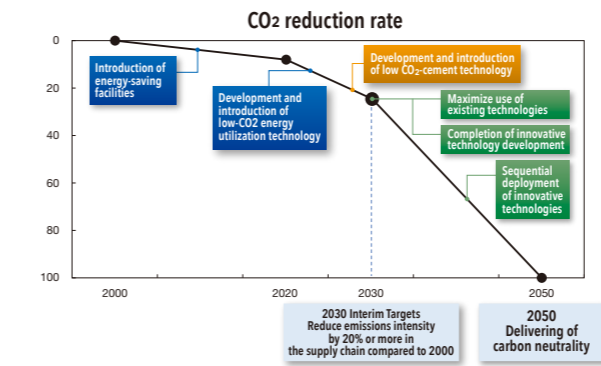
- (1) Sequential deployment of innovative technologies
- (2) Delivering of carbon neutrality throughout the supply chain

By working with governments and collaborating with other industries, the group will address issues such as social acceptability, sharing of economic burden, green energy supply and infrastructure development, which need to be solved for the social implementation of innovative technologies essential for the deliver of carbon neutrality.

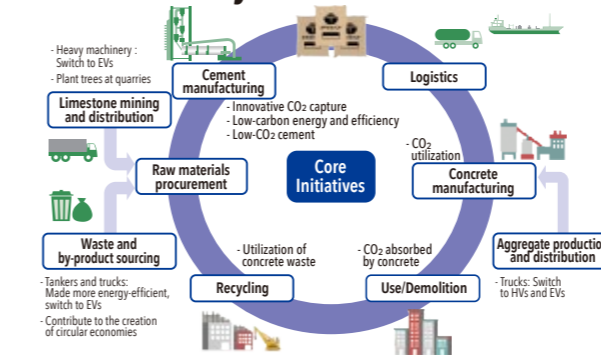
\*1 Supply chain: A series of processes involving cement as a commodity, such as raw cement material procurement, production, distribution, use of concrete and recycling, including scopes 1, 2 and 3.

\*2 Low CO<sub>2</sub> cement: Cement using low-CO<sub>2</sub> clinker, blended cement, cement using carbonation process, and the like.

### Scenario for Delivering Carbon Neutrality



### Supply chain initiatives towards delivering carbon neutrality



### Our Efforts to Develop Innovative Technologies

#### Development of Carbon Circulation Technology for the Cement Industry

A NEDO-funded project (FY2000~FY2021)

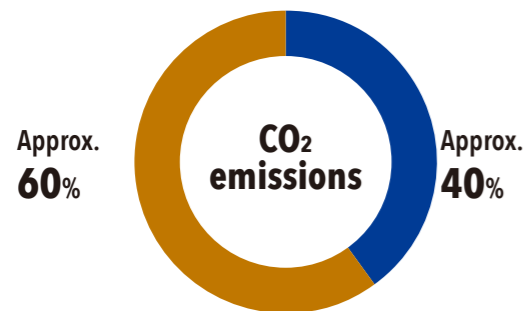
- CO<sub>2</sub> capture technology: Chemical absorption method (Capture of high-purity CO<sub>2</sub>)
  - Demonstrative application of the amine method, which is widely used to capture CO<sub>2</sub>, to the cement process
- CO<sub>2</sub> utilization technology: CO<sub>2</sub> mineralization in cement and concrete materials
  - Demonstrative application of efficient CO<sub>2</sub> mineralization of waste concrete, concrete sludge, etc.
  - Demonstrative application of CO<sub>2</sub> mineralization through low-CO<sub>2</sub> cement (CARBOFIX)

#### Development of CO<sub>2</sub> Capture Technology for the Cement Production Process

Green Innovation Fund Project (since FY2021)

- CO<sub>2</sub> capture technology: CO<sub>2</sub>-capture cement production process (CO<sub>2</sub> recovery using a compact facility)
  - Development and demonstration of a technology to capture CO<sub>2</sub> at the calciner (C2SP kiln) that efficiently recovers CO<sub>2</sub>
- CO<sub>2</sub> utilization technology: Methanation (CO<sub>2</sub> conversion into thermal energy source)
  - Demonstration of methanation system suitable for the cement production process

### CO<sub>2</sub> Emissions from Cement Production Process



Raw material-derived (decarbonation\*)

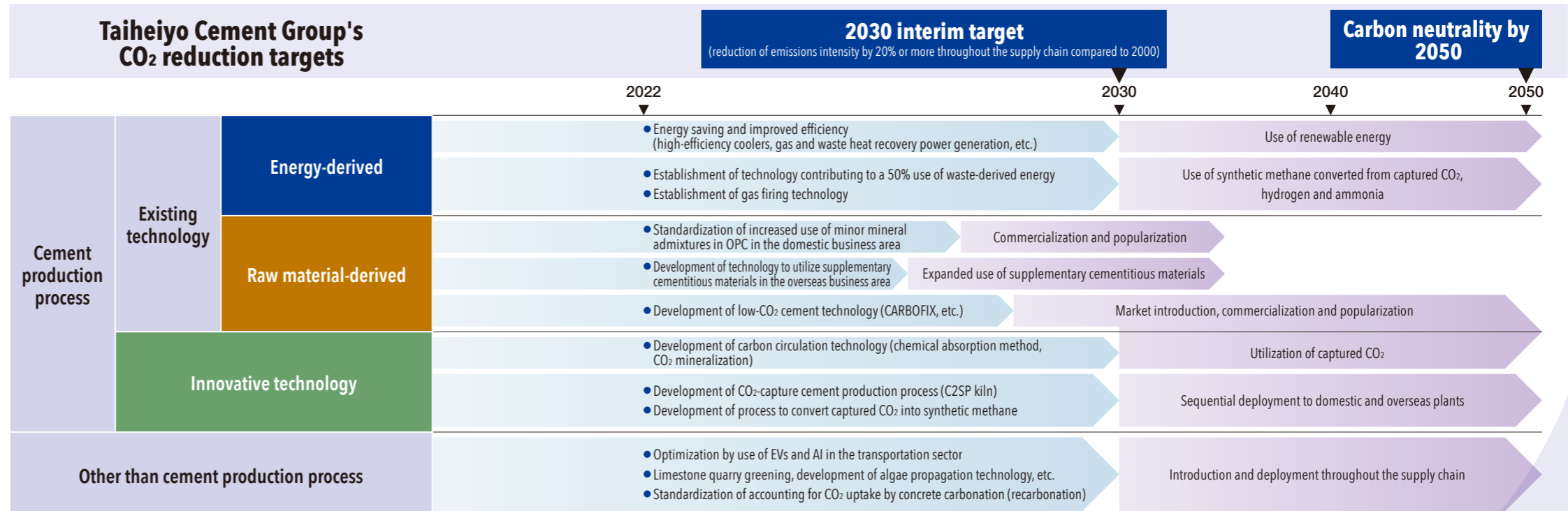


Energy-derived (fossil energy and electricity consumption)



\* CaCO<sub>3</sub> → CaO + CO<sub>2</sub>

### Taiheiyo Cement Group's CO<sub>2</sub> reduction targets





Vice President and Representative Director  
**Yuuichi Kitabayashi**

## Carbon Neutral Strategy 2050

We have established a technology development project team to promote the development of a CO<sub>2</sub>-capture calciner (C2SP kiln) and methanation technology, and are aiming to achieve CO<sub>2</sub> capture and reuse.

### Q: What are the key points of the initiatives towards delivering carbon neutrality?

As is well known, a considerable amount of CO<sub>2</sub> is emitted during the cement production process. Of this, 40% comes from energy sources and 60% comes from the decarbonation of limestone, the main raw material. We believe that in the future it will be possible to reduce the CO<sub>2</sub> emissions from energy sources to zero by switching to green energy sources such as hydrogen, ammonia and synthetic methane, but regarding the CO<sub>2</sub> emissions from raw materials, there is a big problem that we cannot reduce it to zero as long as limestone is used.

Therefore, we are working on the development of technologies to efficiently capture and also use the CO<sub>2</sub> generated from limestone. If we can deliver carbon neutrality ahead of the rest of the world through the commercialization of these innovative technologies, it will lead to significant growth for us. We have already established a technology development project team for carbon neutrality and are participating in NEDO's Green Innovation Fund Project to promote the development of innovative technologies. Furthermore, in March 2022 we formulated the Carbon Neutral Strategy 2050, positioning the achievement of carbon neutrality as one of our most important challenges, and are accelerating our efforts.

### Q: Could you please explain your initiatives to develop new carbon capture technologies?

There are two CO<sub>2</sub> separation and capture methods currently being studied. One is a chemical absorption method called the amine method, which can capture high-purity CO<sub>2</sub> by repeating the process of absorbing CO<sub>2</sub> with a chemical absorbent called an amine solution, and heating the amine solution to release the CO<sub>2</sub>. CO<sub>2</sub> capture using the amine method will be implemented as a NEDO demonstration project from FY2021 to FY2022 at the Kumagaya Plant, and demonstration operations will continue in FY2023 and beyond in order to accumulate further data.

The other is the development of a CO<sub>2</sub>-capture cement production process (C2SP kiln) that efficiently separates and captures CO<sub>2</sub> from the preheater through a device in the cement production process. Because most of the CO<sub>2</sub> originating from raw materials is generated in a heating furnace called a calciner that is inside the preheater, it attempts to efficiently capture concentrated CO<sub>2</sub> by separating the combustion gas emitted from the calciner. The C2SP kiln is our own and a world-first, and we are working with the aim to create a global standard model, just as the NSP kiln developed in Japan has become the global standard.

We are also paying attention to technologies such as underground storage of CO<sub>2</sub>, whilst also proceeding with research and development on the effective use of captured CO<sub>2</sub>. Technological demonstration is in progress to mineralize captured CO<sub>2</sub> as a carbonate by reacting it with waste concrete, ready-mixed concrete or concrete sludge, and reusing it as a construction material or raw material for cement. Furthermore, we are also working on the development of so-called methanation, which converts captured CO<sub>2</sub> into synthetic methane and reuses it as energy. In addition to reusing synthetic methane at cement plants, we are working with gas companies to conduct feasibility studies on reusing it for city gas.

### Q: What is the company's future roadmap?

Our group is aiming to deliver carbon neutrality throughout our supply chain by 2050. In addition, as a 2030 interim target, we have set targets of reducing CO<sub>2</sub> emissions intensity by 20% or more and reducing domestic CO<sub>2</sub> emissions by 40% or more, compared to 2000. We will invest 100 billion yen to complete the development of innovative technologies such as the C2SP kiln for CO<sub>2</sub> separation and capture, CO<sub>2</sub> mineralization by carbonation and CO<sub>2</sub> utilization through methanation by 2030, and will promote the deployment of innovative technologies to our plants in order to deliver carbon neutrality by 2050.

### Q: Is the Carbon Neutral Strategy 2050 consistent with the Paris Agreement?

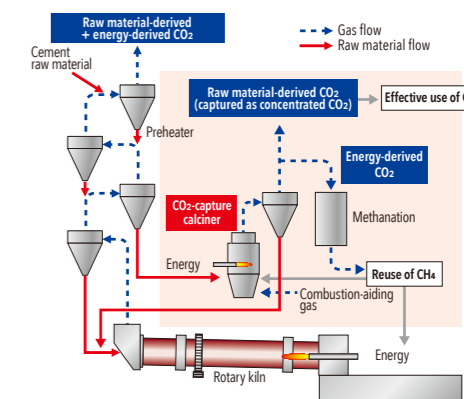
We believe that the group's Carbon Neutral Strategy 2050 is consistent with the Paris Agreement. The Ministry of Economy, Trade and Industry published the "Technology Roadmap for Transition Finance in the Cement Sector" in March 2022 announcing it as being consistent with the Paris Agreement. We can say that our Carbon Neutral Strategy 2050 is consistent with the Paris Agreement because it conforms with the technology roadmap presented by the Ministry of Economy, Trade and Industry.

#### Example 1

### C2SP Kiln

In January 2022, our company was selected for the NEDO Green Innovation Fund Project "Design and Demonstration of CO<sub>2</sub>-Recovering Cement Production Process" and we are currently developing our unique, world-first "CO<sub>2</sub>-capture calciner\*" that can efficiently capture CO<sub>2</sub> with a compact device. Approximately 60% of the CO<sub>2</sub> generated in the cement production process comes from the main raw material limestone, which is heated to 900°C and generates CO<sub>2</sub> as it passes through the calciner (CaCO<sub>3</sub> → CaO + CO<sub>2</sub>). In a "CO<sub>2</sub>-capture calciner", oxygen is used to aid combustion in place of conventional air, allowing concentrated CO<sub>2</sub> to be captured in a compact device. Furthermore, this technology can be used with existing preheaters and rotary kilns, maintaining high thermal efficiency and the use of recycled raw materials and fuels.

\* Calciner: A combustion device installed in the preheater to improve the firing efficiency of a rotary kiln.



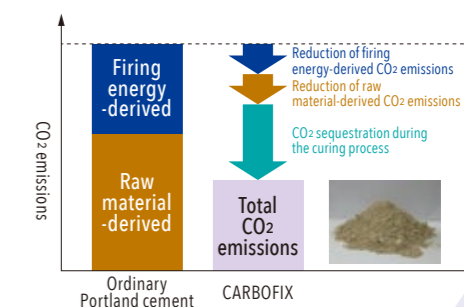
#### Example 2

### Low CO<sub>2</sub> cement (CARBOFIX)

By developing the technology and production techniques that we have cultivated over the years to control the reactivity of cement-based materials, we have developed CARBOFIX, a cement-based material that cures through a chemical reaction with CO<sub>2</sub> and can mineralize the CO<sub>2</sub>. CARBOFIX is a cement that has been developed as part of the technology to mineralize and utilize the CO<sub>2</sub> captured from cement kiln exhaust gas, and can be produced in existing rotary kilns in the same manner as Portland cement.

The production process of CARBOFIX has lower raw material-derived and firing energy-derived CO<sub>2</sub> emissions than ordinary Portland cement. Furthermore, it is a material designed to maximize the effect of reducing total CO<sub>2</sub> emissions as concrete by reacting with CO<sub>2</sub> to cure and harden.

It is expected to be one of the innovative technologies that contributes to the delivering of carbon neutrality, and going forward we will consider initiatives for implementation in society.







Managing Executive Officer  
Senior General Manager  
of International Business  
Division  
**Yoshifumi Taura**

**2 Reconstructing the Overseas Business Portfolio**

**We will reconstruct our business portfolio towards maximizing our presence.**

As well as expanding our business areas in Southeast Asia and the U.S., where demand for cement is strong, we are proceeding with regional business development.

**Q: What are your basic thoughts about the overseas business portfolio?**

The level of development in the U.S., China and Southeast Asia differs in each region, but the most important thing when expanding overseas is whether the Taiheiyo Cement Group can demonstrate its presence in the region. When expanding into a developing country, the greatest expectation is placed on the stable supply of high-quality cement and concrete, which are basic materials for infrastructure, but as a country develops the expectation of contributing to a recycling-based society also increases. Our group possesses advanced technology backed by our 140-year history, and our basic policy is to dispatch personnel to a wide range of departments, including management, production, equipment, sales and accounting, to ensure that the Mission of the Taiheiyo Cement Group is firmly instilled and we can respond appropriately to a wide range of needs. Generally, the world's cement majors are demanding relatively short-term investment returns, and they seem to be less involved in operations than we are, which I think differentiates our group's overseas expansion. The levels of development, political systems and country risks are not uniform, and there are probably many things that differ from our plans, so we believe that it is essential to develop our overseas business in a flexible and mobile manner, such as restructuring our overseas business portfolio in order to find the best locations where we can demonstrate our presence.

**Q: What are the trends in the overseas business portfolio?**

In the past few years, we have been transferring our business area from China and Korea in East Asia to Southeast Asia, in what could be called a southward shift. While on the one hand we have sold our shareholdings in our Korean equity-method affiliate in 2016 and our Chinese consolidated subsidiary in 2020, we decided to form a capital and business alliance with SI Group in 2021 and also to renovate TCPI's production lines. Southeast Asia is experiencing remarkable economic development, and looking at per capita and total cement use, we expect demand for cement to continue to grow. While we will continue to explore opportunities in countries and regions we have not yet entered, we intend to make investments that will contribute to increasing our production and supply capacity with the aim of gaining more than 10% market share in the countries where we have already established a presence, such as the Philippines and Vietnam. The renovation of TCPI's production line is proceeding and scheduled to start operation in May 2024, increasing its cement production capacity to 3 million tons per year. The country's cement demand is expected to grow to 50 million tons by 2030, and the plan is to invest in phases to increase production and supply capacity to 5 million tons, which is equivalent to a 10% market share. The Cebu region is the second largest economic zone in the Philippines, but we believe that expanding supply in Luzon, where the capital, Manila, is located, is also essential in order to capture 10% of the market share. We are considering not only the acquisition of a cement production plant, but also a wide range of options including construction of a terminal and enhancing our logistics network, in order to precisely capture the growing demand.

**Q: What acquisitions of cement-related assets have been made in the U.S.?**

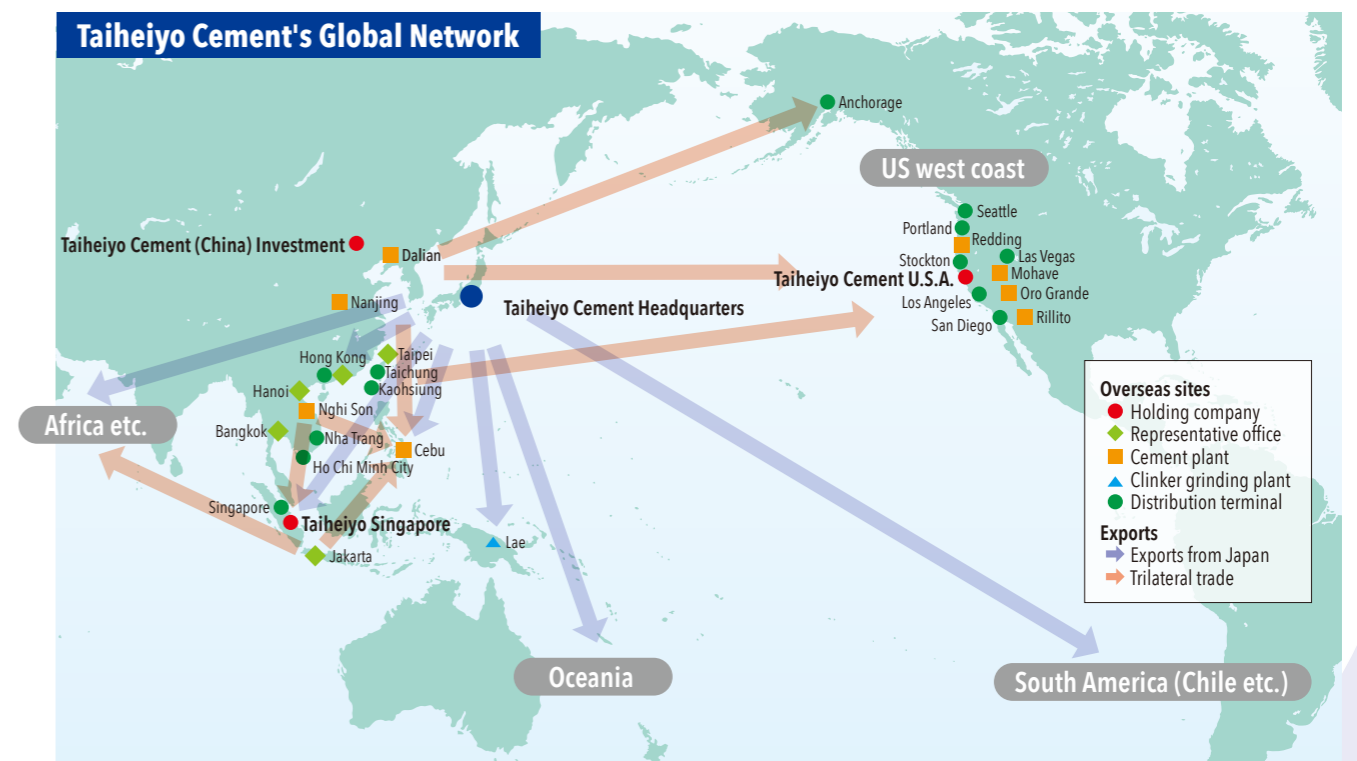
We are conducting our U.S. business, which is the core of our overseas cement business, through our consolidated subsidiary CalPortland Company (in California). The company has three plants in California and one in Arizona with a total cement production capacity of approximately 5.5 million tons, as well as 84 ready-mixed concrete plants in five west coast states from Washington in the north to Arizona in the south, and is diversifying its operations to include aggregates, asphalt and construction. Although the profitability of our U.S. business has improved to the point that nearly half of our consolidated operating income in FY2022 will come from our U.S. business, we expect demand for cement to continue to grow as the west coast has lagged behind the east coast and central regions in their recovery from the 2008 global financial crisis, and there are many areas with population growth due to immigration and other factors. In March of this year, the Taiheiyo Cement Group agreed to acquire a portion of the cement and ready-mixed concrete business assets of Martin Marietta Materials, Inc. (headquartered in North Carolina, U.S.) located on the U.S. west coast, and in June we completed the acquisition of a cement plant with a production capacity of approximately 500,000 tons, 14 ready-mixed concrete plants and other facilities located in Northern California. In August of this year, we also reached an agreement with Martin Marietta

Materials to acquire a cement plant in Southern California with a production capacity of approximately 1 million tons, and the acquisition is expected to be completed in early 2023.

It is difficult to make further acquisitions on the west coast in light of the competitive environment and other factors, so we would like to consider investments in the central and southern regions of the U.S. which have a different industrial structure in order to hedge against the risk of demand fluctuation.

**Q: What initiatives are towards carbon neutrality in the overseas business?**

Our group is committed to delivering carbon neutrality by 2050. Around the world there are initiatives aimed at delivering carbon neutrality in the cement industry, such as using LNG for kiln firing and the penetration of blended cement into the market, and we believe that CO<sub>2</sub> emissions reduction can be progressed by introducing production technologies and new product types that are suitable for these regions. We also believe that if we can commercialize the "cement production process that captures CO<sub>2</sub>", which is the innovative technology at the core of our carbon neutrality efforts, we will be able to deliver carbon neutrality by deploying the process to our overseas cement plants.





Managing Executive Officer  
**Koshiro Hidaka**

**3 Strengthening plant facilities**

**We will modernize plant facilities and production management by 2030.**

**AI and IoT are being introduced to plant facilities to prevent breakdowns and reduce labor demand.**

**Q: What is the background of the initiatives to strengthen plant facilities?**

The Taiheiyo Cement Group has nine cement plants in operation in Japan with the average age of operation approaching 60 years and the oldest plants being over 90 years old. Although continuous operation has been maintained by expanding the frequency and scope of preventive maintenance activities, metal fatigue and other problems associated with long-term operation are worsening and the number of breakdowns caused by parts that were not included in conventional periodic inspections have increased. We believe, as our company name suggests, that the production and sale of cement will continue to be the foundation of our group, so we have decided to take radical measures over the next decade, which includes the period of the 23 Medium-Term Management Plan, including the renovation of principal equipment that we have been unable to implement until now. Strengthening plant facilities will be addressed through a three-pronged approach that includes not only addressing aging facilities, but also modernizing facility and production management by maximizing the use of AI and IoT technologies, and further developing our engineers.

**Q: What are the specific initiatives to strengthen plant facilities?**

In terms of addressing the aging facilities, we will systematically renovate the principal parts of large equipment such as kilns, dryer peripherals, large reduction drives, cargo handling equipment (loaders and unloaders), large motors and trunk cables. By introducing the latest equipment, rather than simply replacing the current equipment, we can further improve environmental performance, achieve energy saving and reduce labor demand. In terms of environmental considerations, we plan to improve maintenance efficiency by

replacing the electrostatic precipitators that process exhaust gas from cement kilns with bag filters, and introduce state-of-the-art vertical mills that can simultaneously dry, grind and sort coal in the coal grinding process.

**Q: What are the specific initiatives to modernize facility management?**

In terms of modernization of facility management, we are planning to use AI and IoT technologies to monitor the condition of equipment at cement plants to improve the accuracy of life expectancy predictions. The Kumagaya Plant is currently undergoing demonstration testing as a model plant, in which vibration, pressure, temperature, sound and other data is measured and collected by sensors and fixed-point cameras installed throughout the plant, and centrally managed via a network installed in the plant; the collected data is analyzed by AI to improve the accuracy of detection of signs of breakdown and end of service life. The analysis of historical data has already verified that predictive diagnosis is possible. We will expand the use of drones to enable continuous data acquisition and multi-faceted analysis. Although the plant is currently being operated on a visual basis due to legal restrictions, we have confirmed that the system is sufficiently accurate to detect an anomaly of about 1mm in the kiln roller. In the future, we plan to install communication infrastructure at plants other than the Kumagaya Plant and finish upgrading the facility management systems of six domestic plants under our direct control by the end of FY2027.

**Q: What are the specific initiatives to modernize production management?**

Currently, each plant works in three shifts, with one mill operator and one kiln operator in principle assigned to the

cement production process. These operators diagnose phenomena and changes in the system based on changes in process data in order to ensure stable production. In this regard, we are progressing the use of AI and IoT technologies to minimize the work of operators, with the ultimate goal of establishing a remote support system via remote operation from the headquarters, initially for domestic plants and then eventually overseas plants. Since FY2020, we have been developing an operation support system to reduce the workload of operators using the Kamiiso Plant as a model plant. Automation has already been achieved for the majority of operator tasks and we have confirmed a reduction in workload. In the future, we aim to achieve fully automated operation of the cement plants by having AI learn from the operational and process data we have accumulated until now, and we also expect to eventually achieve unmanned operation of the cement plants.

**Q: Could you please describe the further development of engineers?**

As I mentioned, we have been experiencing breakdowns that are difficult to detect, but I believe another factor in addition to the aging facilities is the rapid generational change due to the retirement of experienced inspectors and operators, as well as the shortage of employees aged in their 30s and early 40s. While there is a significant expectation that the shortage can be alleviated by the introduction of AI and IoT technologies, we believe there is an urgent need to train engineers. We have established "Techno Schools" for mid-career engineers at each plant to intensively learn specialized knowledge related to cement production, and "Maintenance Dojo" where facility maintenance skills are learnt with the training of engineers at contractors in mind, while overseas, seminars are being offered at TCPI for the same purpose of training engineers. As a place to put techniques into practice, we are actively dispatching young engineers to the renovation of TCPI's production line in order for them to gain experience. In this way, we are steadily developing our engineers by resolutely passing on and further enhancing the techniques we have inherited from our predecessors.



Training Center (TCPI)



Central control room (Kamiiso Plant)



Modernization of facility management  
(drone photography of cement production facilities at the Kumagaya Plant)



Vice President and Director  
**Kunihiro Ando**

**4 Quarry Development**

**We will continue quarry development to secure long-term resources.**

**We will secure limestone resources by developing new quarries and optimizing the supply chain according to our quality requirements in order to secure long-term stable supply.**

**Q: What is the need for quarry development?**

Currently, there are 11 limestone quarries operated by The Taiheiyo Cement Group in Japan, and a total of about 40 million tonnes of limestone is quarried annually. Limestone is also used in industries other than cement, such as steel and chemicals, and it is one of the few natural resources for which the required volume can be sourced from within Japan alone. But supplies will gradually decrease if we do not continue to secure exploitable reserves. On the other hand, the conditions placed on quarry development are becoming stricter each year, and it takes about ten years to commence quarrying even if you own the quarrying rights. Therefore, quarry development must be carried out with a view several decades into the future. Supply from the Horoshi area of Ofunato Quarry began in April 2021, but this quarry also took more than 10 years to develop. This development has secured sufficient limestone for 100 years' cement production at the Ofunato Plant.

Since our core business is the production and sale of cement, we have decided to invest 100 billion yen in quarry enhancement over the 10-year period until 2030 and to progress quarry development with a medium- to long-term perspective.

**Q: What are the specifics of the ten-year investment in quarry development?**

At the core of the plan is the development of the Yato area of the Shin-Tsukumi Quarry, which will be the next quarry to supply raw material to the Oita Plant, our group's largest cement plant. This will ensure that the Oita Plant has enough limestone for cement production for 100 years. Development is in progress with the aim of starting supply in FY2030, and a review of limestone customers is also underway. In addition to raw materials for cement, the Shin-Tsukumi Quarry currently in operation is also supplying limestone for

use in steel, chemicals and ready-mixed concrete, but after the development of the Yato area is completed, we plan to consolidate the supply of minerals for steel and chemical uses from other limestone quarries in our group. For limestone used as aggregate in ready-mixed concrete, we completed an aggregate washing plant last year in anticipation of an increase in supply from the Yato area. Although limestone is said to be a resource for which Japan can be self-sufficient, we believe that by building an optimal supply chain that matches the quality of the limestone produced, we can make more effective use of the resources and thereby realize long-term stable supply.

**Q: What are the initiatives toward carbon neutrality?**

We are promoting the installation of various energy-saving equipment at our quarries to reduce the CO<sub>2</sub> emissions from the diesel oil that fuels the quarry equipment and the electricity that powers the plant, in order to achieve the targets set in the carbon neutrality action plan. Specifically, when replacing heavy equipment such as dump trucks and loaders, we select models with high fuel efficiency and, when renovating plant equipment, we introduce eco-belts with high energy-saving performance, including energy recovery. Furthermore, we are promoting the introduction of 'top-runner' transformers and motors. Going forward, we will contribute further to delivering carbon neutrality of the group by expanding the scope of application of investment decisions based on internal carbon pricing.

**Q: What are the initiatives you are focusing on outside of quarry development?**

When quarrying limestone, forests are cleared, topsoil is excavated and the limestone ore is extracted, which inevitably affects the environment and ecosystem of the quarry's area.

For this reason, we are striving to quickly revegetate the excavation faces of not only former quarry sites but also operating quarries, and are also working to preserve the environment, including vegetation, the ecosystem and water resources. For rare species that are identified as requiring conservation during environmental impact assessment, efforts are being made to conserve them through the installation of protection facilities, transplantation and restrictions on development. We strive to minimize negative environmental impacts resulting from the development and operation of our quarries, not only by preventing pollution from the quarrying, but also by conserving biodiversity and water resources.



Ofunato Quarry at the Horoshi area



Aggregate classification plant (Shin-Tsukumi Quarry)



Quarry site Greening (Buko Quarry)



Shin-Tsukumi Quarry (panoramic view)



Director and Senior Executive Officer  
**Tetsuya Ohashi**

**5 Enhancing Management Foundations - Human Capital**

**We will secure and develop human resources and create a more supportive workplace for employees in order to be a corporate group that continues to grow.**

**We are working to create an environment in which all employees can work with vitality and thoroughly demonstrate their abilities.**

**Q: What is your approach to human resources?**

As the environment surrounding our company is constantly changing through digitalization, globalization, the declining birthrate, aging population and other challenges such as the COVID-19 pandemic, the importance of "human capital management" is increasing.

We view human resources as "capital" and believe that increasing the value of individuals by investing in people will lead to medium- and long-term improvements in corporate value. We are deploying initiatives that are conscious of the link between management strategy and human resource strategy, including the building of a human resource portfolio that can respond to changes in the environment and securing and training human resources that can create added value.

In recent years, employee engagement has become a necessary element of human resource strategy in particular, and in order to enhance engagement it is necessary to align the direction of growth that the company and employees each aspire to. Our management is sending out messages to employees to inform them about the aims of the various measures promoted by the company.

Our basic policy for promoting diversity is to promote innovation aimed at further improvement of corporate value and based on the ideas and values of diverse human resources. We are also working to promote "work-life management" to improve retention and productivity and help each employee realise fulfilment in both their work and private life.

While the relationship between companies and employees is expected to change towards more equality due to labor shortages caused by the declining birthrate and aging population, as well as changes in work attitudes, we will continue to focus on efforts to achieve human capital management based on respect for human rights.

**Q: What is your recruitment policy?**

We have established a basic recruitment policy that takes into account our management strategy and labor structure. It is aimed at securing personnel who can strengthen the earnings base of our existing businesses and steadily implement our growth strategy.

Regarding our labor structure in particular, as a result of limited recruitment in the past, the lack of mid-career personnel in their 30s and 40s has become noticeable, and we are working hard to recruit mid-career personnel in parallel with new graduates.

In recent years, individual attitudes and needs regarding work styles have become more diverse, as seen in the change in attitude towards relocation, so we are flexibly expanding our recruitment of area-limited positions, in addition to positions which do not have restrictions on relocation (including overseas).

Based on the idea of accepting these diverse values and personalities, our individual recruitment policies include increasing the ratio of female employees, and actively recruiting international students and people with disabilities.

**Q: Could you please describe your human resource development?**

We have made the growth of the "individual" a pillar of our human resource strategy, and we are developing human resources to maximize the potential of each individual. Conversely, if the organization is not invigorated then the sustainable development of the company cannot be expected. Having each employee feel a sense of proactive and autonomous growth in their career invigorates the organization and also leads to individual job satisfaction.

Human resource development is based upon on-the-job training to improve skills, and the Human Resources Department conducts training for each job level of employees

with the objective of enhancing the skills and mindset that are common to all departments. In order to foster a mindset that forms the basis of a businessperson, we place particular emphasis on the achievement of goals related to the approach to work for young employees in their first three years of employment, and use a check sheet to alternately conduct self-evaluations and supervisor evaluations of their progress. This check sheet is expected to have the effect of activating communication with supervisors and building a relationship of trust, and as it is also used as teaching material in subsequent job level-specific training, we intend to achieve a synergistic effect in combination with OFFJT.

As part of our promotion of diversity, we also provide training to develop the next generation of female leaders. The training is for the broad generation from first-year employees to those at the level just before joining management, with a curriculum that is designed to increase awareness in stages. The training is offered on a voluntary (nomination) basis so that participants can take the course independently and at their own timing.

**Q: How is work-life management promoted?**

We are promoting work-life management to improve productivity and build an organization that maximizes the capabilities of our diverse workforce. We are progressing with the design of a system that achieves flexible working styles which allow employees to autonomously control their work and life - for example, a shortened working hour system for employees who are raising children aged up to elementary school age or are providing nursing care to a family member. In addition, we have a personnel management system that divides employees in area-specific positions and non-area-specific positions into separate tracks, and the system allows employees to change between tracks in accordance with life events such as marriage, childcare and nursing care. We will continue our efforts to create a workplace where employees can balance their work and life.

**Q: What are the initiatives toward Health and Productivity Management (H&PM)?**

We have been promoting employee health management since FY2019 and in September 2022 revised the Health-Conscious Management Declaration with the aim of further promoting the health of employees and their families, and creating a rewarding workplace. The President is the chief health management officer under the Health-Conscious Management Declaration, with the Human Rights & Labor Practices Committee, a subcommittee of the CSR Management Committee under the direct control of the Board of Directors, playing a central role. Specifically, we are advancing H&PM through the PDCA cycle, which includes establishing a health management activity plan for each fiscal year, implementing

measures, verifying their effectiveness, and reflecting the results in measures for the next fiscal year.

In FY2023, we are particularly focusing on measures to prevent lifestyle-related diseases. Based on the data from health checkups, we are monitoring the state of health of employees overall, providing information on lifestyle improvement through the company intranet, etc., and focusing on planning participatory events. We will continue our efforts to maintain and improve the health of our employees and their families, centered on the Human Rights & Labor Practices Committee under the Health-Conscious Management Declaration and in cooperation with the Taiheiyo Cement Health Insurance Association and the Taiheiyo Cement Labor Union.

**Q: What are the initiatives regarding respect for human rights and diversity?**

We recognize that respect for human rights and diversity is a principle for the formation of a sustainable society. In this regard, we formulated our Basic Policy Concerning Human Rights and Labor Practices in April 2015, which takes into consideration matters including the Universal Declaration of Human Rights and the labor standards of the International Labor Organization.

Under this policy, we have established Standards of Conduct to serve as a code of conduct for each employee, and we are committed to respecting the human rights of not only our employees but all people involved in our business activities. We are conducting training on an ongoing basis on the theme of human rights and diversity during job level-specific training and training for the top management level of group companies. During Human Rights Week we also ask our employees and their families, including those of our partner companies, to submit human rights awareness slogans in an effort to promote human rights awareness.

Furthermore, we are striving to create a brighter workplace by having a human rights awareness promotion committee member and a harassment consultation counselor at each business site who conduct awareness-raising activities and provide consultation services to prevent harassment.



Practical training for job level-specific training



Director and Senior Executive Officer  
**Tetsuya Ohashi**

**6 Digital Technology "DX" Promotion**

**We will continue to provide stable and sustainable products and contribute to building safe and secure social infrastructure.**

By positioning DX as one of the key drivers of our growth strategy, we will promote stable production through advanced automatic control and automation of production processes using digital technology, as well as promote management from a new perspective, improve operations and enhance services such as information provision to customers.

**Contributing as a key driver of the 23 Medium-Term Management Plan through company-wide DX initiatives**

**Establishment of the "DX Promotion Team"**  
The "DX Promotion Team" was established in June 2022 under the leadership of the director in charge of the Corporate Planning Department. The DX Promotion Team aims for the early realization of company-wide DX by working as a company-wide lateral organization on digital transformation, which until now has been promoted separately by each business division.

**Background**

As the development of unprecedented business models using digital technology, collectively referred to as DX, accelerates across all industries, it is important for us to speedily advance our DX in order to maintain and enhance our competitiveness.

We have formulated the 23 Medium-Term Management Plan as the final step to achieving "our future vision and direction" for the mid-2020s. The basic policy is to "become a corporate group that never stops moving forward", "being part of the social infrastructure industry, contributing to the establishment of a safe and stable society" and "enhance our earnings foundation and steadily carry our growth investment". We believe that DX promotion will be a key driver of this.

**Purpose of the DX Promotion Team**

The "DX Promotion Team" was established in June 2022 to promote DX speedily across the company. In addition to promoting DX as a company-wide initiative in each of the group's businesses, we will also materialize the provision of new services that make maximum use of digital technology.

**Role of the DX Promotion Team**

In addition to advancing efforts to realize measures that have been promoted in each business division, such as the restructuring of business systems, development of communication infrastructure, strengthening of plant facilities and quarry development, realization of the smart factory concept,

and optimization of the allocation of cement distribution vessels through AI, the team will also identify new issues to be addressed.

The DX Promotion Team will consider the use of effective IT tools to solve issues and the provision of services in order to contribute to the steady implementation of the 23 Medium-Term Management Plan. Through these efforts, the team will also focus on further deepening systems that support flexible work styles, such as work style reform and the training of DX human resources.

**Composition of the DX Promotion Team**

Leader	Director in charge of the Corporate Planning Department
Standing members	One or two persons each from the Cement Business Division, Mineral Resources Business Dept., Environmental Business Development Dept., Production Dept., Maintenance & Engineering Dept., Mining Dept., Construction Materials Business Dept., Business Planning and Administration Dept., Central Research Laboratory, Human Resources Dept. and General Affairs Dept.
Secretariat	Corporate Planning Department (Information-Technology Planning Group)

**DX Promotion Initiatives**

**Utilization of the Latest Technology**

- Advanced facility maintenance through operation monitoring of cement production facilities using AI and IoT technologies
- Rapid detection of facility abnormalities through periodic inspection of cement production facilities using drones
- Development of a remote support system for cement production facility operation
- AI learning aimed at fully automated operation of cement production facilities
- Improved operational efficiency and optimization of logistics by using AI in ship allocation planning
- Development of a slump forecasting system using AI image recognition in concrete production

**Digital Infrastructure Development**

- Establishment of an information sharing platform with group companies to create group synergy and resolve issues
- Provision of an electronic transaction system through a web portal site for business partners
- Cultivation of "DX human resources" with both business knowledge and advanced digital skills

**Contribution to SDGs targets in the key strategies of the 23 Medium-Term Management Plan**

- Key Strategy 1** Initiatives toward carbon neutrality
- Key Strategy 2** Reconstructing the overseas business portfolio
- Key Strategy 3** Strengthening plant facilities
- Key Strategy 4** Quarry development
- Key Strategy 5** Enhancing management foundations - human capital
- Key Strategy 6** DX promotion

## Key Business Strategy Themes

We aim to successfully tackle these three business strategy themes while leveraging the strengths of our business divisions and R&D.

### 1 Contributing to National Resilience

The increase in the number and severity of natural disasters is creating challenges across society social structures to formulate measures to prevent disasters and mitigate damage. We will contribute to national resilience by further enhancing the stable supply of cement and other construction materials in order to enhance infrastructure and support speedy recovery after a disaster.

- Cement Business → P.42
- Mineral Resources Business → P.46
- Construction Materials Business → P.50
- Research and Development → P.52

### 2 Contributing to the Creation of a Recycling-based Society

In addition to utilizing industrial waste, industrial by-products, municipal waste and incineration ash as raw materials and fuels for cement production, the Taiheiyo Cement Group has recently been expanding initiatives to utilize disaster waste. Going forward, we will apply and develop the expertise and technologies we have cultivated so that we can contribute to the creation of a recycling-based society and the resolution of social issues.

- Cement Business → P.42
- Mineral Resources Business → P.46
- Environmental Business → P.48
- Research and Development → P.52

### 3 Delivering Carbon Neutrality

The Taiheiyo Cement Group views the reduction of CO<sub>2</sub> emissions as an opportunity to boost our corporate value. We will expand our efforts to efficiently replace fossil fuels with alternative energy derived from waste, promote technological progress in such areas as the development of low-CO<sub>2</sub> cement and innovative technologies for CO<sub>2</sub> capture, storage and utilization, toward carbon neutrality.

- Cement Business → P.42
- Environmental Business → P.48
- Research and Development → P.52

# Cement Business (Japan)



Director and Senior Executive Officer  
Senior General Manager of Cement Business Division  
**Yukimasa Nakano**

**We aim to quickly recover business profit, which is a cornerstone of sustainable development.**

Based on a solid foundation for manufacturing, transportation and supply, our cement business in Japan reliably provides cement and ready-mixed concrete to users nationwide. As well as expanding our product lineup that includes special cements and cement-based soil stabilizers, we are building a sales system that can accurately respond to changes in construction methods and the diverse needs of users, such as by deploying user meeting activities for each industry.

In the environment surrounding this business, profitability has deteriorated due to the continuing decline in demand for cement caused by the stagnation of work at construction sites due to the prolonged COVID-19 pandemic, as well as further sharp rises in coal prices following Russia's invasion of Ukraine. We decided to raise the prices of cement and cement-based soil stabilizers by 2,000 yen per tonne for shipments from January of this year, but we have determined that we are in a situation where we cannot secure appropriate profits without passing on costs further. So, we will once again revise our prices for shipments from October 2022 in the form of either a "coal price surcharge" or a "fixed price revision". Since we are planning to make major investments to develop our quarries and plants, and develop technologies to deliver carbon neutrality by 2030, funded mainly by operating cash flow, price revisions and cost reductions are the most important issues for us. In addition, we will also promote labor productivity improvements through the use of AI and IoT, as well as the development and deployment of technologies to reduce environmental burdens and CO<sub>2</sub> emissions.

## 23 Medium-Term Management Plan Strategies

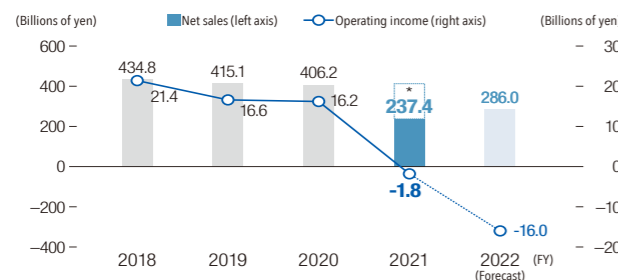
- **Enhance our earnings base**
  - Mobilize comprehensive group strengths (manufacturing, sales and logistics capabilities), and contribute to national projects.
  - Formulate sales strategies suitable for the characteristics of each region
  - Employ efficient transportation
- **Strengthen plant facilities**
  - Maintain a stable supply system by upgrading key equipment
  - Improve labor productivity by making full use of AI and the IoT
- **Initiatives toward carbon neutrality**
  - Develop and expand technologies to reduce environmental impact and CO<sub>2</sub> emissions

Net sales*		Operating income	
FY2021 Results	FY2024 Plan	FY2021 Results	FY2024 Plan
406.2 billion yen	267 billion yen	16.2 billion yen	23.5 billion yen

\* Since we have adopted the Accounting Standard for Revenue Recognition (ASBJ Standard No. 29) etc. from FY2022, the net sales in the FY2024 plan show the amount after adoption of the new standard. (The adoption of the new standard has a negative impact of -185 billion yen.)

## FY2022 Achievements

### Net Sales and Operating Income



\* Of the 168.7 billion yen decrease in net sales for FY2022, 175.2 billion yen is due to the application of the above-mentioned Accounting Standard for Revenue Recognition.

Regarding private sector demand, construction work was delayed due to the prolonged COVID-19 pandemic and stagnant tourism-related investment such as hotels and transportation. In the public sector, rising material prices and labor costs have impacted both tendering opportunities and the success of tenders. Due to this, domestic demand for cement was 37.88 million tonnes (a 2.0% decrease on the preceding fiscal year). Including consignment sales, the Taiheiyo Cement Group sold 13.36 million tonnes of cement in Japan (a 3.0% decrease on the preceding fiscal year). As a result of the above, net sales were 237.4 billion yen (a decrease of 168.7 billion yen on the previous fiscal year\*) and operating income was -1.8 billion yen (a decrease of 18 billion yen on the previous fiscal year). In response to soaring coal prices and other production cost increases, we decided to raise our prices by 2,000 yen per tonne for shipments beginning in January 2022.

Despite such business circumstances, we completed the replacement of the EP (Electrostatic Precipitator) with bag filters at Kamiiso Plant Kiln No. 7 and our group company DC Co., Ltd., and our group company Myojo Cement Co., Ltd. expanded its chlorine bypass facilities to increase its waste and by-product processing capacity.

## Key Strategies for FY2023

- 1. Sales**
  - Steady price revisions to secure business profit
  - Boost our presence in the domestic distribution market
  - Improve our system to supply special products to meet customer needs
- 2. Ready-mixed concrete**
  - Promote substantial action to provide customer support
  - Provide solutions that match the local situation
- 3. Improve technical marketing and quality assurance work**
  - Respond positively to change in the precast concrete products market.
- 4. Secure more large-project orders**
  - Promote the marketing of solutions that leverage the combined capabilities of Taiheiyo Cement and our group companies
- 5. Develop our soil stabilizers business**
  - Proactively engage with new applications and methods
  - Develop and promote high-performance products

## Efforts to Address Social Issues

- Stable supply of cement products
- Mitigate and adapt to climate change
- Further contributions to a recycling-based society

## Relevant SDGs



## Stable Supply System and Optimization of Distribution

Our Cement Business (Japan) provides a stable supply of our products via our robust manufacturing, transportation and supply chain infrastructure that includes 9 cement plants, 106 service stations (distribution sites), and 35 cement tankers. In the 23 Medium Term Management Plan, we aim to enhance our aging facilities and also pursue efficient transportation by upgrading our production and equipment management systems using AI and IoT technologies. Until now, transportation planning has relied heavily on the experience of the planner in the allocation of both ships and trucks, but we believe that the introduction of AI will enable more efficient logistics planning thereby reducing fuel consumption and optimizing distribution.

For marine transportation, we are developing a ship allocation simulator that employs AI to learn logistics variables such as tanker locations, factory and service station inventories and weather conditions to plan ship allocation. AI allows immediate calculation and ranking of tens of combinations, whereas a person can only think of two or three. The system will select the most optimal plan and make minor adjustments to it, and we plan for its implementation by FY2024.

For land transportation, we are progressing with our plan to customize and utilize a commercially available AI dispatching system. After introducing the system to group companies on a trial basis, we aim to begin operating the system in the Tokyo and Kanto branch offices during FY2023.

As a leading company, our aim is to maintain a stable supply system and optimize distribution in order to deliver safety and security to society and contribute to the formation of a sustainable society.



Our coastal cement tanker, Hokyuyumaru

# Cement Business (Overseas)



Managing Executive Officer  
Senior General Manager of International Business Division  
**Yoshifumi Taura**

We aim to achieve the sustainable development of our group by expanding our business area.

In the overseas cement business, we produce and sell cement at nine plants in the Pacific Rim, including four on the west coast of the United States, two in China, and one each in Vietnam, the Philippines, and Papua New Guinea. In addition to this, we are developing a variety of other businesses, including the export of cement and clinker from Japan and trilateral trade, as well as increasing our handling of bulk materials.

Impacts such as higher cement production costs due to soaring coal, electricity and other energy prices, and stagnation of construction work due to the lockdowns caused by the COVID-19 pandemic, were seen in Southeast Asia and China. On the other hand, in the U.S., the core of our group's overseas business, we were largely unaffected by price fluctuations due to our use of local coal, and we have been able to continue to increase revenue and profit by passing on the higher electricity and other costs to customers against a backdrop of strong demand. Under these positive business circumstances, and since the U.S. is identified as the best location for growth investments in our 23 Medium Term Management Plan, in June of this year we completed the acquisition of a cement plant in Northern California and other cement business-related assets from Martin Marietta Materials, and in August we agreed to acquire Martin Marietta Materials' cement plant and other assets in Southern California. In addition, the renovation of TCPI's production line is progressing as planned towards operation in May 2024, and synergies from investments decided in the 20 Medium Term Management Plan are steadily emerging, including the start of clinker supply to TCPI from SI Group, with whom we have entered into a capital and business alliance.

To deliver carbon neutrality, we will promote energy conservation at each site and steadily deploy innovative technologies for CO<sub>2</sub> capture in the cement production process that we are developing to our overseas cement plants.

In the U.S., both sales volume and prices exceeded those of the previous fiscal year on the back of robust housing demand. In China, the sales volume was lower than the previous year due to the impact of restricted production caused by power shortages resulting from the soaring coal prices. In the Philippines and Vietnam, our sales volume was lower than the previous year due to further waves of COVID-19 infection and social distancing measures. As a result of the above, net sales were 225.7 billion yen (an increase of 10.8 billion yen on the previous fiscal year) and operating income was 26 billion yen (an increase of 900 million yen on the previous fiscal year).

Under this business environment, we completed our investment in the SI Group and began renovation work on TCPI's production line. As a growth investment under the 23 Medium Term Management Plan, we agreed to acquire cement-related assets, including a cement plant in Northern California (with an option for the acquisition of a cement plant in Southern California and other assets).

## 23 Medium-Term Management Plan Strategies

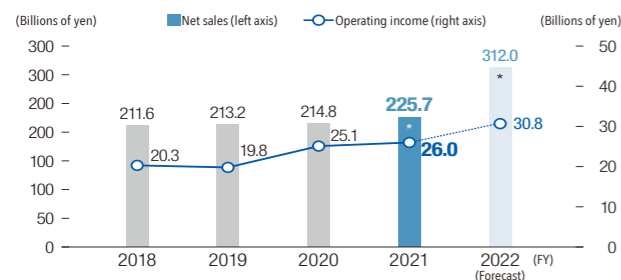
- **Sustained growth investment**  
- Create business expansion in Southeast Asia and the US, and construct the optimum logistics network
- **Enhance our earnings base**  
- Promote our Mineral Resources, Environmental and Construction Materials businesses overseas  
- Implement further cost cuts
- **Initiatives toward carbon neutrality**  
- Implement initiatives toward CO<sub>2</sub> reductions

Net sales*		Operating income	
FY2021 Results	FY2024 Plan	FY2021 Results	FY2024 Plan
214.8 billion yen	218 billion yen	25.1 billion yen	28.4 billion yen

\* The adoption as of FY2022 of the Accounting Standard for Revenue Recognition (ASBJ Standard No. 29) has had no impact on the net sales in the FY2024 plan.

## FY2022 Achievements

### Net Sales and Operating Income



\* The adoption of the Accounting Standard for Revenue Recognition has had no impact.

## Key Strategies for FY2023

### 1. Boost profitability of existing businesses

- (1) USA- Construct an optimal production and logistics portfolio  
- Meet increased demand by maximizing plant production and securing import sources by leveraging our global network
- (2) China- Introduce green products to respond to the tightening of regulations and contribute to waste treatment  
- Promote our Environmental Business and seek out new business
- (3) Vietnam- Expand our market share by differentiating ourselves from other companies through expanding our logistics bases and diversifying our products  
- Boost our competitiveness by cutting production costs through energy-saving investment and via waste treatment

- (4) Philippines - Steadily carry out work to renovate the production base  
- Create a 3 million tonne sales system ready for when production capacity has been enhanced

### 2. Expand and increase the sophistication of our trading business

- Boost our bargaining power in the international market
- Expand our bulk materials business

### 3. Implement initiatives to rebuild our business portfolio

- Create an optimal logistics network incorporating Indonesia
- Further business expansion in Southeast Asian countries such as Indonesia and the Philippines

## Efforts to Address Social Issues

- Contribution to infrastructure improvement
- Mitigation and adaptation to climate change
- Contribution to creating a recycling-based society

## Relevant SDGs



## Acquisition of cement-related assets in the U.S. toward expanding our business area and building an optimal logistics network

In the United States, the core of our overseas cement business, we are developing our cement, ready-mixed concrete and aggregate businesses through CalPortland, mainly in the five West Coast states of Washington, Oregon, California, Arizona and Nevada. Of these, California, the state we are most focused on, is the largest in the U.S. in terms of both population and economic scale, and ranks fifth in the world in terms of GDP behind the U.S., China, Japan and Germany. California's cement demand accounts for about 10% of the total demand in the U.S., and is expected to grow in the medium to long term due to the increase in housing demand and infrastructure development in line with population growth, as well as the upcoming Los Angeles Olympics and Paralympics in 2028.

In June of this year, we acquired a portion of the cement and ready-mixed concrete business assets owned by Martin Marietta Materials, Inc. on the U.S. west coast, including its Redding plant, in order to expand our supply capacity while maintaining stable operations at our three existing cement plants so that we can steadily capture the growing demand. Then in August, we also reached an agreement to acquire a cement plant in Southern California with a production capacity of approximately 1 million tons and other assets, which is expected to be completed in early 2023.

The Redding plant will be a valuable production and supply base in northern California, a location where our group has not had such a presence until now. The acquisition of the ready-mixed concrete business is expected to make a steady contribution to earnings and enhance the company's competitiveness in securing cement customers. In addition, we expect to reduce energy costs by improving the efficiency of the Redding plant's operations, as well as reducing logistics costs by optimizing distribution that includes the newly acquired cement terminal and our existing cement plants., and will further address global warming countermeasures with our planning to focus on the limestone-rich cement production that aims for low CO<sub>2</sub> emissions along with logistics optimization.



CalPortland Redding Plant



# Mineral Resources Business

We aim to achieve sustainable development by securing a century-long stable supply.

In addition to our main businesses of handling aggregates for ready-mixed concrete plants and mineral products for steel and chemical manufacturers, the Mineral Resources Business is also engaged in developing our geo-solutions business that is involved in processing construction soil and contaminated soil, as well as the sale of new products developed by the Group, such as functional hollow particles and ultra-pure silicon carbide (SiC).

Our business is founded upon quarries that we own and centered around 11 limestone quarries in Japan, but as the quality and characteristics of minerals vary from location to location, we are focusing on building and reviewing an optimal supply system from the perspective of reducing the environmental impact. We are currently developing the Yato area of Shin-Tsukumi Quarry in order to start supplying raw limestone material for cement to the Oita Plant in 2029, but in December last year we constructed an aggregate classification plant so that limestone quarried from the area can also be supplied as aggregate for ready-mixed concrete plants, in addition to as raw material for cement. The Shin-Tsukumi Quarry has also been supplying limestone as a mineral product to steel and chemical manufacturers, but in view of the characteristics of the limestone from the Yato area, in parallel with the development we are also restructuring our logistics system and other aspects of our operations in order to transfer supply from other quarries within the Group. In addition, we are constructing a shipping yard in the Sodegaura area in Chiba Prefecture so that we can steadily address the growing demand for limestone aggregates in the Tokyo metropolitan area.

In the aggregates business, our sales volume declined in the Kanto and Tohoku regions due to the completion of disaster restoration work, despite an increase in demand due to the resumption of redevelopment work in central Tokyo. The sales volume of limestone for steel, the mainstay of our mineral products business, increased due to a recovery in crude steel production. Our geo-solutions business exceeded the previous year's level due to an increase in transactions for construction soil generated from construction sites such as tunnels and land development projects. As a result, we posted net sales of 77.1 billion yen (an increase of 1.4 billion yen on the previous fiscal year) and operating income of 6 billion yen (an increase of 300 million yen on the previous fiscal year).

Under these business circumstances, we have concluded an agreement with Usuki City regarding quarry development in order to progress the development of the Yato area of Shin-Tsukumi Quarry, which will be the next source of limestone for the Oita Plant. We also completed a demonstration plant for "Nanolitia", a lithium-ion battery cathode material, at our Central Research Laboratory.



Vice President and Director  
**Kunihiro Ando**

## 23 Medium-Term Management Plan Strategies

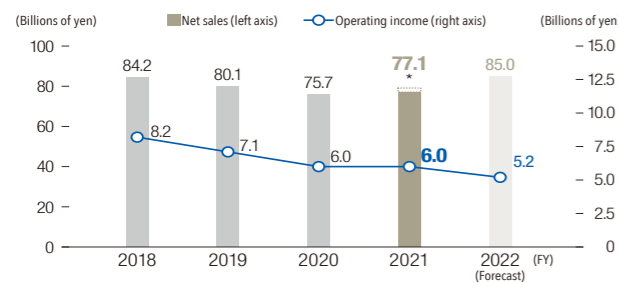
- **Quarry development**
  - Quarry development to establish foundation that enable us to ensure a long-term stable supply of mineral resources
- **Enhance our earnings base**
  - Enhance and promote limestone aggregate production and distribution facilities
  - Reconstruct our production and sales system targeting steel and paper manufacturing
  - Open up new markets for our heavy metal immobilizer (DENITE)
  - Accelerate commercialization of our functional hollow particles (CellSpheres)
- **Sustained growth investment**
  - Implement growth investment in the Southeast Asia region

Net sales*		Operating income	
FY2021 Results	FY2024 Plan	FY2021 Results	FY2024 Plan
75.7 billion yen	82 billion yen	6.0 billion yen	9.5 billion yen

\* Since we have adopted the Accounting Standard for Revenue Recognition (ASBJ Standard No. 29) from FY2022, the net sales in the FY2024 plan show the amount after adoption of the new standard. (The adoption of the new standard has a negative impact of -4 billion yen.)

## FY2022 Achievements

### Net Sales and Operating Income



\* Of the 1.4 billion yen increase in net sales for FY2022, -2.0 billion yen is due to the application of the above-mentioned Accounting Standard for Revenue Recognition.

## Key Strategies for FY2023

### 1. Establish the foundations to ensure a long-term stable supply of our mineral resources

- Review, plan and implement mine and quarry redevelopment
- Fully leveraging our mineral resources

### 2. Expand the earnings of our existing core businesses that demonstrate the group's overall capabilities

- (1) Aggregates business
  - Establish an aggregate washing plant at Shin-Tsukumi Quarry and carry out sales promotions
  - Construct an aggregates yard with the aim of ensuring a stable supply of aggregates in the Kanto region and creating a system to promote sales there

### (2) Mineral products business

- Develop optimal production systems that match changes in those of our steelmaking customers

### (3) Geo-solutions business

- Expand our sales volume by boosting the inclusion of our heavy metal immobilizer in the planning for major projects, and securing regular sales customers.

### 3. Nurture future key businesses that enable sustainable growth

- Commercialize our functional hollow particles, and create new businesses
- Secure stable income sources for our local subsidiary in Vietnam, and implement growth investment in the Southeast Asia region

## Efforts to Address Social Issues

- Stable provision of mineral resource products
- Further contributions to a recycling-based society
- Provision of environmentally sound products

## Relevant SDGs



## Business activities that contribute to sustainable development and expanding them overseas

The core of our Mineral Resources Business is the manufacture and sale of mineral products such as limestone and silica, which are raw materials for cement, and we have also been steadily expanding into overseas markets, particularly in Asia, by fully leveraging the know-how we have accumulated in Japan. We have dispatched representatives to China, Thailand and Vietnam, which are experiencing remarkable economic development, to continue activities from conducting market trend research to cultivating relationships with influential partners for the commercialization of our products. Local subsidiaries have been established in areas that have been found to have business potential.

One example of our success to date is the sale of high specific gravity aggregates for construction equipment counterweights in China and Thailand, which has been ongoing for more than ten years. We are also constantly reconfiguring our business portfolio. An example of the Mineral Resources Business' overseas trading is the sale of limestone to South Korea. We are supplying limestone to Korea from a source secured by our subsidiary in Vietnam in order to meet the strong demand. In Vietnam, the market for gypsum board is growing, and although natural gypsum from Thailand has been used in the past, prices have soared in recent years due to high ocean freight rates. So, we have begun importing natural gypsum from Laos as an alternative source. Furthermore, in collaboration with local subsidiaries under the jurisdiction of the overseas cement business, the domestic cement business and the Central Research Laboratory, we are preparing a soil improving material business that effectively utilizes blast furnace slag generated from local steel mills, and plan to develop this business in southern Vietnam where soft ground is common.

In the future, we plan to utilize to the utmost the business know-how and human networks we have accumulated in various overseas locations to expand our business related to the cement business in Indonesia, where synergies from the capital and business alliance will be fully realized, in addition to existing overseas cement business operations in Singapore, the Philippines and other countries.



Mekong Delta Development Status (Vietnam)

# Environmental Business



Managing Executive Officer  
**Shinji Fukami**

**Contributing to the delivery of carbon neutrality by deepening the circular economy, which balances social and economic values.**

Our core business is recycling waste and by-products generated at thermal power stations, steelmakers and chemicals manufacturers, as well as recycling materials such as municipal waste, incineration ash and sewage sludge at the request of municipalities. In recent years we have also been developing the aquatics business via products such as water purification materials, which also contributes to the creation of a recycling-based society.

One of the changes in the circumstances environment surrounding this business is that actions to reduce greenhouse gases is accelerating. Our group has established a roadmap that includes the development of innovative technologies, with the goal of carbon neutrality by 2050, and the entire company is working together to achieve this goal. We believe that the role of our business for the time being is to enhance our waste collection in order to expand the use of alternative energy sources. It is also necessary for us to take on the challenge of new businesses and we have been working on the recycling of lithium-ion batteries (LIB), which until now have been considered difficult to process, the establishment of low-temperature embrittlement technology, and the development of technologies to recover precious metals from incineration residues from municipal waste and phosphorus from wastewater, which will contribute to resource recycling. We believe that if we can grow these businesses into pillars of our operations, they will naturally contribute to the deepening of the circular economy and the achievement of our group's carbon neutrality in a way that has economic value.

Although the COVID-19 pandemic had some impact in reducing the amount of waste and by-products generated, there was no significant change in the operations of domestic thermal power plants. Waste recycling businesses for thermal power plants remained strong, including the sale of calcium carbonate for desulfurization and the collection of waste gypsum and coal ash. As a result of the above, net sales were 72.3 billion yen (a decrease of 5.7 billion yen on the previous fiscal year) and operating income was 6.6 billion yen (an increase of 200 million yen on the previous fiscal year). On the other hand, we have established "low-temperature embrittlement" technology that easily separates plastics from metals by improving the friability of automobile shredder residue, which we have been working on for some time.

## 23 Medium-Term Management Plan Strategies

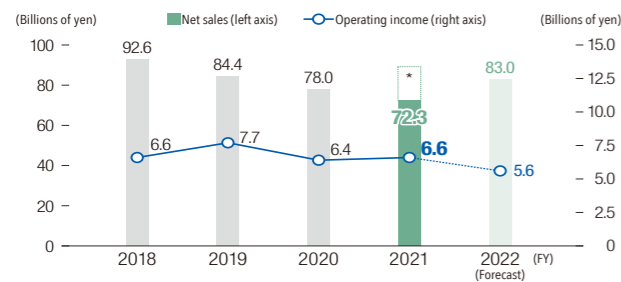
- **Initiatives toward carbon neutrality**
  - Maximize our waste treatment business and develop new businesses
- **Enhance our earnings base**
  - Establish a new model for recycling resources with the cement industry at its core
  - Implement large-scale initiatives and create new business models

Net sales*		Operating income	
FY2021 Results	FY2024 Plan	FY2021 Results	FY2024 Plan
78 billion yen	82 billion yen	6.4 billion yen	8.5 billion yen

\* Since we have adopted the Accounting Standard for Revenue Recognition (ASBJ Standard No. 29) etc. from FY2022, the net sales in the FY2024 plan show the amount after adoption of the new standard. (The adoption of the new standard has a negative impact of -16 billion yen.)

## FY2022 Achievements

### Net Sales and Operating Income



\* Of the 5.7 billion yen increase in net sales for FY2022, 16.9 billion yen is due to the application of the above-mentioned Accounting Standard for Revenue Recognition.

## Key Strategies for FY2023

### 1. Maximize our waste treatment business and develop new businesses

- Increase and expand treatment of alternative energy such as waste plastic
- Expand raw material substitutes by the removal of harmful elements
- Recovery of precious and rare metals (resource complex initiatives)

### 2. Establish a new model for a recycling-based society with the cement industry at its core

- Expand the LIB recycling business
- Expand sales of biomass fuel, enhance alliances with other companies and explore M&A opportunities

## Efforts to Address Social Issues

- Further contributions to a recycling-based society
- Building a carbon neutral business
- Provision of environmentally sound products and solutions

## Relevant SDGs

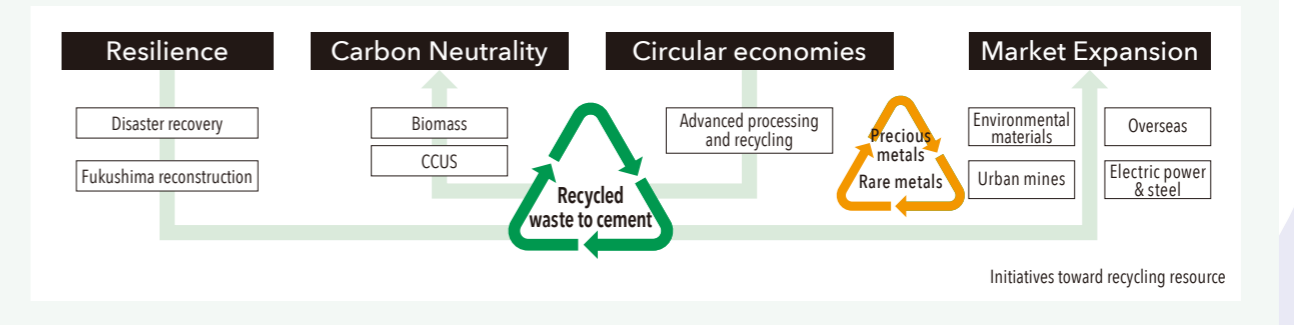


## Resource recycling initiative that deepened collaboration between industries (challenging new value creation)

Utilizing waste and by-products as raw materials and heat energy for cement production at cement plants whilst upholding cement quality plays an important role in extending the life of landfill sites. The amount of waste and by-products used per tonne of cement has reached more than 400 kg, totaling about 6.2 million tonnes per year.

In addition to this established role, the future promotion of the Environmental Business requires the activation of diverse resource recycling, including CO<sub>2</sub> reduction and carbon neutrality in the industrial value chain. We are furthering these efforts and developing them into four different approaches according to social needs: resilience, market expansion, circular economies and carbon neutrality.

Regarding "resilience", the convenience and importance of the cement industry's recycling technology is known by society, leading to comprehensive partnership agreements with local governments and the establishment of a system for rapid disaster recovery support. In terms of "market expansion", we are developing markets for each use type of application, such as dairy farming and fisheries, for environmental materials such as Ceraclean, a water purification material, and are also expanding into Southeast Asia. Regarding "circular economies", as we possess technologies for utilizing automobile-related waste, which until now has been difficult to process, and for concentrating, separating and recovering metal resources contained in waste and byproducts that has been applied to the cement production process, we are also progressing the advancement of resource recycling by matching our technologies with those of other industries. In terms of "carbon neutrality", we are exploring commercial opportunities for innovative CCUS technologies.



# Construction Materials Business



Managing Executive Officer  
**Masaki Takahashi**

Aiming to achieve appropriate profits, develop new products and construction methods that contribute to reducing labor demand, and expand our business domain overseas.

The Construction Materials Business consists of the construction materials business, which manufactures and sells products including premix products, admixtures, repair materials, construction and civil engineering materials, ALC (autoclaved lightweight concrete) and paving blocks, and the construction and civil engineering business which is involved in ground improvement projects, sales of materials for shield tunnels, and renovation and reinforcement work for concrete structures.

The COVID-19 pandemic has led to serious labor shortages at construction sites, and demand for building materials products has been sluggish. In addition, as cement prices have been largely revised against the backdrop of soaring coal prices, we are working on the prompt and appropriate passing on of costs as a top priority for the building materials products that use cement as a main raw material and for construction and civil engineering projects. In response to the decrease in demand due to labor shortages at construction sites, we will turn it into a business opportunity by further demonstrating the group's total strength through complementing the technologies and know-how within the group, jointly procuring raw materials and by-products, and sharing human resources, and by developing new products and new construction methods that contribute to reducing labor demand. While we expect the domestic construction market to inevitably decline by a certain amount due to factors such as population decline, there are many regions, including Southeast Asia, where the market is expanding. We are also working to expand our business domain, such as the development of a local ground improvement business that is already under consideration and should benefit from the capital and business alliance with the SI Group.

## 23 Medium-Term Management Plan Strategies

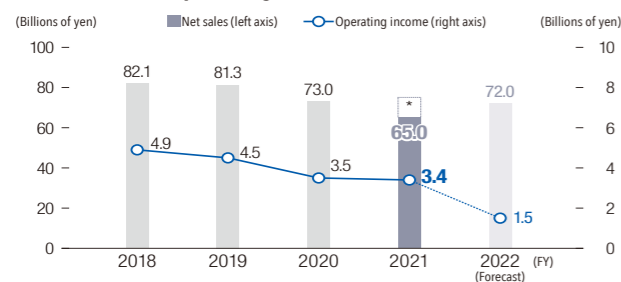
- **Enhance our earnings base**
  - Improve business profits via product differentiation and greater competitiveness
  - Accelerate the construction of a group structure toward business expansion into the Southeast Asian market
- **Initiatives toward carbon neutrality**
  - Enhance initiatives to reduce the environmental impact of the entire Construction Materials Business
  - Develop new products and businesses leveraging existing technologies and value chains

Net sales*		Operating income	
FY2021 Results	FY2024 Plan	FY2021 Results	FY2024 Plan
73 billion yen	75 billion yen	3.5 billion yen	6.6 billion yen

\* Since we have adopted the Accounting Standard for Revenue Recognition (ASBJ Standard No. 29) from FY2022, the net sales in the FY2024 plan show the amount after adoption of the new standard. (The adoption of the new standard has a negative impact of -10 billion yen.)

## FY2022 Achievements

### Net Sales and Operating Income



\* Of the 7.9 billion yen increase in net sales for FY2022, 10.1 billion yen is due to the application of the above-mentioned Accounting Standard for Revenue Recognition.

In the construction materials business, sales of ALC and other building materials were sluggish due to delays and postponements of construction projects caused by factors including new waves of COVID-19, as well as cooling private investment. In the construction and civil engineering business, sales of materials for shield tunneling also remained sluggish, while ground improvement projects were strong due to a recovery trend. As a result of the above, net sales were 65 billion yen (a decrease of 7.9 billion yen on the previous fiscal year) and operating income was 3.4 billion yen (a decrease of 70 million yen on the previous fiscal year).

Under these business circumstances we are tackling capital investment and, as a priority issue, the development of new construction methods to reduce labor demand at construction and manufacturing sites. Taiheiyo Materials Corporation has begun marketing "AIR SHOT ONE", a dry spraying method that reduces environmental impact and dust, and the "Slab Guard Method", a method of thickening the thin top surface layer of bridge slabs. This method enables reinforcement of the bridge slab in thinner layers, due to its ultra-high strength of 90 N/mm<sup>2</sup>.

## Key Strategies for FY2023

- 1. Boost the earnings capacity of existing businesses**
  - Enhance profitability through product differentiation and steady cost shifting
  - Implement capital investment to boost production efficiency
- 2. Respond to the labor shortage and aging workforce issues affecting construction sites**
  - Develop products and methods that reduce labor demand
  - Secure stable transportation and construction capabilities
  - Seek to optimize our supply system by expanding collaborations with OEMs etc.
- 3. Expand into new business domains**
  - Open up new business areas that can create synergies
  - Develop new products leveraging technologies and value chains possessed by group companies
  - Construct a group system with a view to business expansion into the burgeoning Southeast Asian market

## Efforts to Address Social Issues

- Provision of environmentally sound products and technical services.
- Provision of products that reduce labor demand

## Relevant SDGs



## Providing solutions for reducing labor demand and contributing to the establishment of innovative CCUS technologies

In the Construction Materials Business, we utilize our cement and concrete technologies to create structural components for buildings and civil engineering work from below ground to above, contributing to the creation of comfortable living space and infrastructure for safe living.

Our construction materials business manufactures pre-mixed mortar products (bagged products containing the appropriate mixture of cement, sand, and other materials and can be used simply by mixing with water) and concrete admixtures that improve the functionality of a wide range of structures, from stand-alone houses to roads, bridges and tunnels. Familiar examples include our production and sale of ALC used as wall material for housing, stores and factories, as well as paving blocks.

Our construction and civil engineering business is involved in ground improvement projects to improve soft ground using cement-based soil stabilizers and other materials so that it can be used as a foundation for structures, renovation work for concrete structures such as water and sewage facilities, and seismic reinforcement work. In addition, our group companies complement each other in human resources and technology across the group and utilize our own nationwide network to respond quickly and appropriately to increasingly diverse and sophisticated on-site needs. Furthermore, in response to the labor shortages that are becoming more pronounced on construction sites, we are actively proposing solutions to reduce labor demand by combining materials and construction methods, and introducing IoT into construction machinery.

Delivering carbon neutrality is one of our group's greatest business challenges, but we are already cooperating in the research and development of CCUS technology, which captures CO<sub>2</sub> generated in the cement manufacturing process and uses it in the manufacturing process of concrete products, as one of the themes for our research and development of innovative technologies. The expectations on the role of the group companies in the construction materials business in terms of CO<sub>2</sub> utilization are high, and by making steady progress we are contributing towards carbon neutrality.



Construction management utilizing IoT (Onoda Chemo Co.)

# Research and Development



Managing Executive Officer  
**Takayoshi Okamura**

## Key Strategies for FY2023

- 1 Carbon neutrality**
  - Maximize use of fossil fuel substitutes and low-carbon cement
  - Innovative cement production processes
- 2 Refine infrastructure technologies and expand overseas**
  - Cement: Quality, processes and cost reductions
  - Stabilizer/Insolubilizing agent: Enhance functionality and expand applications
  - Concrete: Enhance functionality and expand applications
- 3 Evolve recycling technologies**
  - Develop combustion and de-chlorination technologies
  - Coal ash and slag substitutes, alkali reduction
  - Chromium removal and precious metal recovery
- 4 Innovative materials**
  - Functional materials
  - Resource-recycling calcium carbonate concrete
- 5 Future-oriented technologies**
  - Utilization of AI and the IoT to boost productivity and reduce labor demand
  - Integrated system to control kilns and predict quality

## Contributing to sustainable development by our outstanding research and development capabilities.

### Q: Could you provide an overview of the Research and Development Department?

In the Research and Development Department, the Central Research Laboratory, the Intellectual Property Department, and the Carbon Neutral Technology Development Project Team continue to work in unison. With the group's sustainable development in mind, the solution of social issues is considered an important role of the Research and Development Department. Today, carbon neutrality is of paramount importance to the cement industry.

Meanwhile, circular economies also continue to be an important theme for the cement industry. The cement industry has been developing resource recycling businesses since the 1990s, and we intend to take this a step further and progress research and development from the perspective of contributing to sustainable development on a global scale toward meeting the SDGs.

### Q: What are strengths of the Research and Development?

The priority issue of the Research and Development Our greatest advantage is the advanced platform technology relating to manufacturing processes of our core products, cement and concrete. We have accumulated technologies and knowledge to produce cement of consistently high quality through properly

grinding limestone whose qualities are different depending on each quarry and utilizing waste and by-products as raw material and fuel. We intend to continue contributing to society and industry through the development of technology that meets new needs.

### Q: What is the progress on the key strategies and future developments?

Regarding carbon neutrality, which is one of our key strategies for FY2023, we have focused on the development of CO<sub>2</sub>-cured concrete, which improves strength by absorbing and solidifying CO<sub>2</sub>. We have already completed the registration of the trademark "CARBOFIX" and have positioned it as a key technology in our group's "Carbon Neutral Strategy 2050."

In terms of Research and Development, we are conducting numerous joint research projects with universities and research institutions, and we are actively promoting open innovation and cross-industry collaboration aimed towards creating new value. We are also a member of the Global Cement and Concrete Association (GCCA), in which the world's major cement companies also participate, and have developed a method for calculating the amount of CO<sub>2</sub> absorbed by concrete throughout its life cycle, and are working toward implementation and certification by an international evaluation organization. We will continue to develop technologies that contribute to the group's sustainable growth.

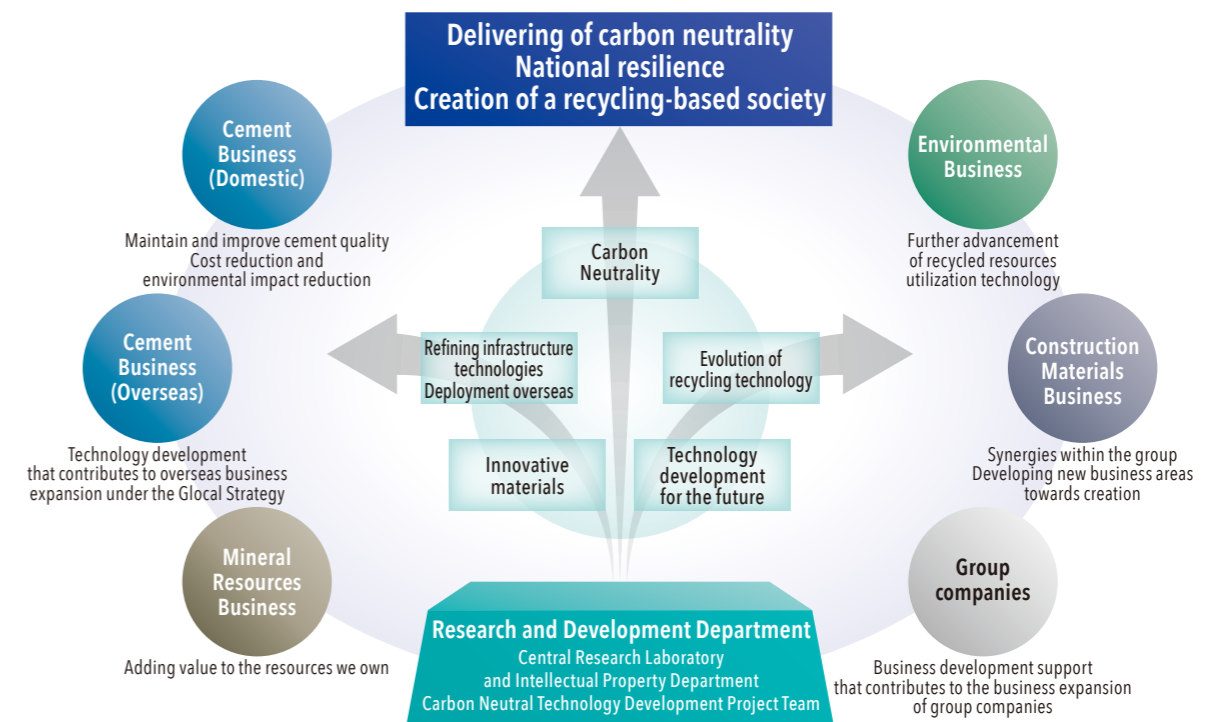
## Role of the Research and Development Department

Research and Development is contributing to the resolution of social issues such as national resilience, building a recycling-based society and delivering carbon neutrality, and on R&D strategies to contribute to the group's sustainable growth.

In particular, establishing innovative technologies that will be implemented in society to deliver carbon neutrality is a top priority challenge that will impact the future of the cement industry. We will also seek to further refine our infrastructure technologies so that we can maintain and develop "Taiheiyo quality" while responding to the changes in various business environments, and can supply high-quality products and advanced solutions. Contributing to the creation of circular economies is another important role we play, and further enhancing our technologies for utilizing recycled resources

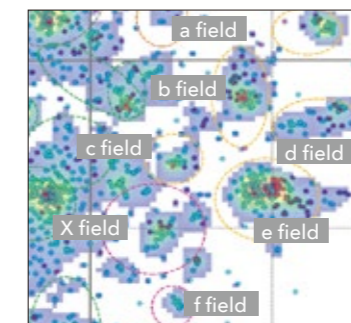
is a key challenge. We also position the following as key future-oriented challenges: the enhancement of innovative technologies that will lead to new generation of profits, the boosting of productivity via AI and the IoT, and the development of technologies for reducing labor demand.

Regarding these five key strategies, we will organically collaborate and operate with each business division in the domestic and overseas Cement Businesses, the Mineral Resources Business, the Environmental Business and group companies, and together with the Carbon Neutral Technology Development Project Team and the Intellectual Property Department we will support the group's aim of "becoming an outstanding leading company" with our technological capabilities.

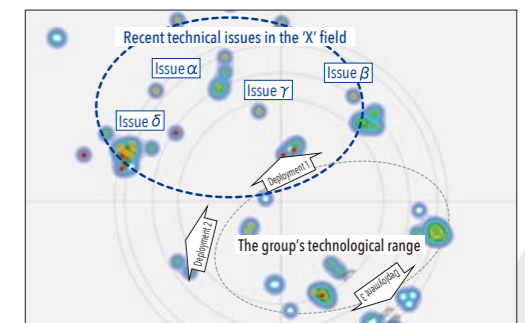


## Promote information analysis activities centered on intellectual property

We actively incorporate the results of our bird's-eye analysis of various data centered around patent information into our research and development activities to stimulate value creation activities, such as the deployment of developed technologies to new applications and the search for new technological fields. These IP landscape activities are also being deployed to group companies and effectively used to examine themes for technological development.



Example of our Group's core technology map



Example of a study of the direction of technological development in the 'X' field

# Message from the officer in charge of finance



Director and Senior Executive Officer  
**Hideaki Asakura**

**Aiming to implement investment for growth and strengthening plant facilities and quarry development while maintaining financial soundness.**

## Progress of Improving Financial Structure

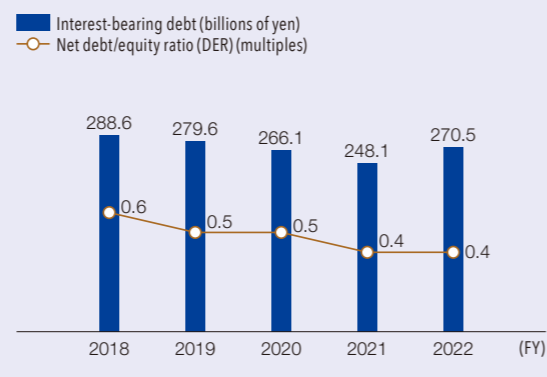
Our group was formed through a merger in October 1998, and at that time the financial structure was fragile, with both net sales and interest-bearing debt each close to 1 trillion yen. After the merger, we proceeded with the consolidation of unprofitable group companies and the sale of idle assets, but also faced drastic change in the business environment as the domestic demand for cement, which was over 70 million tonnes at the time of the merger, fell by more than 10 million tonnes in 10 years, followed by a fall of 7 million tonnes in just one year in FY2010. In response, in FY2011 we took decisive business restructuring measures centered on reducing cement production capacity by 5.6 million tonnes. This has enabled us to improve profitability by 16 billion yen per year, and with the subsequent demand for reconstruction from the Great East Japan Earthquake, profitability has increased to the point of recording more than 60 billion yen in operating income for eight consecutive fiscal years from FY2014 to FY2021. In 2018, we gained an "A" rating for our financial structure from issuer ratings, and by the end of FY2021, the final year of our 20 Medium-Term Management Plan, we have improved our equity ratio to over 45% and net debt/equity ratio (DER) to 0.4x.

As we continue to push forward with the improvement of our financial structure, under the 17 Medium-Term Management Plan (the three-year plan for FY2016-2018), we pursued a policy "to become a corporate group that progresses on a growth path", and have changed direction towards growth investments, including the acquisition of a cement plant (Oro Grande Plant) in our U.S. Cement Business, the start of a biomass power generation business, and making a cement production subsidiary a wholly owned subsidiary. Under the 20 Medium-Term Management Plan, we made investments that contributed to strategic business expansion, such as investment in the SI

Group and renovation work on TCPI's production lines. While we will continue to invest in growth under the 23 Medium-Term Management Plan, we also plan to make new investments over the next 10 years in research and development to deliver carbon neutrality and to enhance our domestic business.

The success of our group's sustainable development depends on our ability to steadily implement both robust offensive investments under our growth strategy and defensive investments for enhancing, and we will provide steady support through the financial strategies in the 23 Medium-Term Management Plan.

### Interest-bearing debt and net debt/equity ratio (DER)



## Financial Strategies in the 23 Medium Term Management Plan

### Implement investments for growth and enhancing the foundations of our domestic business

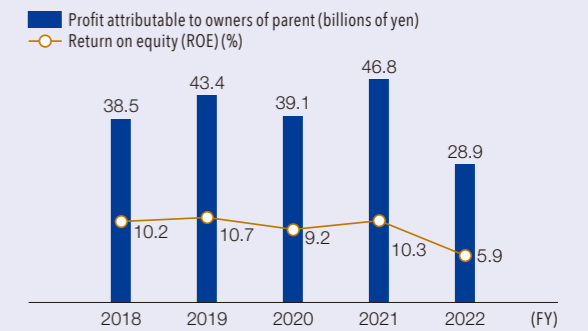
The 23 Medium-Term Management Plan sets management

targets of an operating income on net sales of 11% or more and return on equity of 10% or more. While return on assets (ROA) was used as a management indicator in the previous Medium-Term Management Plans, because we have secured a certain degree of soundness in our financial structure at the end of the 20 Medium-Term Management Plan, we have introduced ROE to clarify our target of maximizing corporate value while maintaining financial soundness. The target of 10% or more is management's intention to achieve an increase in corporate value for our stakeholders that exceeds our cost of capital of about 8%. In order to achieve this, we will monitor the profitability of existing businesses and carefully select and manage growth investments from the perspective of whether they will drive the group's profitability in the future.

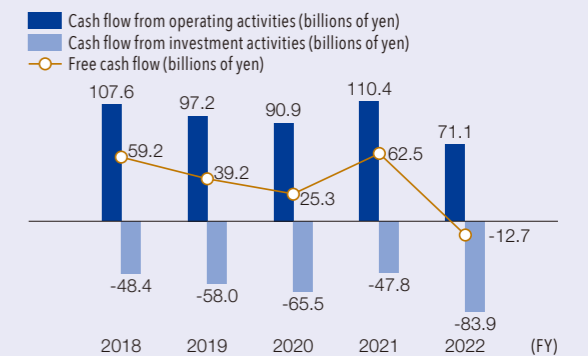
In addition, in order to enhance our business foundation to support sustainable growth, we plan to invest a total of 300 billion yen over the 10 years from FY2022 to FY2031, which includes the period of the 23 Medium-Term Management Plan, with 100 billion yen invested in each of (1) initiatives to deliver carbon neutrality, (2) strengthening plant facilities, and (3) quarry development. During the period of the 23 Medium-Term Management Plan alone, we will invest 120 billion yen in growth investments and 160 billion yen to enhance our business foundation, while maintaining a net debt/equity ratio (DER) of around 0.4x. In order to execute large investments without increasing interest-bearing debt, we will focus upon cash flow from operating activities, which is earned from our core businesses, as the source of funds for investment. In addition to monitoring the steady creation of cash flow from operating activities to ensure that investment opportunities are not lost due to insufficient funds, we will strive to maintain and improve the soundness of our financial structure by furthering our group financing centered on our financial subsidiary and enhancing capital efficiency. However, the present funding situation has been affected by a significant decrease in cash flow from operating activities due to the deteriorating profitability of our core domestic cement business caused by soaring coal prices and other factors, and more stakeholders are questioning the need to revise our investment plans and net debt/equity ratio (DER) targets. Although we expect that temporary deterioration of the net debt/equity ratio (DER) target is unavoidable due to working capital borrowings and other factors, we need to quickly restore cash flow from operating activities in order to avoid a major revision of our 10-year investment plan. Therefore, we have decided to revise our prices for cement and cement-based soil stabilizers again for shipments from October 2022, in the form of a "coal price surcharge method" or a "fixed price revision method" as selected by the purchaser.

We are also considering the use of transition financing and other financing methods towards carbon neutrality. We believe that by utilizing these resources we will be able to further accelerate our technological development and gain widespread recognition of our group's efforts.

### Profit Attributable to Owners of Parent and Return on Equity (ROE)



### Cash flow



## Shareholder Returns Policy

Under the 23 Medium-Term Management Plan, we plan to pay stable and continuous dividends while flexibly implementing the purchase of treasury shares in a timely manner to improve capital efficiency, aiming for a total return ratio of 33% (three-year average). While steadily progressing investments such as in enhancing and also shareholder returns, we are also striving to maintain and improve our financial soundness, with a target of maintaining a net debt/equity ratio (DER) of around 0.4x.

## Communication with our stakeholders

Regarding communication with institutional investors and our other stakeholders, in addition to financial information such as financial results and forecasts, each year we are also increasing the dialogue on non-financial information such as ESG and SDGs initiatives. In FY2022 we conducted a total of more than 170 individual investor meetings. Opinions and suggestions received through investor meetings are reported to management in a timely manner. In the future, we will expand communication by increasing opportunities for direct dialogue between management and our stakeholders.

# Sustainability Management

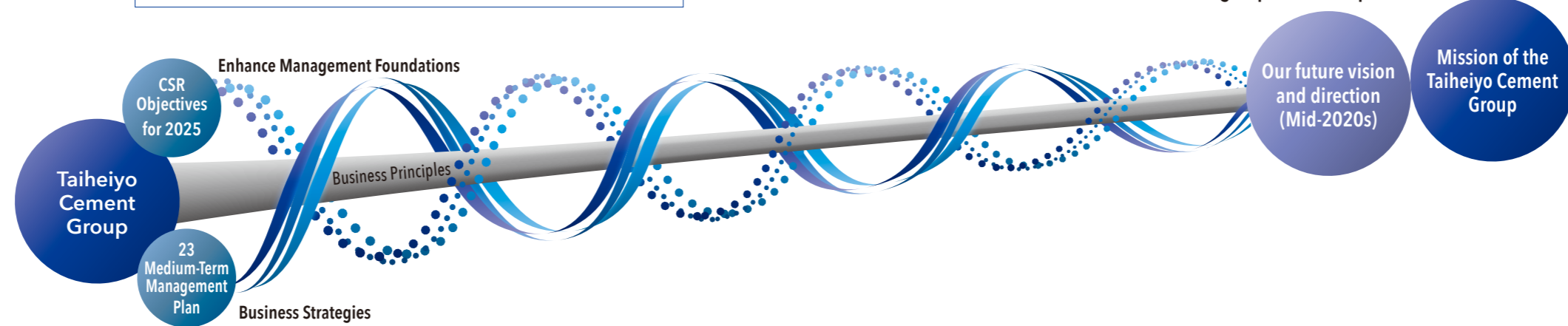
## Corporate Framework for CSR

The Taiheiyo Cement Group Mission was formulated in 2002 as the highest level concept and guiding principle of our business activities. Our Business Principles present more detailed guidelines for action based on the Mission.

The vision and direction targeting the mid-2020s have been established as our vision for the future, based on the Mission. They present the group's values and orientation in qualitative terms.

The Medium-Term Management Plan sets forth our management strategy and targets for the next three years, while the CSR Objectives for 2025 are medium-term, quantitative CSR targets. Based on these two sets of quantitative targets, we aim to achieve our Future Vision and Direction.

To become an enterprise group that provides a sense of safety and security to societies in the Pacific Rim by demonstrating the group's overall capabilities.



### Basic Policy for Promoting CSR Management

- 1 Based on our Mission and Business Principles, the company will clarify the ideal form of CSR management to be pursued and strive to advance operations based on CSR.
- 2 Promoting a corporate culture that places great importance on compliance, we aspire for all directors and all employees to always make the most appropriate autonomous decisions.
- 3 We will manage the company in the awareness that our social mission includes protecting the environment, defending human rights and contributing to communities.
- 4 We will proactively engage with key CSR issues and undertake the most appropriate prioritization and resource allocation.
- 5 We will practice appropriate information disclosure and communication with stakeholders, based on the state of our CSR management, and build relationships of trust.
- 6 We will treat the promotion of CSR management as a group-wide activity.

### CSR Objectives for 2025

1. **Prevention of accidents**  
- Zero fatalities
2. **Reduction of greenhouse gas emissions**  
- Reduce specific net CO<sub>2</sub> emissions by at least 10% or more (compared with FY2001)
3. **Diversity**  
- Ratio of female recruits: At least 30%  
- Ratio of female employees: At least 10%  
- Ratio of newly appointed female managers: At least 10%



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# ENVIRONMENT

## Environmentally-Conscious Management

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# Environmentally-Conscious Management

We are working to improve our environmental performance by formulating strategies across the company and proactively working to solve problems based on our Environmental Management Policy.

## Environmental Management System

### Approach

Our environmental management policy declares an active commitment to environmental issues facing society, including not only preventing environmental pollution but also creating a recycling-based society, mitigating climate change, reducing environmental impacts, protecting water resources and conserving biodiversity as key management challenges. Under this policy we are focusing on improving our environmental performance.

### Environmental Management Policy

In January 2006 we formulated our Environmental Management Policy, reflecting the fact that we consider an active commitment to the environmental issues facing society to be key management challenges. In addition to initiatives emphasizing the six items in all business operations, we strive to communicate with a wide range of stakeholders, from international society to local communities, and to seek the ideal form for a sustainable cement industry as a member of the WBCSD and GCCA (Global Cement and Concrete Association).

Formulated in January 2006  
Revised in April 2019

- Pursuing Environmentally Conscious Business Activities**  
In pursuit of reducing environmental impacts, we properly assess the impacts of our business activities and promote the introduction of eco-efficient technologies into our business and the development of eco-conscious products. Also, we pursue environmental conservation activities as a member of the regional community.
- Compliance with Environmental Laws and Regulations**  
As a minimum, we comply with all environmental laws and regulations applicable to our business activities. Furthermore, beyond compliance, we meet environmental commitments undertaken through voluntary agreements.
- Contributing to a Recycling-based Society**  
Leveraging the inherent capabilities of the cement industry, we actively recycle industrial and municipal waste as raw materials and fuels for cement production.
- Proactively Addressing the Issue of Climate Change**  
We promote greater energy reduction throughout the whole of our business activities and strive to develop technology to help reduce society's total greenhouse gas emissions.
- Promoting Global Technology Transfer**  
Through the worldwide transfer and deployment of our technology, we aid the development of greater energy conservation, environmental preservation and utilization of waste materials.
- Ecosystem Conservation**  
We strive to protect the ecosystem, including biodiversity, by providing products and technologies that contribute to harmonious coexistence with nature.

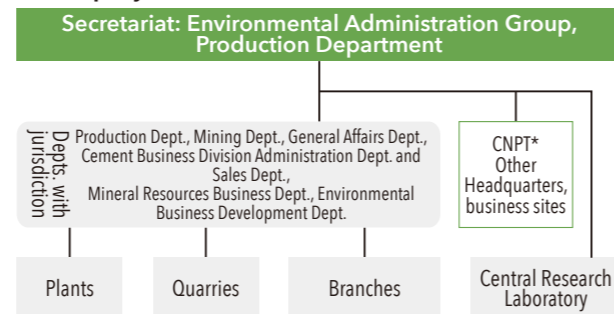
## Environmental Management System and Company-wide Environmental Management

We have established an Environmental Management Committee chaired by the officer in charge of the Production Department as one of the specialized committees under the CSR Management Committee, which reports directly to the Board of Directors, to promote environmental management and implement the EMS.

### Company-wide EMS Readiness

In June 1997 we initiated ISO 14001 certification of each of our plants and attained certification of all six of our directly operated plants by 1999. Recognizing, however, that plant level management systems alone are insufficient to ensure comprehensive environmental protection through environmental management projects, we built a company-wide environmental management system (EMS) and extended it beyond plants to cover our headquarters, branches and Central Research Laboratory. In April 2009, we established a company-wide EMS that extends the scope of application not only to plants but also to the head office, branch offices, and central research laboratory, and received ISO 14001 certification registration from the Japan Testing Center for Construction Materials. As part of the continuing certification, the company-wide system underwent a renewal audit for the fourth time in March 2021.

### Company-wide EMS Readiness



\* The Carbon Neutral Technology Development Project Team

### Taiheiyo Cement Group Environmental Targets

**CO<sub>2</sub> Emission Reduction Targets**

Cement production-related CO<sub>2</sub> emissions from Taiheiyo Cement and group companies

**Reduce specific net CO<sub>2</sub> emissions by 10% or more from FY2001 levels by FY2026. CSR Objectives for 2025**

**Reduction Target for Main Air Pollutants**

Emissions of NO<sub>x</sub>, SO<sub>x</sub> and dust from the main stacks of kilns at the cement production sites of Taiheiyo Cement and group companies

**Limit NO<sub>x</sub>, SO<sub>x</sub> and dust levels per tonne of clinker (g/t-clinker) to the target levels achieved in FY2011**

All of our cement plants in Japan, including those of group companies, have obtained ISO 14001 certification. Furthermore, all of our overseas cement plants in countries that adopt ISO have obtained ISO 14001 certification and are actively committed to environmental conservation. Cement plants in countries where ISO is not adopted as the mainstream standard operate their own EMS.

### Internal Environmental Audits

We conducted internal environmental audits at all our sites in FY2022.

As priority items from this year's audit, confirmation of legal compliance reviews, external communications and corrective actions for unachieved items were identified as company-wide concerns. The status of a follow-up, including corrective and preventive actions for nonconformity with environmental requirements, and the status of responses to emergencies were identified as items that plants must deal with. Verifying the compliance status of service stations was identified as an item that must be dealt with by branches.

The audit identified 34 findings, including 3 for which improvements were requested. Corrective actions were taken for all 3 findings for which improvements were requested.

### Environmental Education

During Environment Month each June we deliver a message from the president and provide educational materials on the environment page of our portal site to increase awareness and encourage learning about the environment, and about environmental preservation activities throughout the group. Each workplace also engages in a number of different activities, such as conducting training sessions related to accident response, viewing environment-related videos, holding lectures and taking part in local cleanup activities. In FY2022, more than 400 activities took place, including group companies' activities.



Training to respond to environmental accidents (Kumagaya Plant)

## Compliance with Environmental Laws

► GRI307-1

### Environmental Accidents

In FY2022, there was an explosion at the on-site power generation facility at our Saitama Plant. This resulted in buildings and vehicles being damaged and dirtied from debris, and flying debris caused damage to farmland. In response to the accident, an accident investigation committee, including external experts, was established to investigate the cause of the accident and take measures to prevent its recurrence.

We also had two minor accidents and have taken measures to prevent their recurrence.

### Response to Environmental Accidents

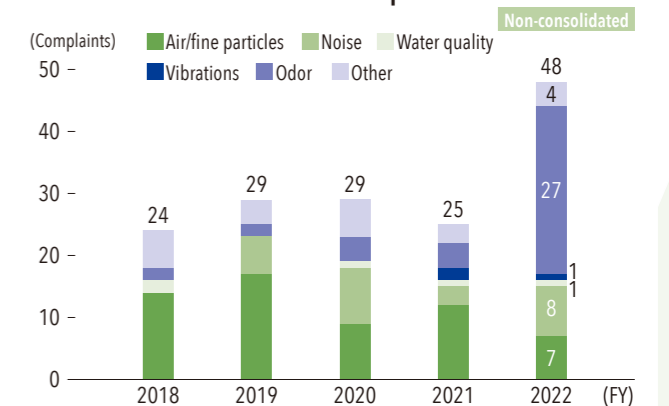
Each plant maintains emergency response plans in preparation for possible environmental accidents. They also conduct periodic fire-fighting drills in cooperation with local fire departments. Other training includes how to reduce environmental impact when an environmental accident occurs, and how to report it to a government entity.

### Environmental Complaints

As we increasingly utilize ever more diverse forms of waste and by-products the number of environmental issues we need to consider also increases. Therefore, we are ramping up our efforts to reduce environmental impact through activities such as introducing indoor storage and sealed containers for waste and by-products, and improving our flue gas stacks. On receiving an environmental complaint, whenever possible we quickly travel to the site in question to check the situation, investigate the cause and provide an explanation. If we find that our activities are the cause we implement improvements.

In FY2022, our cement plants received 148 environmental complaints, including those from outside sources. We responded to 48 of these, which were associated with our operations. Odor complaints have increased compared to pre-FY2021 levels, but we are appropriately addressing them.

### Number of Environmental Complaints Received





### Mitigating Climate Change

#### Approach

A significant amount of CO<sub>2</sub> is generated during cement production. This is because the production process requires a high temperature of 1,450°C and limestone, used as a raw material, is decarbonated through a chemical reaction during the calcination process (CaCO<sub>3</sub> → CaO + CO<sub>2</sub>). Therefore, we have set CO<sub>2</sub> emission reduction targets and are working to achieve them.

#### Greenhouse Gas Emissions and Reduction Targets

▶ GRI102-11, 302-3, 305-1, 2, 4, 5

92%\* of the total greenhouse gas emissions associated with the operations of our group companies are directly associated with cement production. In 2015, we therefore set in the CSR Objectives for 2025 a target of reducing specific net CO<sub>2</sub> emissions by 10% or more from FY2001 levels, and in March 2022, we announced "2030 Interim Targets" towards carbon neutrality, and set targets of reducing emissions intensity by 20% or more throughout the supply chain and reducing total (domestic) CO<sub>2</sub> emissions by 40% or more (each compared to 2000).

Regarding the CSR Objectives for 2025, our specific net CO<sub>2</sub> emissions for FY2022 were 675 kg of CO<sub>2</sub> per tonne of

cementitious product, the same as in FY2021 and an 8.3% reduction compared to FY2001. Regarding the 2030 Interim Targets, our net CO<sub>2</sub> emissions across the entire supply chain for FY2022 were 793 kg of CO<sub>2</sub> per tonne of cementitious product, a 9.6% reduction compared to 2000, and total CO<sub>2</sub> emissions were reduced by 35%. Regarding the CO<sub>2</sub> reduction effect due to the recarbonation of concrete, we are promoting the study of appropriate evaluation methods in collaboration with the GCCA.

\* Calculated from the total greenhouse gas emissions generated by our domestic group companies (excluding power generation companies) that are reporting their greenhouse gas emissions by business segment in accordance with the Act on Promotion of Global Warming Countermeasures.

#### Efforts Related to CO<sub>2</sub> Emissions Reduction in the Cement Production Process

▶ GRI302-1, 3, 4, 305-4, 5

In order to reduce CO<sub>2</sub> emissions, we have been working to conserve energy by installing energy-efficient equipment and improving the stability and efficiency of our kiln operations. We have also been implementing measures such as expanded use of waste- and biomass-derived energy sources to decrease our rate of use of fossil fuels. We are also moving toward using recycled resources with less carbonate content to lower CO<sub>2</sub> emissions from the calcination of limestone. We are moving forward with the adoption of gas engine and waste heat recovery power generation to reduce CO<sub>2</sub> emissions that are ancillary to purchased electricity.

#### Progress in Meeting the CO<sub>2</sub> Reduction Targets in the 2030 Interim Targets and CSR Objectives for 2025

Target (compared to 2000)	Reduction Rate	FY2022 Results
CSR Objectives for 2025 Reduction rate of specific net CO <sub>2</sub> emissions* <sup>1</sup> : <b>10% or more</b>	8.3%	Although the specific heat consumption of clinker production and CO <sub>2</sub> emissions intensity from alternative raw materials for limestone decreased, the result remained the same as FY2021 at 8.3% due to an increase in the ratio of clinker used in cement production.
2030 Interim Targets Reduction rate of specific CO <sub>2</sub> emissions across the supply chain* <sup>2</sup> : <b>20% or more</b>	9.6%	Net CO <sub>2</sub> emissions fell by approximately 5 kg of CO <sub>2</sub> per tonne of cementitious product from FY2021. Thus, the reduction rate improved by 0.6% from the rate of 9.0% in FY2021.
Reduction rate of total (domestic)* CO <sub>2</sub> emissions* <sup>3</sup> : <b>40% or more</b>	35%	

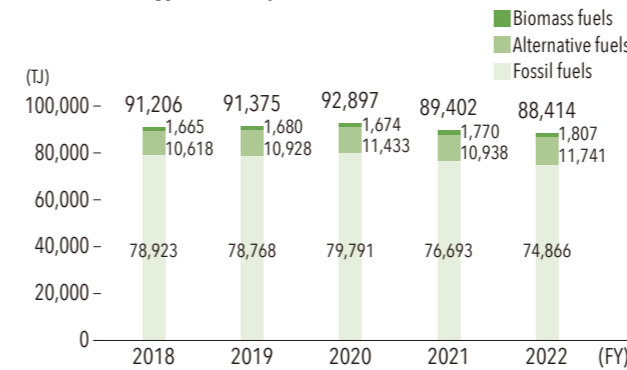
\*1 Scope 1 (excluding alternative fossil energy and CO<sub>2</sub> resulting from on-site power generation)

\*2 Scope 1 (excluding alternative fossil energy)+Scope 2+Scope 3 (Category 1,3)

\*3 Scope 1 (excluding alternative fossil energy)+Scope 2

#### Efforts to Save Energy

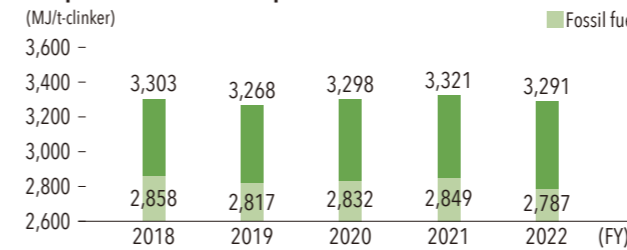
##### Total Energy Consumption for Clinker Production



Reference guidelines: "GCCA Sustainability Guidelines for the monitoring and reporting of CO<sub>2</sub> emissions from cement manufacturing Ver. 0.1" GCCA

Total energy consumption for clinker burning during the group's cement production was 88,414 TJ in FY2022, a 988 TJ decrease from FY2021.

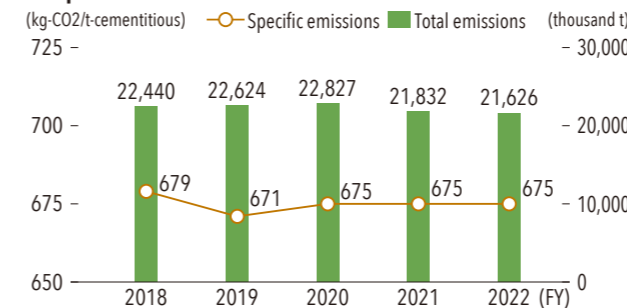
##### Specific Heat Consumption of Clinker Production



Reference guidelines: "GCCA Sustainability Guidelines for the monitoring and reporting of CO<sub>2</sub> emissions from cement manufacturing Ver. 0.1" GCCA

Specific heat consumption of clinker production by the group's cement production in FY2022 was 3,291 MJ/t-clinker, a 30 MJ/t-clinker decrease on the previous year's level.

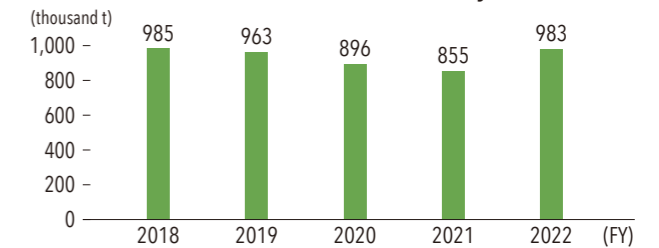
##### Specific Net CO<sub>2</sub> Emissions



Reference guidelines: "GCCA Sustainability Guidelines for the monitoring and reporting of CO<sub>2</sub> emissions from cement manufacturing Ver. 0.1" GCCA

Net CO<sub>2</sub> emissions associated with the group's cement production were 21.626 million tonnes in FY2022, a 206,000 tonne decrease from FY2021. Specific net CO<sub>2</sub> emissions were 675 kg of CO<sub>2</sub> per tonne of cementitious product, the same as in FY2021.

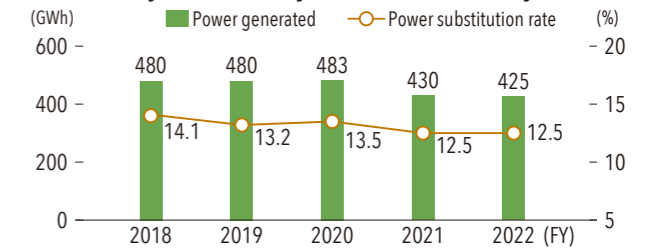
##### CO<sub>2</sub> Emissions from Purchased Electricity



Reference guidelines: "GCCA Sustainability Guidelines for the monitoring and reporting of CO<sub>2</sub> emissions from cement manufacturing Ver. 0.1" GCCA

CO<sub>2</sub> emissions from purchased electricity used in the group's cement production in FY2022 was 983,000 tonnes, a 128,000 tonne increase from FY2021. The increase was due to the impact of higher emission factors in Vietnam and an increase in the amount of electricity purchased by the Saitama Plant.

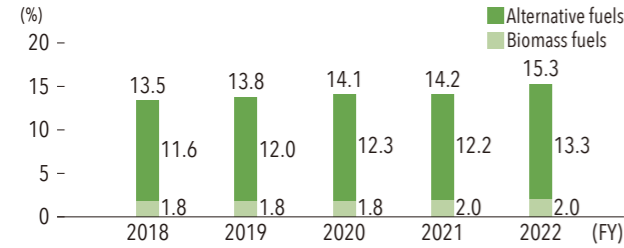
##### Electricity Generated by Waste Heat Recovery



Reference guidelines: "GCCA Sustainability Guidelines for the monitoring and reporting of CO<sub>2</sub> emissions from cement manufacturing Ver. 0.1" GCCA

Waste heat recovery power generation associated with the group's cement production was 425 GWh in FY2022, a roughly 5GWh decrease on FY2021. Its ratio to all electricity consumed at our cement plants was about 12.5%. Assuming an emission factor of 0.69 t-CO<sub>2</sub>/MWh if we were to purchase electric power from an external source, equates to a reduction in CO<sub>2</sub> emissions of approximately 293 thousand tonnes.

● Ratio of Alternative Fuels and Biomass Fuels GCCA

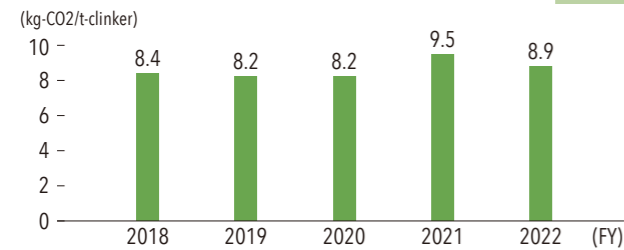


Reference guidelines: "GCCA Sustainability Guidelines for the monitoring and reporting of CO<sub>2</sub> emissions from cement manufacturing Ver. 0.1" GCCA

In FY2022, alternative energy and biomass energy accounted for about 15.3% of energy used in the group's cement production, an increase of 1.1% on FY2021. Assuming an emission factor of 0.096 kg-CO<sub>2</sub>/MJ for coal, our use of alternative energy resources equates to a reduction in CO<sub>2</sub> emissions of approximately 1.3 million tonnes.

Use of Alternative Raw Materials

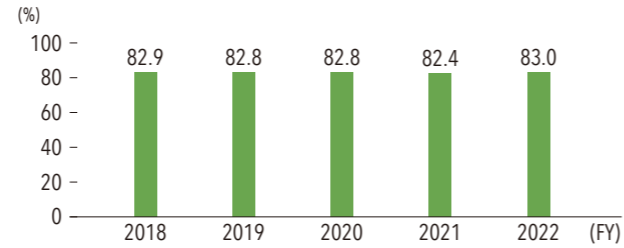
● Reduction of Specific CO<sub>2</sub> Emissions by Replacing Limestone with Alternative Raw Materials GCCA



Reference guidelines: "GCCA Sustainability Guidelines for the monitoring and reporting of CO<sub>2</sub> emissions from cement manufacturing Ver. 0.1" GCCA

Specific CO<sub>2</sub> emissions from alternative raw materials instead of limestone was 8.9kg-CO<sub>2</sub>/t-clinker in FY2022, a decrease of 0.6kg-CO<sub>2</sub>/t-clinker from FY2021. Our use of alternative raw materials equates to a reduction in CO<sub>2</sub> emissions of approximately 240,000 tonnes.

● Ratio of Clinker Used to Cement Produced GCCA



Reference guidelines: "GCCA Sustainability Guidelines for the monitoring and reporting of CO<sub>2</sub> emissions from cement manufacturing Ver. 0.1" GCCA

The ratio of clinker used in the production of cement compared to the amount of cement produced in FY2022 was 83.0%, an increase of 0.6% from FY2021.

Reducing CO<sub>2</sub> Emissions during Transportation GCCA

▶ GRI305-3

We contract the delivery of our raw materials and products to transportation companies and are striving to reduce CO<sub>2</sub> emissions as a specified consigner designated under the Japanese Energy Saving Act. Major efforts include implementing a plan to transport goods on return trips, encouraging drivers to eco-drive, and promoting energy efficient devices such as digital tachometers and eco-tires on vehicles. In shipping, we continue to pursue energy efficiency technologies and operate new ships that are equipped with various energy-saving features. We are also supporting energy-saving operations for conventionally powered ships.

Our FY2022 CO<sub>2</sub> emissions were roughly 3% higher than in FY2021 due to an increase in shipping volume.

● CO<sub>2</sub> Emissions by Mode of Transportation (FY2022) Non-consolidated

Mode of transportation	Tonnage transported (thousand t)	Average Distance Transported (km)	Transported tonne-kilometers (thousand tkm)	CO <sub>2</sub> emissions (thousand t)
Ship	16,574	492	8,160,378	111
Truck	14,234	55	784,294	45
Railway	5,212	26	134,275	3
Total	36,020	252	9,078,947	159

Environmental Accounting

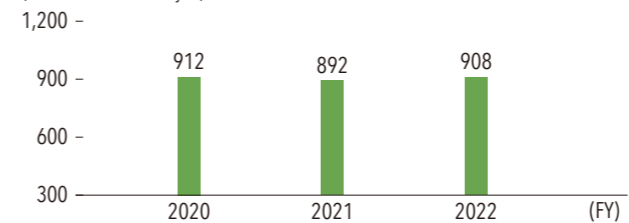
External Economic Benefits Derived from the Recycled-Waste-to-Cement System

We use the external economic benefit (EEB) evaluation method to express, in monetary terms, our evaluation of socioeconomic benefits from environmental impact reduction due to increased recycling of waste accepted from outside the company. We calculate that we created a social benefit of 90.8 billion yen in FY2022. The amount of waste and by-products used in FY2022 increased from the previous fiscal year, leading to an approximate 2% increase in economic benefit on the previous fiscal year.

● External Economic Benefits (FY2022) Non-consolidated

Impact	Inventory	Reduction (t)	Inventory Market Price (Yen/t)	External Economic Benefit (Hundred million yen)
Climate change mitigation	CO <sub>2</sub>	1,896,090	3,000	57
Depletion of energy resources	Crude oil	110,455	18,400	20
Depletion of mineral resources	Natural resources	4,792,457	1,000	48
Shortage of landfills	Waste	5,216,145	15,000	782
Total				908

(Unit: hundred million yen)



Taiheiyo Cement's External Economic Benefit Evaluation

- We have developed a unique evaluation method to estimate the contribution to overall environmental benefit to society by utilizing waste materials from other industries.
- We use information, including data collected for the GCCA Cement CO<sub>2</sub> Protocol, to calculate the reduction in consumption of fossil energy and natural resources associated with the use of waste and by-products.
- Economic benefits are calculated by multiplying reductions in consumption (effects of environmental conservation) by set market prices. The market values of the inventory items are set at FY2001 levels, and are estimated on the basis of the following considerations. CO<sub>2</sub>: 3,000 yen/t (a hypothetical CO<sub>2</sub> emission tax rate). Crude oil: import price. Natural resources: estimated price. Waste: controlled landfill costs in the Tokyo area.
- A portion of the EEB is accounted for in our profit and loss statement.

Environmental Accounting for One of Our Projects - Installation of a Waste Plastic Receiving and Processing Facility for Kilns No. 7 and No. 8 at Kamiiso Plant

▶ GRI201-2

As part of our efforts towards carbon neutrality, we are currently expanding the use of waste plastic as an alternative energy source to coal. As one of the achievements of these efforts, a waste plastic receiving facility and kiln blowing equipment were installed at the Kamiiso Plant's No. 7 and No. 8 kilns at the end of 2021.

We have established a regular container route between the Tokyo metropolitan area and a public wharf near the Kamiiso Plant for the transportation of waste plastics in order to reduce the environmental impact. We aim to further reduce our CO<sub>2</sub> emissions and environmental impact by increasing the amount of waste plastic processed as an energy substitute.

Investment amount: Approx. **1.5 billion yen**

Reduction in CO<sub>2</sub> emissions: **100,074 tons/year**



Kamiiso Plant Waste Plastic Receiving and Processing Facility

## Improving Energy and Resource Efficiency

### Approach

Through our "Recycled-Waste-to-Cement System", which safely reuses large amounts of waste and by-products generated by industrial activities as well as general household waste in the cement manufacturing process, we have links with many industries and local communities and are contributing to the creation of a recycling-based society.

### Resource Recycling with Industries

#### Electric Power Utilities

We accept coal ash produced at coal-fired power plants and use it as a substitute for clay as a raw material in cement. In addition, we operate ash centers\* to use more ash effectively. We also supply the power plants with limestone powder which is used to scrub the harmful sulfur oxides from the exhaust produced by the burning of coal. The reaction of the limestone powder with sulfur oxides forms by-product gypsum, which we make effective use of as a raw material for cement.

\* Ash centers are distribution sites that combine collection/transportation (transshipment and storage) and intermediate-processing (powder mixing) functions. They receive coal ash from coal-fired power plants and ensure a stable supply to our cement plants, while also supplying diverse products that meet user needs.

#### Steelmakers

In the iron and steelmaking process, impurities are removed from iron ore to make iron.

We supply the limestone and quicklime used in the refining process. We also use blast furnace slag and steel slag, by-products that remain after the refining process, as raw materials for cement and as cement admixtures.

#### Construction Soil

Traditionally this soil had been dumped into landfills. By making effective use of it as a cement raw material, we contribute to the conservation of natural resources and also help to prolong the life of landfills. We have also set up intermediary facilities that organically link sites where construction soil is produced to our nationwide plants, and strive to make them effective resources.

### Resource Recycling with Local Communities

In addition to industrial waste, we also use general waste generated by local governments, municipal waste incineration residues, water purification sludge and sewage sludge as raw materials and fuel to manufacture cement. The total amount of waste generated in Japan in FY2021 was 41.67 million tonnes, of which approximately 76% was incinerated, and 3.64 million tonnes of unused incineration residues were buried in landfill sites.

We use a set of three technologies related to systems for recycling municipal waste and strive to make effective use of such resources and resolve environmental issues.

#### - Incineration Residues Recycling System

A system for recycling municipal waste incineration residues (incineration ash and dust) as a raw material for ordinary Portland cement.

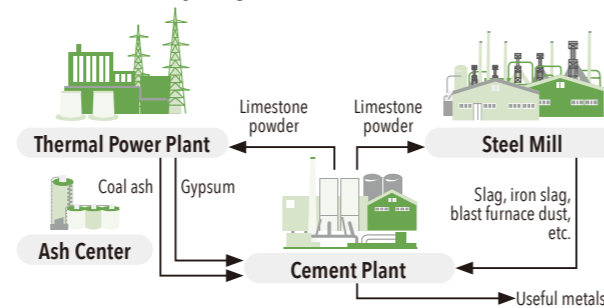
#### - AK System

A system for recycling household waste and general business waste as alternative raw materials and fuels for cement manufacture. The waste is preprocessed through biological breakdown (fermentation) using a waste recycling kiln.

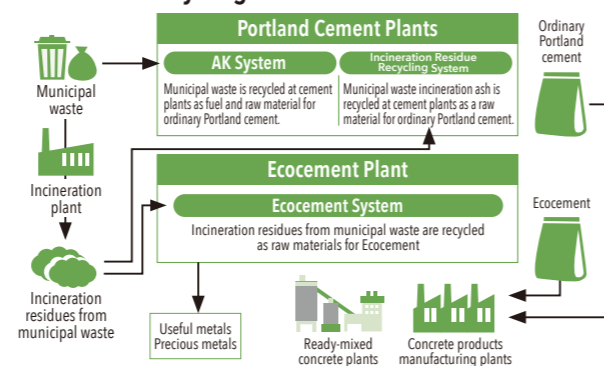
#### - Ecocement System

Ecocement is a new type of cement made primarily from municipal waste incineration residues. The system uses more than 500 kg of ash and other waste materials per tonne of Ecocement. It also has an urban mining function to recover useful metals and precious metals contained in municipal waste incineration residues and waste.

### Resource Recycling with Industries



### Resource Recycling with Local Communities



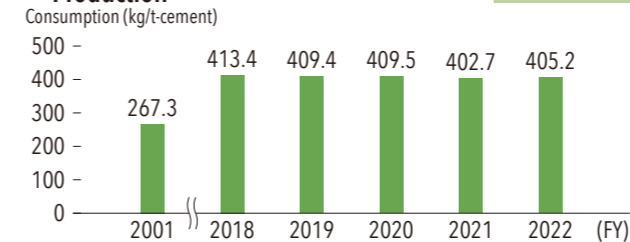
### Performance of Recycled-Waste-to-Cement System

► GRI301-1, 2

All of our directly operated cement plants in Japan recycle waste and byproducts into alternative raw materials and fuels for cement. This helps to prolong the life of landfills, prevent the depletion of natural mineral resources, limit greenhouse gas emissions and reduce emissions of pollutants into the atmosphere.

In FY2022 we accepted a greater volume of coal ash, blast furnace slag, by-product gypsum, construction soil, waste oil and waste plastic. On the other hand, we accepted less unburned ash, soot, dust, dirt, sludge, wood chips, water treatment plant sewage sludge and ash, municipal waste incineration ash and general waste, but the input of recycled waste and by-products was 6,244 thousand tonnes, an increase of about 136 thousand tonnes on the previous fiscal year. This means we recycled 405.2 kg of waste and by-products per tonne of cement produced.

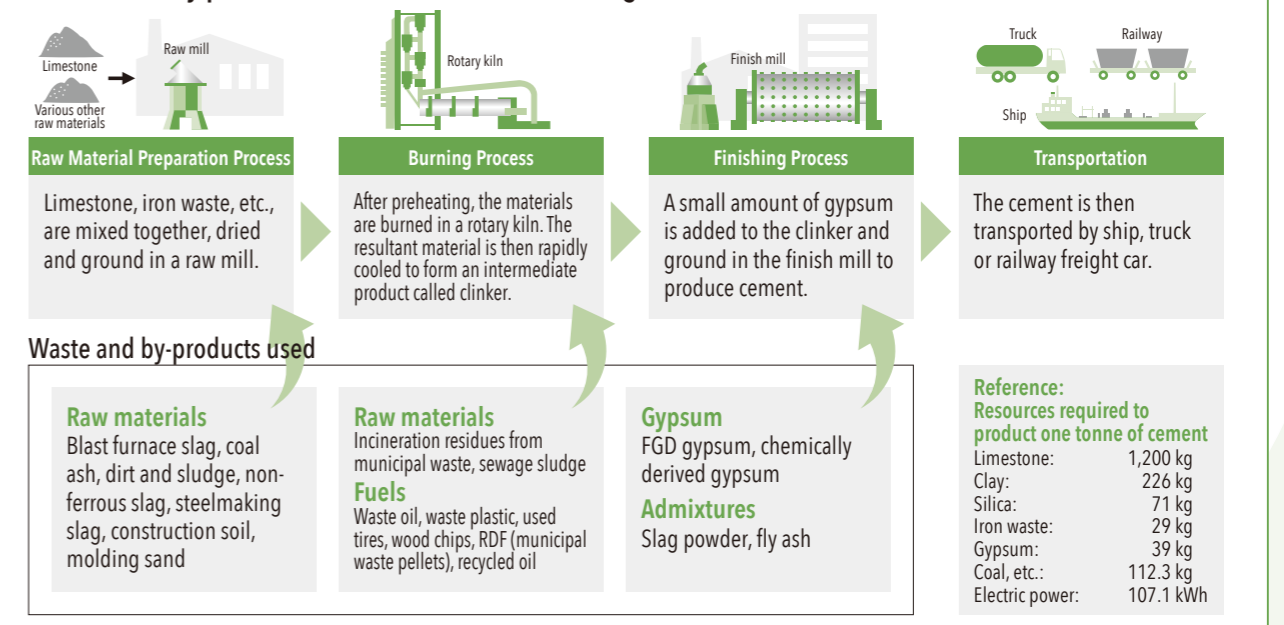
### Trends in Use of Waste and By-products per Unit Production



### Main Waste and By-products Used in Cement Plants (FY2022)

Waste and By-products	Total Amount (t)	Rate (kg/t-cement)
Coal ash	2,059,809	133.7
Blast furnace slag	1,107,289	71.8
By-product gypsum	522,078	33.9
Unburned ash, dust	504,711	32.7
Dirt and sludge	360,317	23.4
Construction soil	185,221	12.0
Waste oil	160,538	10.4
Wood chips	26,525	1.7
Waste plastic	199,484	12.9
Water treatment plant sewage sludge and ash	363,515	23.6
Incineration residues from municipal waste	144,244	9.4
Municipal waste	18,958	1.2
Other	591,767	38.4
<b>Total</b>	<b>6,244,458</b>	<b>405.2</b>
Raw material-related	5,686,938	369.0
Fuel-related	557,520	36.2
<b>Total</b>	<b>6,244,458</b>	<b>405.2</b>

### Waste and By-products Used in Cement Manufacturing Processes



## Reducing Environmental Impact

### Approach

To continue being a sustainable company, we aim to coexist and prosper with local communities by conducting responsible business activities through the prevention of environmental pollution, effective use of resources, reduction of waste generated on-site, and the proper management of chemical substances.

### Preventing Environmental Pollution

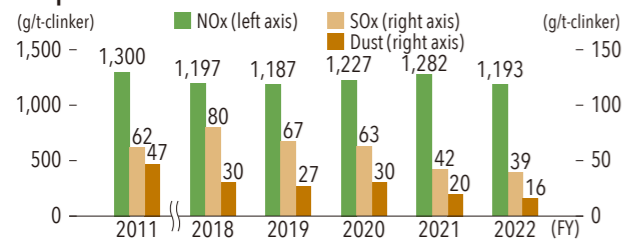
▶ GRI305-7

#### Air Pollution

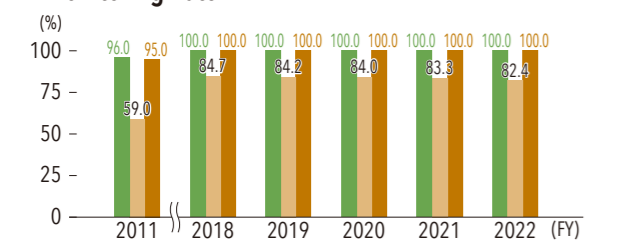
Air pollutants generated from cement production are primarily NOx, SOx and dust in combustion gases emitted from cement kilns. To ensure the proper management of these substances we strive to reduce air pollutant emissions through measures such as installing equipment to continuously monitor emission concentrations, improving NOx reduction systems and installing bag filter equipment to capture dust emissions. Our target is to maintain our FY2011 emissions levels.

In FY2022, emissions of NOx, SOx and dust were all lower than the figures for FY2011, our benchmark year. Furthermore, the level of SOx emissions was very low compared to the limit set under the Air Pollution Control Act.

#### Specific Emissions of Clinker for Main Pollutants



#### Monitoring Rate



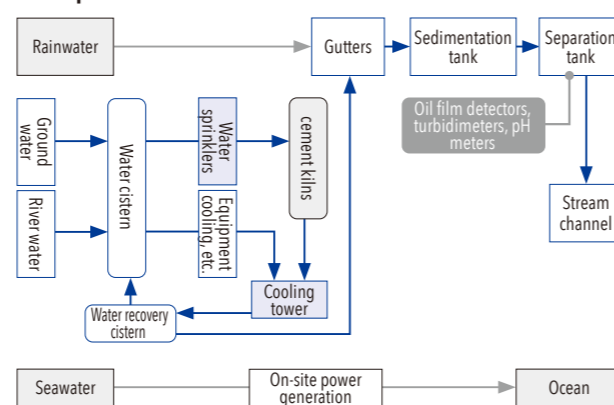
■ Percentage of clinker volume manufactured in a kiln equipped with continuous NOx measurement  
 ■ Percentage of clinker volume manufactured in a kiln equipped with continuous SOx measurement  
 ■ Percentage of clinker volume manufactured in a kiln equipped with continuous dust measurement

Reference guidelines: "GCCA Sustainability Guidelines for the monitoring and reporting of CO<sub>2</sub> emissions from cement manufacturing Ver. 0.1" GCCA

### Water Contamination

Most of the water discharged from our plants to public waters is cooling water and not polluted as defined in the Water Pollution Control Act. At our cement plants all water resources are reused as circulation water to minimize the impact of water discharge into public waters. Moreover, we are installing sedimentation tanks, water-oil separation tanks, oil film detectors, pH meters and suspended solid sensors on water discharge routes that connect to public waters.

#### Example of Water Circulation Flow at a Cement Plant



### Soil Contamination

In FY2001 Taiheiyo Cement evaluated the risks associated with cement plants that may be sited on contaminated ground by appointing an expert consultant to undertake a soil history survey. We are continuing to conduct drilling surveys, starting with the higher-risk locations, to verify whether or not the soil is contaminated. Actions have been taken as necessary based on the findings.

We are also working to eliminate the possibility of soil contamination via measures to prevent the leakage of wastewater from scrapyards or fluid from oil tanks, acid/alkali tanks, pipes and so forth.

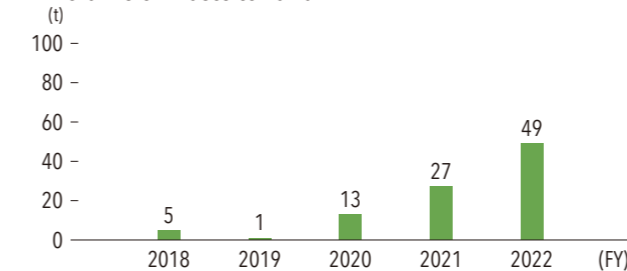
### Reducing Waste

▶ GRI306-2

#### Initiatives at Plants and Quarries

Our cement plants and quarries reduce the amount of waste handled by disposal contractors by reusing waste from operations as material for cement production. We also endeavor to reduce waste that ultimately ends up in a landfill via measures such as the use of chromium-free kiln bricks.

#### Volume of Waste to Landfill\*

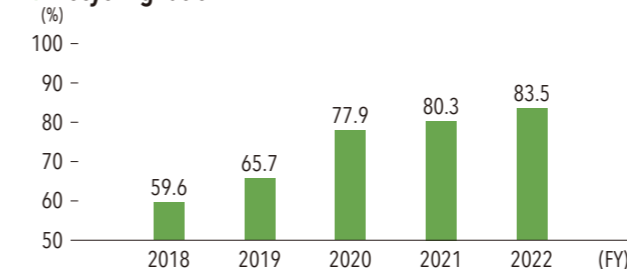


\* Regarding the aggregation scope, see Cement Manufacturing Process (Material Balance) → P.121

#### Initiatives at Service Stations

Service stations (SS) reduce the waste handled by waste disposal contractors by returning any residual cement that remains in silos after switching the cement products. Returned cement is recycled as raw material. In FY2022, the recycling rate was 83.5%, an increase of 3.2% from the previous year.

#### Recycling ratio



#### Initiatives at Offices

Our special purpose subsidiary, Taiheiyo Service Corporation, recycles the company's used copy paper for efficient use in-house. Approximately 320,000 sheets of A4 size paper were recycled in FY2022.

### Appropriate Management of Chemical Substances

▶ GRI306-2

#### Pollutant Release and Transfer Register (PRTR)

The PRTR Law requires that we report on equipment installed at our Kumagaya plant for the washing of municipal waste incineration ash. This washing process uses water, and our total discharge of dioxins and ferric chloride into public waterways are as shown below.

#### Reported Levels of Dioxins and Ferric Chloride Emissions

Emissions	Reported Levels		
	FY2020	FY2021	FY2022
Dioxins (mg-TEQ)	0.0	0.0	0.0
Ferric chloride (kg)	152	170	198

#### Management of PCB Waste

We properly store and dispose of high and low concentrations of PCB waste in accordance with the Amendment to the Law concerning Special Measures for Promotion of Proper Treatment of PCB Wastes (revised in 2016), hereinafter referred to as the PCB Special Measures Law.

For high-concentration PCB waste with an early disposal deadline as stipulated by the PCB Special Measures Law, we signed a processing contract with the Japan Environmental Safety Corporation (JESCO) in 2006 and have prioritized processing.

Pollutants such as electrical ballasts stored at the Kumagaya Plant, Saitama Plant and the former Chichibu Plant, as well as at the Chichibu quarry and branch office service stations, were processed in FY2022. Transformers and capacitors containing high-concentration PCB in the Kyushu, Chugoku and Shikoku area were processed before March 31, 2018. However, we have confirmed that three unprocessed capacitors still remain in that area. We have submitted a report to the prefectural governor about the three capacitors, and they are being stored appropriately until the local government decides on the disposal method for equipment that has passed its deadline for processing.

Pollutants such as transformers and capacitors stored at the Saitama Plant and electrical ballasts stored at the Kamiiso Plant, Ofunato Plant, Kumagaya Plant, Saitama Plant and Fujiwara Plant are scheduled for processing in FY2023.

#### Treatment of High-concentration PCB Waste

(No. of machines)

Waste	Stored in FY2021 (as of March 31, 2021)	New Targets for FY2022	Treated in FY2022	Stored in FY2022 (as of March 31, 2022)	Treatment Scheduled for FY2023
Capacitors	2	2	0	4	1
Transformers	0	1	0	1	1
Electrical ballasts	936	514	502	948	948
Total	938	517	502	953	950

# Disclosure Regarding Recommendations of the TCFD

We announced our support for the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) in June 2019 and since then performed scenario analysis. The results of our first scenario analysis were published in 2020. Following the Glasgow Agreement at the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP26) in November 2021, we updated the CO<sub>2</sub> reduction scenarios applicable to us to 1.5°C and 4°C.



## TCFD Content Index

Recommended Disclosures	Our Disclosures
<b>Governance</b> The organization's governance around climate-related risks and opportunities	<ul style="list-style-type: none"> <li>Corporate Governance → P.104</li> <li>Sustainability Management → P.56</li> <li>Environmentally-Conscious Management → P.60</li> <li>Risk Management and Compliance → P.110</li> </ul>
<b>Strategy</b> The actual and potential impacts of climate-related risks and opportunities for the organization's businesses, strategy and financial planning	<ul style="list-style-type: none"> <li>Medium-Term Management Plan → P.24</li> <li>Delivering Carbon Neutrality → P.26</li> <li>Business Strategies → P.40</li> <li>Risks and Opportunities → P.22</li> </ul>
<b>Risk Management</b> How the organization identifies, assesses and manages climate-related risks	<ul style="list-style-type: none"> <li>CSR Management Promotion System → P.107</li> <li>Risk Management and Compliance → P.110</li> <li>Environmentally-Conscious Management → P.60</li> </ul>
<b>Metrics and Targets</b> The metrics and targets used to assess and manage climate-related risks and opportunities	<ul style="list-style-type: none"> <li>Delivering Carbon Neutrality → P.26</li> <li>Mitigating Climate Change → P.62</li> <li>Environmental Accounting → P.65</li> <li>GCCA Key Performance Indicators → P.128</li> </ul>

## Setting Scenarios

We focused our scenarios, evaluation and analysis on the business risks and opportunities that climate change will pose to the Group by the year 2050. We identified events that will materially impact climate-related risks and opportunities, based on climate-related, long-term scenarios founded on science, such as the World Energy Outlook (WEO) and Energy Technology Perspectives (ETP) published by the IEA and The Fifth Assessment Report (AR5) published by the IPCC. Then we created two climate-related scenarios, 1.5°C and 4°C, that will have impact on the business operations of the Group, along with appropriate carbon price assumptions for the 2030s using the IEA World Energy Outlook 2021 as a reference. To follow up, we analyzed the business impacts in every scenario by size and time horizon (short, medium and long).

## Process of Selecting Material Climate-related Risks and Opportunities and Scenarios

- STEP 1** Conduct a benchmark survey to identify climate-related risks and opportunities for the cement industry and identify relevant drivers
- STEP 2** Determine the causal relationships between climate-related drivers, interim outcomes and implications. Then identify key drivers
- STEP 3** Create climate-related scenarios for each key driver, referring to the published climate-related long-term scenarios that were developed based on scientific grounds
- STEP 4** Evaluate the anticipated business impacts in each scenario
- STEP 5** Review responses to the business impacts, which are, in our view, positively or negatively significant to our evaluation

	1.5°C scenario (consistent with the Paris Agreement)	4°C scenario (ineffective response to climate change)
<b>Reference Scenarios</b>	IEA net-zero Emissions Scenario (NZE) Carbon Emissions Pathway: RCP 2.6	IEA Stated Policies Scenario (STEPS) Carbon Emissions Pathway: RCP 8.5
<b>Assumed Carbon Price</b>	US\$130 (approx. 17,550 yen)/tonne-CO <sub>2</sub>	US\$30 (approx. 4,050 yen)/tonne-CO <sub>2</sub>



## Scenario Overview Business Impact

Category	Drivers	1.5°C Scenario		4°C Scenario	
		Negative	Positive	Negative	Positive
1. Policy and Regulatory	● Introduction of Regulated Carbon Pricing		↑	↓	
	● Reinforcement of regulations on CO <sub>2</sub> emissions			↓	
2. Market	● Rising fossil fuel prices	↓		↓	
	● Increased demand for low-carbon construction materials		↑		↑
3. Technologies	● Reduced operation of coal-fired thermal power plants	↓		↓	
	● Progress in the development of CO <sub>2</sub> capture and utilization technology		↑	↓	
4. Reputation	● Improved technologies for resource recycling and advanced circular economies		↑		↑
	● Increased awareness toward carbon neutrality		↑	↓	
5. Physical events	● Chronic - Rising average temperatures and sea levels	↓	↑	↓	↑
	● Acute - Intensification of climatic events (e.g., flooding, heat waves)	↓	↑	↓	↑

## Scenario Analysis Overview

	1.5°C Scenario	4°C Scenario
<b>Scenario Overview</b>	In the scenario consistent with the Paris Agreement, government and industry are working together toward carbon neutrality. The cement industry is focusing on developing innovative technologies. CO <sub>2</sub> capture, utilization and storage technologies are being developed consistent with the industry's transition to carbon neutrality. In addition, the physical effects of climate change are being addressed to a certain extent through national resilience policies and other measures.	In a scenario of ineffective response to climate change there is a mismatch between our efforts towards carbon neutrality and the regulations applicable to the cement industry, which would put us at a competitive disadvantage. Profits from the development of the innovative technologies that we promote are limited. In addition, the physical effects of climate change are becoming more severe, such as frequent extreme climatic events.
<b>1. Policy and Regulatory</b>	Reliable and stable carbon pricing consistent with our Carbon Neutral Strategy 2050 is introduced. This facilitates long-term investment decisions toward carbon neutrality.	Limited and unstable carbon pricing delays the development and implementation of our innovative technologies.
<b>2. Market</b>	Initiatives towards carbon neutrality in the construction value chain progress and the demand for low-carbon and recycling-based construction materials increases. The availability of coal ash decreases as the operation of thermal power plants decreases, but we are mitigating this risk by progressing the diversification of alternative raw materials, such as the use of construction soil.	There are limited regulatory incentives for the use of low-carbon products, which limits the increased use of our low-CO <sub>2</sub> cement. The use of by-products such as coal ash helps promote the increased use of blended cement to some extent.
<b>3. Technologies</b>	The practical application of our innovative technologies toward carbon neutrality, such as low-CO <sub>2</sub> cement and C2SP kilns, is progressing. In addition, the improvement of technologies related to alternative energy and alternative raw materials contributes to improving our profitability.	While the gradual introduction of C2SP kilns is necessary to reduce direct emissions at our plants, considerable additional effort is required due to delays in the development of hydrogen infrastructure for the utilization of the captured CO <sub>2</sub> .
<b>4. Reputation</b>	In the short term, the cement industry faces a reputational risk as an industry with high CO <sub>2</sub> emission intensity. However, our credibility and reputation will improve as our Carbon Neutral Strategy 2050 is steadily implemented and our efforts are recognized as contributing to climate change mitigation.	Delays in the development of innovative technologies and the incentives and infrastructure that are necessary for their full-scale deployment poses additional challenges to the delivering of carbon neutrality and gradually increases reputational risk.
<b>5. Physical events</b>	Mitigation measures become necessary for production sites and supply chains affected by extreme rainfall and flooding. On the other hand, a certain level of demand for construction materials for restoration and reinforcement work can be expected.	While demand for construction materials for restoration and reinforcement work due to heavy rain and flood damage can be expected, extreme weather events pose a significant threat as they significantly increase in frequency and intensity, increasing the risk of significant financial impact on production sites and supply chains.

# Conserving and Restoring Biodiversity

We recognize that our quarrying activities are most closely related to biodiversity. We are aiming to achieve nature positive by working with local communities in the development and operation of quarries and the use of old quarry sites.

## Environmental Impact of Quarry Operations

▶ GRI304-1, 2, MM1, MM2

### Reducing Environmental Impact

Cement production starts with quarrying limestone, the primary raw material for cement. We also quarry many mineral resource products used as aggregates and industrial raw materials.

Because forests are cleared, topsoil is excavated and limestone ore is extracted at a quarry, it inevitably affects the environment and ecosystem of the quarry's area. However, the limestone, rocks and sand we quarry only require crushing for particle size adjustment and sorting, and do not require any refining processes. Consequently, our operations are unlikely to cause chemical contamination to surrounding areas. In addition, we minimize the amount of waste stones generated during our limestone quarrying by using them as construction materials.

### Limestone Quarries of the Group

The group operates 17 major limestone quarries around the world, which are located near to our integrated cement plants. The total site area\* of the quarries is 4,269 ha (Japan: 2,608 ha; USA: 1,281 ha; other regions: 380 ha).

### ● Limestone Quarries of the Group

Region	Quarries	Site area (ha)	No. of quarries that require special care*
Japan	11	2,608	1
USA	3	1,281	0
Other	3	380	0

\* "Require special care" refers to quarries that fall under Category IV or higher in terms of IUCN Protected Areas

Using the Integrated Biodiversity Assessment Tool (IBAT) provided by BirdLife International, we checked if any of our group's limestone quarries are in any of the protected areas defined by the International Union for Conservation of Nature (IUCN). We found that none of our quarries are within or adjacent to Protected Area Category III or lower category areas. However, in Japan, one quarry is within a Category IV area and two are adjacent to Category IV areas.

All these quarries have obtained the necessary licenses from their local governments and conduct environmentally sound quarrying operations. They have no pending litigations concerning biodiversity or other environmental issues.

### ● Outline of IUCN Protected Area Categories

IUCN Categories	Outline
Ia: Strict Nature Reserve	Areas that have outstanding or representative ecosystems or have geographical or physiological features or characteristic species.
Ib: Wilderness Area	Large unmodified or slightly modified areas that retain their natural character.
II: National Park	Areas set aside to protect the environmental integrity of the ecosystem.
III: Natural Monument or Feature	Areas that have outstanding natural features or natural features of cultural value.
IV: Habitat/Species Management Area	Areas that require active interventions to maintain habitats or address the requirements of particular species.

### Activities to Reduce Environmental Impact

▶ GRI103-2, 3, 304-1, 2, 3, 4, MM1

Throughout the group we believe that balancing the conservation of ecosystems in local communities and development of the communities themselves are important in quarry operations. With this belief, we hold discussions with local governments, local communities and academics while operating quarries. This helps to ensure we not only prevent pollution but also conserve biodiversity and water resources while minimizing our environmental impact.

### Environmental Impact Assessment

In developing quarries, we conduct ex-ante assessments of environmental impact of quarry developments based on environmental research of the development area such as on biodiversity and water resources. We then discuss the results of the research with local governments, local communities, academics and other stakeholders before finalizing a development plan. Moreover, we regularly monitor the surrounding environment during the development and operations of quarries, and report to our stakeholders on the environmental impact that the quarries have there arethere areas.

For instance, in the new development of a quarry in the Ofunato Quarry, Iwate Prefecture, we conducted environmental assessment for approximately ten years. We focused on preserving rare wildlife species in cooperation with external experts and local residents. Furthermore, we minimized noise and vibration during the development work and also limited the traffic hours for trucks used in construction work. In addition, even after development work begins, we carry out regular assessments and implement environmental protection measures.



Raptors survey (Ofunato Quarry)

### Biodiversity Protection

When environmental impact assessments determine that protection is required, we protect rare species and the like via measures such as installing protective equipment, transplanting and restricting development work.

Since 1972, at the Minowa Quarry of Chichibu Taiheiyo Cement Corporation, we have been protecting and nurturing rare species of native plants on Mt. Buko, which is located in Chichibu City and Yokoze Town in Saitama Prefecture. We created a botanical garden at the quarry and, together with local experts and other people, we preserve 68 native plant species there while increasing the plant population. Additionally, our Central Research Laboratory continues to research and develop ways to protect and propagate plants, and to verify the genetic diversity of wild specimens using biotechnology. Since 2016, in the course of developing the Ofunato Quarry, we have been working with experts to protect and propagate various rare plant species in their native biospheres by creating a botanical garden on the side of the office of Ryushin Mining Co., Ltd.



Rare plant conservation area (Ofunato Quarry)

### Greening Quarries

Rocks and soil are exposed in working quarry areas, and no vegetation is left. However, if no quarrying work is expected for some time, we strive to green such areas as soon as possible. We also plant vegetation in excavated topsoil stockyards and in places where the contours of the soil will remain unchanged for a while. At some quarries, at the request of the local community, we restore greenery if operations have been suspended for several months.

We basically plant vegetation that is native to the region. In our greening of quarries in Japan in FY2022, we scattered seeds over a total area of 36,829m<sup>2</sup> (3,429m<sup>2</sup> more than the planned 33,400m<sup>2</sup>) and planted 2,540 saplings (380 more than the planned 2,160).

Other efforts include participating in an annual tree planting campaign with contractors and local residents to improve awareness of quarry development and greening activities.



Quarry face greening (Buko Quarry)

### Water Resource Conservation

In quarrying we also pay close attention to protecting not only terrestrial plants but also water resources such as rivers and natural springs in an effort to contribute to biodiversity. From the perspective of conserving water resources, spring water and rainwater is discharged from quarrying after treatment to minimize impact on the environment outside of the quarrying area by passing through regulatory pond. In some quarries we drill wells for domestic water and supply this water to local communities for everyday use.

### Use of Old Quarry Sites

We reuse old quarry sites where operations have completely ended after consultation with the local community. When greening a site we strive to restore the original vegetation.

# Providing Environmentally Sound Products and Services



Providing environmentally sound products and services that contribute to resource conservation and CO<sub>2</sub> reduction in response to society's need for environmental conservation, by leveraging the advantages of cement and related technologies we have cultivated over the years.

## Advancement

### Environmentally sound limestone-blended cement

Our U.S. group company, CalPortland Company, has launched a new product series called ADVANCEMENT, which is a blend of Portland cement and limestone. By replacing up to 15% of clinker with limestone ADVANCEMENT can reduce CO<sub>2</sub> emissions by approximately 10% compared to ordinary Portland cement as specified by ASTM C150.

ADVANCEMENT complies with ASTM C595 and AASHTO M240 as TYPE 1L and is also certified by the California Department of Transportation. This allows ADVANCEMENT to be widely used in infrastructure construction, including highways. Following test marketing in 2021, CalPortland plans to gradually switch from ordinary Portland cement (TYPE II/V) produced at its Mojave Plant to ADVANCEMENT (TYPE 1L) from 2022, which will reduce CO<sub>2</sub> emissions by approximately 95,000 tonnes while producing approximately 1.2 million tonnes of ADVANCEMENT annually.

There are also a variety of products in the ADVANCEMENT series to match application and performance requirements. ADVANCEMENT LT is light-colored and aesthetically pleasing while maintaining the low-CO<sub>2</sub> emission performance, and can be used in architectural applications to meet the aesthetic expression of architects and designers. In addition, ADVANCEMENT HS is suitable when particularly high sulfate resistance is required. ADVANCEMENT is a series of low-CO<sub>2</sub> emission cement products that are tailored to the application and performance requirements.



ADVANCEMENT delivery trucks

### Thermal Insulating Paving Blocks "Thermalbarrier ILB"

#### Taiheiyo Precast Concrete Industry Co., Ltd.

Thermalbarrier ILB is a paving block that suppresses the absorption of heat from solar radiation, thereby reducing the rise in temperature and heat retained in the road surface and mitigating the hot environment in pedestrian and roadside areas. The surface layer of this block is made of material that is highly effective in reflecting near-infrared radiation, and the base layer is made of concrete with cavities to reduce the absorption and retention of heat from solar radiation in the paving blocks and roadbed. This contributes to mitigating the heat island effect by reducing not only the daytime hot environment but also heat radiation at night.

The performance of the ThermalbarrierILB was confirmed to be effective in reducing road surface temperature by 11.5°C or more in a comparison test with asphalt pavement conducted by the Japan Interlocking Block Pavement Engineering Association, and was certified as "cool block paving". In addition to its excellent thermal insulation performance, the Thermalbarrier ILB series also includes a product that, depending on the specifications of the base concrete layer, provides the block itself with water retention performance and permeability to allow rainwater and other substances to permeate into the roadbed. We also effectively use crushed roof tiles, molten slag produced in the cooling process after incineration of municipal waste, and glass cullet made from processed wine bottles, which would normally be disposed of as industrial waste, as recycled aggregates.

A recent example of installation of Thermalbarrier ILB is its widespread use in the sidewalks around the competition venues for the 2020 Tokyo Olympics and Paralympics, etc.



Thermalbarrier ILB laid in the plaza in front of the Meiji Memorial Picture Gallery in Jingu Gaien

### Disaster Waste Regional Treatment Service Working Towards Early Recovery Based on Comprehensive Partnership Agreements

Disaster waste, such as debris and wood chips generated by natural disasters such as earthquakes and floods, is a major obstacle to the recovery of the affected areas. Prompt disposal of disaster waste is essential for early recovery. Our cement plants can effectively utilize this waste as raw material for cement and as an energy source. Furthermore, comprehensive partnership agreements with municipalities other than those where our plants are located enable the regional treatment of waste, and we are providing services that contribute to early disaster recovery over a wider area.

#### Background and Achievements

We have been receiving and treating disaster waste generated by large-scale disasters. The 2011 Great East Japan Earthquake brought recognition to the regional treatment of disaster waste performed by cement plants. We have accepted and treated approximately 1 million tonnes of debris and other disaster waste. Tsunami debris was pre-treated to remove salt to avoid affecting the quality of cement.

Since then, we have treated disaster waste generated by the 2014 Hiroshima landslides and subsequent disasters including the Kumamoto Earthquake, torrential rains in western Japan, and Typhoon Hagibis in 2019 at a total of nine domestic cement plants owned by us and our group companies.

Based on the knowledge gained from the Hiroshima landslides, we have been working with local governments where our cement plants are located to conclude "comprehensive partnership agreements" regarding resource recycling and disaster waste treatment so that we can promptly treat disaster waste regionally in the event of a disaster. Since signing the first agreement with Inabe City, Mie Prefecture, in 2015, we have been expanding the scope of these agreements.

Meanwhile, based on the idea of accepting and treating disaster waste by utilizing all of our cement plants located throughout Japan via regional transportation and treatment, in 2019 we signed a comprehensive partnership agreement with Miyagi Prefecture, where we do not have a cement plant. When Typhoon Hagibis caused extensive damage centered around Miyagi Prefecture later that year, as mentioned above, we accepted a large amount of flood-damaged rice straw immediately after it was harvested and treated it at our Ofunato and Saitama Plants based on this agreement, and

since then we have processed approximately 20,000 tonnes in total as of March 2021.

Through this we are promoting the regional treatment of disaster waste by utilizing our domestic cement plants and marine transportation network and providing services that will contribute to early recovery.



Flood-damaged rice straw caused by Typhoon Hagibis in 2019 (10 municipalities in Miyagi Prefecture)



Regional treatment of wood chips damaged by Kumamoto earthquake (Myojo Cement Co., Ltd)



Salt removal equipment (Ofunato Plant) (as of 2012)

# Appropriate Use of Water Resources

Relevant SDGs  

Striving to analyze water risks and understand the status of water use as issues that may emerge in the future in our use of water resources, and working to ensure the proper use of water resources.

## Appropriate Use of Water Resources Water Risk Analysis

▶ GRI303-1

According to the results of the water risk analysis conducted using the Water Risk Filter\*, the average score for the total basin risk for all our plants (weighted average taking into account the cement production volume) was 2.8. The highest total basin risk score was 3.2, and the average score was 0.3 lower than that of the previous year. The volume of cement produced at the plant in question accounted for about 9% of the production volume of all the plants. However, when we analyzed conditions at that plant, no urgent issues were identified.

\* A water risk mapping tool developed by the World Wide Fund for Nature (WWF). It is used to evaluate business impacts related to water scarcity, flooding, drought, seasonal variation, physical water quality risks, regulatory risks, etc. The maximum score is 5.0, and the higher the score, the greater the risk.

## Water Consumption

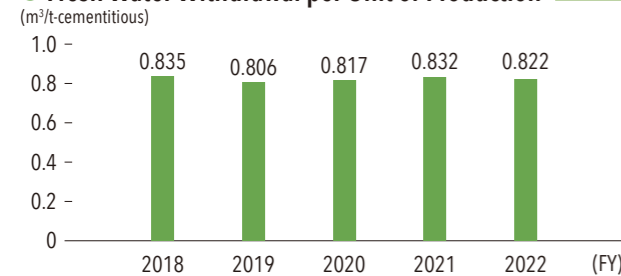
▶ GRI303-1, 2, 3, 4, 306-1

Most of the water used at our cement plants is for the cooling of production equipment, exhaust gas and on-site power generators. Therefore, the water discharged from the plants is mostly cooling water, which is not polluted as defined in the Water Pollution Control Act. All the fresh water used at the plants is circulated and reused, except for the household wastewater, as we strive to reduce our water withdrawal and lessen the impact of wastewater on bodies of water.

Our total withdrawal of fresh water in FY2022 was about 26.34 million m<sup>3</sup> and our total withdrawal of seawater about 150 million m<sup>3</sup>. The seawater was used to cool on-site power generation equipment at our plants near the ocean and then released back into the sea after use. The amount of fresh water discharged was approximately 13.25 million m<sup>3</sup>, meaning that about 13.10 million m<sup>3</sup> of fresh water was used at the plants. However, most of this water is not used as a raw material and evaporates after being used to cool equipment or gas.

In FY2022 our fresh water withdrawal to produce 1 tonne of cement was 0.822 m<sup>3</sup> (withdrawal per unit of production). There was no great change in our water consumption efficiency.

## Fresh Water Withdrawal per Unit of Production GCCA



## Water Consumption GCCA

(Unit: thousand m<sup>3</sup>)

	FY2018	FY2019	FY2020	FY2021	FY2022
Surface water	8,130	6,521	5,626	5,355	5,527
Ground water	16,370	16,884	18,656	18,759	18,706
Industrial water	3,095	3,251	3,325	3,078	2,108
Total fresh water withdrawal (I)	27,596	26,656	27,607	27,192	26,341
Total seawater withdrawal	149,056	149,776	147,372	146,232	146,894
Total water withdrawal	176,652	176,432	174,979	173,424	173,234
Total fresh water discharge (O)	12,294	12,167	13,674	13,447	13,246
Total seawater discharge	149,056	149,781	147,377	146,368	147,062
Total water discharge	161,350	161,948	161,051	159,815	160,308
Total fresh water used (I-O)	15,302	14,489	13,933	13,745	13,095

Reference guidelines: "GCCA Sustainability Guidelines for the monitoring and reporting of water in cement manufacturing Ver. 0.1" GCCA

## Appropriate Use of Water Resources

▶ GRI203-1, 303-1, 2, 3, 4, 5, 306-1, 413-1

At present there are no specific concerns regarding water resources that may be raised by local communities. However, we are striving to reduce water withdrawal with a view to conserving water resources. In addition, we maintain close communication with local communities and contribute to the appropriate use of local water resources.

TCPI supplies clean water to local communities from wells drilled by the company for water to use in its plants.

This system has improved the collection and storage of rainwater and spring water at the site. Developing these water resources has made it possible to secure a supply of the water it needs in its work, without having to build new wells or increase the volume of ground water it extracts, and also to keep the amount of water that drains out of the site to a bare minimum. (There are strict regulations with regard to water that drains out of a site.)



System for the sustainable use of water (California)

# SOCIAL

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# Occupational Health and Safety



We are continuously promoting organizational safety, security and health activities with the aim of eradicating occupational accidents, including those in the supply chain, and achieving a safe work environment.

## Approach

Our Health & Safety Policy is shown below. Under this policy our headquarters and business sites prepare health and safety management policies that suit the actual conditions at the workplace each fiscal year.

## Taiheiyo Cement Health & Safety Policy

Taiheiyo Cement Corporation recognizes that ensuring the health and safety of our employees is a cornerstone of our company. We invest appropriate management resources to the prevention of occupational accidents and diseases in accordance with the Industrial Safety and Health Act and the Mine Safety Act, and efficiently implement the fundamental policies shown below.

## Fundamental Policies

- Promote health and safety activities through cooperation between management and labor, with the aim of eliminating occupational accidents.
- Ensure the health and safety of our employees and those of our contractors by complying with health and safety-related laws and regulations, the health and safety management regulations created by us, and health and safety regulations created by our business sites.
- Strive to improve the level of health and safety by actively promoting the implementation and operation of our Occupational Safety and Health Management System, and by continually ensuring the fundamental safety of our work and equipment, providing education and training, and raising awareness of health and safety.
- Constantly improve workplace environments and work procedures by applying improved technologies and new health and safety information via the companywide, business site and group affiliate health and safety committees.
- Ensure health and safety throughout the Taiheiyo Cement Group by promoting action to eliminate occupational accidents under the leadership of the companywide, business site, and group affiliate health and safety committees.

## ● Safety Objectives (KPIs) for FY2022

KPI	Achievements and Issues This Fiscal Year	Plans for Next Fiscal Year
<b>FY2022 Company-wide Health &amp; Safety Committee Objectives</b> (1) Zero fatalities across the group (CSR Objectives for 2025) (2) 30 or less lost-time injuries across the group (3) 80 or less total occupational accidents across the group (4) Absence rate of company employees: 0.4% level	(1) Fatalities: 1 (2) Lost-time injuries: 37 (3) Total occupational accidents: 103 (4) Absence rate: 0.604%	<b>FY2023 Company-wide Health &amp; Safety Committee Objectives</b> (1) Zero fatalities across the group (CSR Objectives for 2025) (2) 30 or less lost-time injuries across the group (3) 80 or less total occupational accidents across the group (4) Absence rate of company employees: 0.5% level
<b>Eliminating Accidents Caused by Breaking Workplace Rules</b> 15% or less of total occupational accidents (ratio of accidents due to rule breaking)	<b>Violation of work standards, etc.: 23%</b> - Failure to wear specified protective equipment, omission of work procedures, etc.	<b>Ratio of accidents due to rule breaking: 15% or less</b> - Improve comprehension through periodic education on rules - Identification and improvement of facilities and behaviors that violate rules - Guidance aimed at eliminating violation conditions through regular patrols - Promote "visualization" with signs, work procedures, etc.
<b>Eliminating Heatstroke-related Accidents</b> Zero heatstroke-related accidents	<b>Heatstroke-related accidents: 6</b> - There were cases of overconfidence where employees believed "I am fine". Awareness through education and further improvement of the work environment is planned.	<b>Zero heatstroke-related accidents</b> - Improved understanding of accidents through prior education - Reliable response to heat index - Improvement of the work environment (development of rest areas, cooling systems, etc.) - Guidance on checking the condition of countermeasures through safety patrols
<b>Preventing the Recurrence of Similar Accidents</b> Halving the three most common causes of accidents - Being trapped by or dragged into equipment - Falls from height - Flying/falling objects	<b>Reduction rate 17% (44 accidents)</b> - Both making equipment safer and familiarization with safety principles will be addressed.	<b>Halving the three most common causes of accidents</b> - Confirmation of effectiveness of countermeasures through accident study support - Conduct case study education using the Accident Information Database - Continual operational checks of accident prevention measures (periodic on-site patrols) - Promote "visualization" with signs, work procedures, etc.

## Health & Safety System

Under the Taiheiyo Cement Health & Safety Policy we establish health and safety management regulations that cover the basic principles of the group's health and safety management, and promote health and safety activities. The aim is to create comfortable working environments while also ensuring the health and safety of our employees and those of our contractors at the group's business sites and other locations.

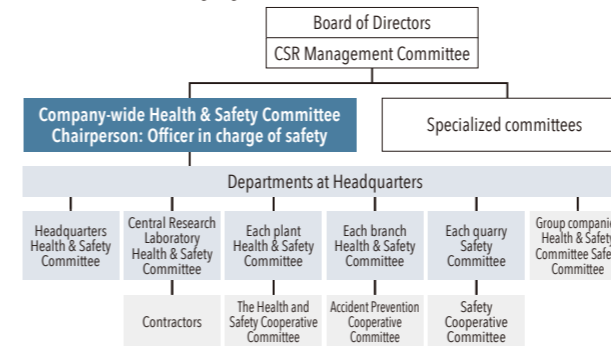
We established the Company-wide Health & Safety Committee, chaired by the officer in charge of safety, as a Specialized Committee under the CSR Management Committee, which is itself under the direct oversight of the Board of Directors. The Company wide Health & Safety Committee supervises health and safety activities held by our various business locations. It also collects safety-related data from not only the company itself but also our group companies and provides guidance.

All plants, quarries and branches under the jurisdiction of our divisions at Headquarters, and all group companies, have a health and safety committee consisting of representatives from both management and labor, as well as a cooperative committee promoting the health and safety-related activities of each business site.

Health and safety management at cement plants and quarries in Japan is carried out by our OSHMS\*.

\* OSHMS (Occupational Safety and Health Management System): Guidelines issued by the Ministry of Health, Labour and Welfare in 1999. A framework for reducing potential dangers at workplaces and promoting comfortable work sites by autonomously practicing continuous, uninterrupted health and safety management.

## ● Health & Safety System



## Safety Operation Officer Certification System

Since FY2008, we have been using the Safety Operation Officer System which emphasizes the importance of improving leadership capabilities to reduce occupational accidents. This system provides the certification as a safety operation officer that is required for leaders of work groups. To further improve the capabilities of those leaders, as of FY2016 we require participants in the certification seminars held at the plants to have completed the foreman training course stipulated in the Industrial Safety and Health Act.

## Health and Safety Training

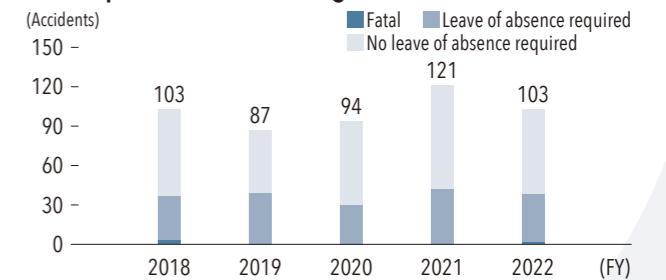
We have established procedures for the implementation of health and safety training, and are committed to providing such training so that work can be carried out safely. Training is provided at all our business sites. It can be categorized into training for newly-hired employees, training for newly-hired employees with professional experience at another company, specialized courses, training for newly-appointed managers, skills training, and training for contractors when they start work at a site.

## Occupational Accident Reports and Database

Any occupational accident is reported to the Company-wide Occupational Health & Safety Committee immediately, regardless of how insignificant it may seem. We promptly post the details of any accident on the group bulletin board as a step towards avoiding any recurrence.

We have maintained a occupational accident database since FY2009. It covers accidents involving employees of the company and group companies as well as the employees of all our contractors, including temporary workers. It categorizes accidents according to the "4 Ms" (men, machines, methods and management), analyzes the causes of unsafe behavior and situations, and systematically stores occupational accident review reports that include details of the countermeasures taken. The database is also translated into English and Chinese so that it can be widely used at our overseas business sites.

## ● Occupational Accidents Registered in the Database



\* Taiheiyo Cement and group companies that are business sites required to submit accident reports under our Safety, Security and Health Management Regulations are the subject of aggregation.

### Health and Safety Promotion Activities

▶ GRI403-2, 3, 4, 5, 6, 7, 9, 10

The Company-wide Health & Safety Committee set the following objectives for FY2022: zero fatalities, limit lost-time injuries to 30 or less and the total number of occupational accidents to 80 or less, while also setting the absence rate in the 0.4% range. We therefore engaged in health and safety promotion activities with a focus on: (1) improving the level of safety management at group companies in order to achieve our CSR Objectives for 2025, (2) eliminating accidents caused by breaking the rules, (3) eliminating heatstroke-related accidents, (4) preventing the recurrence of similar accidents, (5) complying with safety-related legislation, and (6) preventing the spread of COVID-19 infections (preventing employees from becoming infected or infecting others).

As a result, although the total number of occupational accidents decreased, there was one fatality and the absence rate increased due to the spread of COVID-19.

\* Fatalities: 1 (0), Lost-time injuries: 37 (42), total occupational accidents 103 (121), absence rate 0.604% (0.337%) (figures in brackets are FY2021 results).

Regarding the elimination of heatstroke-related accidents, which we identified as a key issue since FY2021, we are measuring WBGT (Wet Bulb Globe Temperature) values at each work site, have established break frequencies based on WBGT values, and promoting the improvement of the work environment, resulting in 6 cases of heatstroke, down from 18 cases in the previous year. In addition, regarding accidents involving the violation of workplace rules, accidents involving violation of work procedures, etc. remained high, accounting for 23% of all occupational accidents, so we are progressing with guidance through periodic patrols, education on rules, improvement of equipment and behaviors, and "visualization" of safety activities.

Analysis of occupational accidents according to years of experience found that approximately 40% of accidents involved workers with less than three years of experience, so we will enhance initiatives to prevent accidents involving less experienced workers. Also, regarding accidents according to type, "falls from height" decreased, but there were still many "trapped by or dragged into equipment", "flying/falling objects" and "falling over" accidents, so we are progressing the prevention of the recurrence of similar accidents.

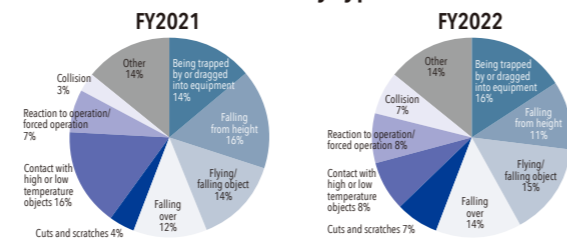
● Absence Rate Non-consolidated (Unit: %)

	FY2018	FY2019	FY2020	FY2021	FY2022
Absence rate	0.458	0.647	0.580	0.337	0.604

● Occupational Accidents\* (Unit: occurrences)

		FY2018	FY2019	FY2020	FY2021	FY2022
By region	Japan	98	81	92	117	98
	Overseas	5	6	2	4	5
By gender	Male	99	83	89	120	100
	Female	4	4	5	1	3
Injury or sickness	Injury	98	83	79	103	97
	Sickness	5	4	15	18	6
Our employees or contractors	Our employees	41	45	40	52	40
	Contractors	62	42	54	69	63

● Breakdown of Accidents by Type\*



\* Taiheiyō Cement and group companies that are business sites required to submit accident reports under our Safety, Security and Health Management Regulations are the subject of aggregation.

Initiatives for ISO 45001

In March 2018, the ISO 45001 standard for OSHMS was established by the International Organization for Standardization. Since 2007, we have been operating OSHMS based on the guidelines given by the Ministry of Health, Labor and Welfare. As an international company, we are working to obtain ISO 45001 certification for safety and health, in addition to quality (ISO 9001) and environmental (ISO 14001).

### Examples of Accident Prevention Initiatives

#### (1) Recurrence prevention measures (in response to a fatality)

In February 2022, a driver from a transportation company was killed in an accident. The death is presumed to have been a result of crushing caused by forgetting to remove a fall prevention device (safety belt). With the cooperation of the transportation company, we attached a ball-shaped object shown in the photo to the fall prevention device and commenced the operation of countermeasures to prevent workers from forgetting to remove the fall prevention device at Tokyo Branch service stations and the Saitama Plant. In the future we will deploy it at all service stations and plants.



Ball-shaped object attached to the safety block  
→ The person will feel discomfort when getting in the vehicle and realize they have forgotten to remove the fall prevention device

#### (2) Experiential Safety Training

In order to boost the safety awareness of our employees we hold safety training where they experience risks inherent in familiar operations. In FY2019 we introduced experiential safety training equipment such as VR (virtual reality) devices at all our cement plants for employees to experience simulated dangers related to safety harnesses, rotating equipment, electricity and heavy objects hanging from a crane. We also set up a system that can provide effective training for younger or less experienced employees.



Hazard experience education using VR  
Images visible through goggles (Experience of being trapped in a conveyor belt)

#### (3) Expanding Safety Activities to Group Companies

The Company-wide Health & Safety Committee provides support for safety activities at group companies. It started conducting safety surveys at the group's business sites in Japan and overseas in FY2019. As a result of measures introduced to prevent the spread of COVID-19, a survey was conducted at only one business site in Japan in FY2022, but in FY2023 we will increase the number of support sites and also promote the utilization of hazard experience facilities at cement plants.



Safety activity support (Onoda Chemico Co.)

#### (4) Ensuring the Safety of Foreign Workers

The number of foreign workers is increasing each year and we are becoming more multinational. At our cement plants we are striving to ensure safety through graphic displays in educational materials, multilingual displays and using DVDs.



Vietnamese  
An toàn là trên hết

Indonesian  
Keselamatan pertama

Vietnamese and Indonesian translations of 'Safety First' (Ofunato Plant)

#### (5) Preventing Heatstroke

As a countermeasure against heatstroke, we began reviewing our work clothes in FY2021 and introduced work clothes for extreme heat in FY2023 that are more breathable than conventional products and stick to the skin less.



Work clothes for extreme heat (Taiheiyō Cement Corporation)

# Human Capital



We are engaged in human resource development while respecting the human rights and diversity of all of our employees toward realizing equal opportunity within the company.

## Human Resource Development

### Approach

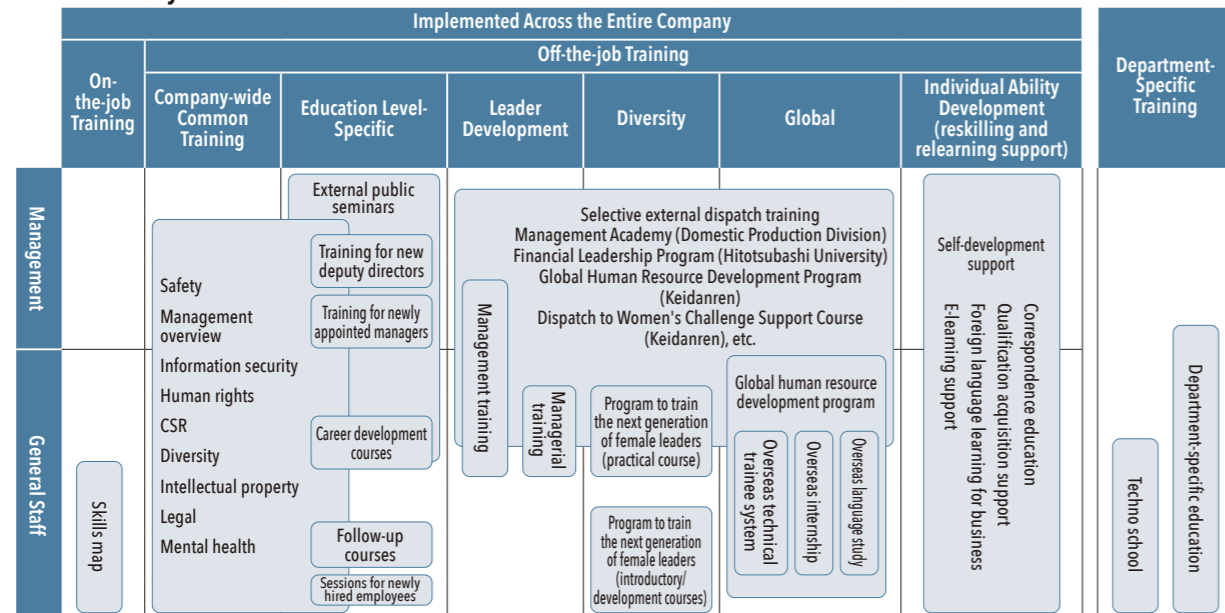
We regard our employees as "human capital" and are the most important resource for achieving the sustainable growth of our group. We are implementing systematic and comprehensive human resource development in accordance with our Basic Policy Concerning the Development of Human Resources so that all of our human resources, who possess diverse individual characteristics and values, can demonstrate the full extent of their individual capabilities.

### Basic Policy Concerning the Development of Human Resources

Our aim is to develop human resources that are highly regarded both inside and outside the company. In principle, human resources will be:

- 1 Developed through on-the-job training supplemented by off-the-job training
- 2 Developed to inherit the roles of their predecessors, playing central roles in the future in each field and at each level
- 3 Developed to take action in constant consideration of group management
- 4 Developed to global standards of competence
- 5 Developed to protect the environment and to serve society by assuming active roles in CSR initiatives
- 6 Encouraged and assisted to develop their motivation and to adopt broader perspectives through self-development

### Education System Chart



### Employee Recruitment

GRI404-2, 3

Non-consolidated

	FY2020	FY2021	FY2022
Graduate hires	108	109	105
Mid-career hires	10	11	9
Total	118	120	114

### Self-appraisal System

All employees are requested to submit annual self-appraisals in which they can detail their future career development aspirations, worksite preferences and family considerations. This helps us improve the working environment so they can fully demonstrate their abilities and we can retain their long-term services.

### Human Resource Evaluation System

We have adopted a human resource evaluation system that prioritizes development over compensation. The system assists employees in deepening their understanding of their evaluation results through feedback. It also strongly emphasizes the exchange of opinions between evaluators and employees, who share their thoughts on issues such as identifying areas for future development.

### Work-Life Management

GRI401-3, 403-6

#### Flexible Work Arrangements

We are striving to provide flexible work arrangements for our employees by adopting various employment systems.

#### Various Employment Systems

- Flextime system (Core time: 11:30 a.m. to 1:30 p.m. (head office, branches, etc.))
- Discretionary labor system
- Telecommuting system
- Side job/business system
- Shortened work hours in order to care for children up to sixth grade of elementary school (10-minute increments up to 3 hours per day)
- Shortened work hours in order to provide nursing care to family (10-minute increments up to 3 hours per day)
- Exemption from overtime work in order to care for children under 3 years old
- Restriction on overtime work, exemption from late-night work, and staggered work hours in order to care for children up to sixth grade of elementary school
- Exemption and restriction on overtime work, exemption from late-night work and staggered work hours in order to provide nursing care to family
- Half-day paid vacation
- "Special Reserved" leave (purposes of use: medical care, nursing care, physical checkups, fertility treatment, self-development, etc.)
- Child nursing/nursing care leave (ten days per year)
- Volunteer activity leave
- Personnel management systems for each course, including area-specific positions (There is a system for changing courses)
- Maternity leave and childcare leave system (up to two years and one month)
- Nursing care leave system (up to a total of two years per person requiring nursing care)
- Work-life management leave
- Career comeback system and more

### Labor-Management Cooperation to Establish the Systems

In order to understand the needs of our employees and incorporate them into the various systems we have established, together with the Taiheiyo Cement Labor Union which represents our employees, four specialized committees that meet as needed. These committees serve as a forum for labor and management to exchange opinions and communicate with each other in order to establish the various systems.



### Support for Continued Employment During Childcare and Nursing Care

In addition to systems for childcare leave, nursing care leave and shorter working hours, we operate a long-term leave (work-life management leave) and reemployment system (career comeback system) to support employees who are forced to interrupt their careers due to unavoidable circumstances such as accompanying a spouse on a job transfer or for childcare.

### Status of Response to Side Jobs and Businesses

We allow employees to engage in side jobs and side businesses in order to encourage the development of diverse experience. However, we do not permit it in cases where it may be difficult to fulfil work obligations, where there may be safety implications, including preventing overworking, or where there may be a conflict of interests in terms of good faith, confidentiality or competition obligations.

### Increasing Understanding of the Systems

We have established an exclusive website for our employees regarding the various systems called Kirakira Palette in order to increase awareness of the various systems that can be utilized for work-life management. The site provides information on childcare and nursing care, health, self-development, and other information to support employees' lives, which can be accessed from anywhere at anytime. We are working to enhance the content.



## Health and Productivity Management (H&PM) Promoting H&PM

We have been implementing H&PM initiatives since FY2019, and in 2022 we revised the "Taiheiyō Cement Group Health-conscious Management Declaration" in order to maintain and promote the health of our employees and their families, as well as to create a rewarding workplace.

### Taiheiyō Cement Group Health-Conscious Management Declaration

The physical and mental health of our employees and their families is a prerequisite for us to realize our mission of contributing to social infrastructure development by providing solutions that are environmentally efficient, enhancing our competitive position and bring value to our stakeholders. We hereby declare that we regard our employees as "human capital" and that we will work to maintain and improve their health and that of their families, and aim to create a rewarding workplace where employees can fully demonstrate their abilities.

September 2022  
TAIHEIYO CEMENT CORPORATION  
Masafumi Fushihara, President and Representative Director

### Fundamental Policies

- Under the Health-Conscious Management Declaration, the Taiheiyō Cement Group, led by the Human Rights & Labor Practices Committee, will work with each business site to promote efforts to maintain and improve the health of employees and their families and to create a rewarding workplace.
- Employees will enhance their physical and mental wellbeing and improve their quality of life by actively working to maintain and improve their health and that of their families.

 Please see our website for more information about our promotion of H&PM.

<https://www.taiheiyō-cement.co.jp/english>  
Sustainability ▶ Collaborating with Society ▶ Human Capital  
▶ Health and Productivity Management

### 1 Initiative

#### Measures to Ensure Employee Health

The results of periodic health examinations of all employees are analyzed and used as indicators for H&PM initiatives and measures toward ensuring health and preventing serious illnesses.

#### Ratio of employees receiving periodic health examinations (%)

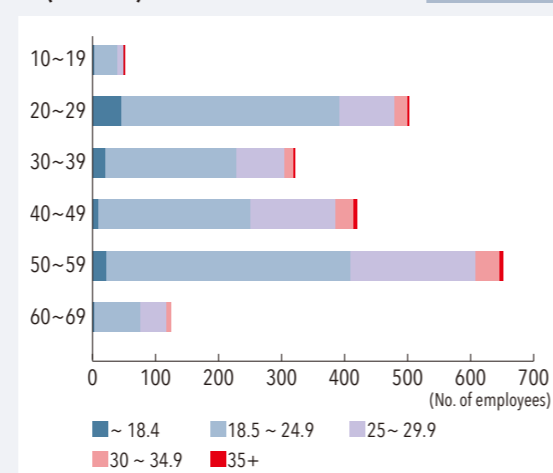
FY2020	FY2021	FY2022
100%	100%	99.9%

### 2 Initiative

#### Preventive Measures Against Lifestyle-related Diseases

We are promoting the prevention of lifestyle-related diseases through indicators such as rates of employee obesity, smoking and alcohol consumption. Regarding obesity in particular, we have set a goal of reducing the percentage of employees with a BMI of 25 or higher to 30% (currently 33% as of August 1, 2022) and are implementing measures such as walking events.

#### Employee BMI Distribution Graph by Age (FY2022)



### 3 Initiative

#### Mental Health Support

In addition to establishing internal and external counseling services for mental health, we provide health literacy education for all employees to maintain mental health and conduct periodic stress checks. Highly stressed employees are offered an interview and business sites with high stress are also subject to analysis of the workplace.

#### Ratio of Employees Taking Stress Checks

FY2020	FY2021	FY2022
95.4%	98.1%	97.5%

#### Counseling Services on Mental Health

Internal	Industrial physician
External	Taiheiyō Cement Health Insurance Consultation Line (telephone and online) * Family members of employees are also eligible

## Respect for Human Rights

### Approach






We formulated our Basic Policy Concerning Human Rights and Labor Practices in April 2015 with the awareness that respecting human rights and diversity is a fundamental principle for a sustainable society, and taking into consideration the Universal Declaration of Human Rights and the labor standards of the International Labor Organization.

Furthermore, we signed the United Nations Global Compact in May 2022 and will further enhance our efforts to protect human rights.

### Basic Policy Concerning Human Rights and Labor Practices

- Recognizing that respecting human rights is a foundational management concern, we will strive to address human rights issues.
- We will respect diversity and will not tolerate discrimination or harassment in any form.
- Applying accepted international principles, laws and labor practices in each country, we will respect the rights of all our workers, provide them with employment free of discrimination and strive to ensure equal employment opportunities.
- We will strive for better working conditions and a workplace environment that ensures the health and safety of our employees.
- We will not tolerate child labor or forced labor under any circumstances.

### Human Rights Issues Survey Roadmap

Survey Subjects	FY2023	FY2024	FY2025
6 domestic plants under direct control	 Interview survey  Documentary survey	(Follow-up survey)	(Follow-up survey)
Major domestic primary suppliers		 Documentary survey	(Follow-up survey)
Major domestic and overseas group companies		 Documentary survey	(Follow-up survey)
Other overseas group companies Major domestic secondary suppliers Major overseas primary suppliers			 Documentary survey

## Signatory to the UN Global Compact

The United Nations Global Compact (UNGC) is the world's largest sustainability initiative, bringing together the United Nations and the private sector (businesses and organizations) to build a healthy global society.

We signed the Compact in May 2022 and endorse the ten principles related to the protection of human rights, the elimination of unfair labor practices, environmental responsibility, and the prevention of corruption, and we are taking various steps to ensure we achieve these principles.



## Human Rights Due Diligence

We are planning to conduct a survey on human rights issues in phases starting in FY2023, which will include our supply chain. We will identify human rights risks based on factors including international standards, external requests and characteristics of the industry, conduct the survey and then consider countermeasures to address the findings.

The survey in FY 2023 will cover the six plants directly under our control, and the scope will be expanded from FY2024 to include Group companies and suppliers.

### Initiatives Regarding Respect for Human Rights Educational Activities on Human Rights

In FY2022, the topic of the training for each job level was "recent Dowa issues and harassment prevention", while the training program for the top management at group companies was related to "workplaces where both men and women can work comfortably". We also provided training support to Group companies, distributed human rights educational booklets and provided information.

#### Internal Training and Motto Submission (FY2022)

Training	Results
Taiheiyo Cement Group CSR top management lecture	125
Human rights training for each job level at headquarters	307*
Human rights training at branches and plants	493
Number of Human Rights Week mottos submitted (employees and family members)	1,650

\* Excluding those who viewed job level-specific videos

#### Our Human Rights Hotline

Members of the harassment counseling committees and human rights committees located at all our business sites conduct activities to raise awareness of human rights to prevent harassment, and handle any related complaints to create a positive workplace environment.

In addition, we have contracted with the Japan Institute for Women's Empowerment & Diversity Management to provide external consultation services and are striving to create an environment conducive to consultation.

In FY2022 we received 9 reports via the hotline. We reviewed the details of each report based on requests from the complainants, and responded appropriately.

#### Harassment Hotline

<b>Internal</b>	Human rights awareness promotion committee members and harassment consultation members have been assigned at all our business sites (56 in total)
<b>External</b>	Telephone and website consultations have been contracted to the Japan Institute for Women's Empowerment & Diversity Management Harassment Hotline

#### Number of Reports to the Harassment Hotline (FY2022)

	Non-consolidated			
	Sexual harassment	Power harassment	Other forms of harassment	Total
Internal	1	5	0	6
External	0	3	0	3

### Diversity

#### Approach

We are promoting diversity and inclusion, and utilizing diverse values and personalities as a driving force for our innovation and growth.

#### Promoting Diversity

The promotion of diversity is one of the most important issues for the creation of an innovative workforce, and we are actively working with the aim of becoming a company where women and other people with diverse values can play an active role. We have added diversity education to the curriculum of our job level-based training and are promoting diversity and inclusion.



Please refer to our website regarding the "General Employer Action Plan" based on the Act for Promotion of Women's Participation and Advancement in the Workplace.

<https://www.taiheiyo-cement.co.jp/english>  
Sustainability ▶ Collaborating with Society ▶ Diversity

#### Promoting Women's Participation and Advancement in the Workplace

We established goals and a basic policy regarding women's participation and advancement in the workplace in November 2013 and began implementing initiatives. The current quantitative targets are defined in our CSR Objectives for 2025 that were established in May 2015 and have been published both internally and externally. The ratio of female employees was 9.3% at the end of March 2022 and we are continuing our efforts to reach our target of 10% or more.

### Fundamental Policies

With the aim of further enhancing corporate value by promoting innovation through the ideas and values of diverse human resources, we will:

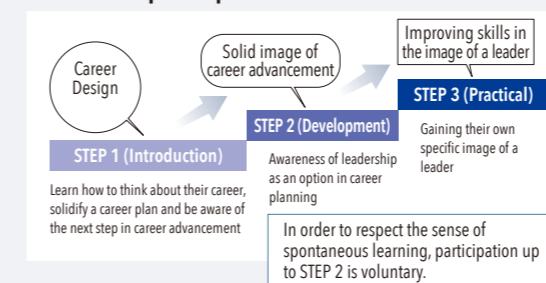
- Promote active recruitment and retention of women in order to build an appropriate human resources portfolio;
- Promote work-life management to improve productivity and build an organization that maximizes the capabilities of our diverse workforce.

#### 1 Initiative

##### Training for the Next Generation of Female Leaders

In Japan, the career development of working women is prone to various uncertainties due to the influence of life events and the absence of role models. To counter this, we provide training aimed at developing the next generation of female leaders.

Number of participants in FY2022: **36**



#### 2 Initiative

##### Participation in the Science, Technology, Engineering and Mathematics Challenge (Rico-challe)

We participate in the "Rico-challe", a program led by the Gender Equality Bureau of the Cabinet Office to support female junior high and high school students in their choice of science technology, engineering and mathematics fields, and have been holding events during the summer vacation since FY2018. The event was not held in FY2022 due to the COVID-19 pandemic, but in FY2022 an "Online Women's Exchange Meeting - 'Rikejo' (Women in STEM) Job Introduction" was held in August, where participants (female high school and college students) and our female engineers had a chance to interact.

Number of participants in FY2022: **4**

#### 3 Initiative

##### Online Discussion Meeting for Female Engineering Students

We held an online discussion with our female engineers in March 2022 with the aim of helping female students gain a more detailed image of working with us in the future and enhancing their motivation to apply to join our company.

Number of participants in FY2022: **18**

### Infrastructure Development

As a preliminary step to promote the expansion of areas for women to work in, we improved the infrastructure for women by adding changing rooms, restrooms, shower rooms and other facilities at the Central Research Laboratory and at all plants. We are also progressing the conversion to barrier-free facilities and equipment to make them accessible to people with disabilities.



#### Promotion of Mid-Career Recruitment

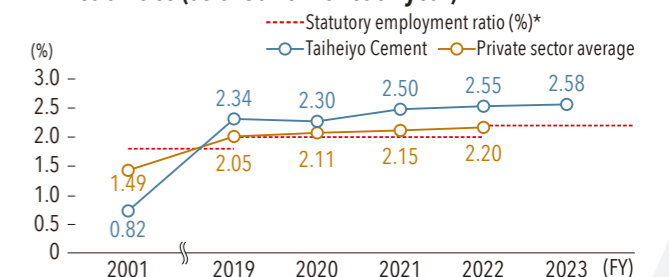
As part of our diversity management, we promote mid-career recruitment to secure personnel with diverse experience. We have hired around ten people in each of the last five fiscal years, and some have already been promoted to management positions. We will continue to actively engage in mid-career recruitment, which has the potential to revitalize organizations that tend to homogenize and be a source of innovation.

#### Promoting Employment Opportunities for Persons with Disabilities

We have been working to improve the working environment for employees with disabilities, including the establishment of three special purpose subsidiaries. We have exceeded the statutory rate of employment for the 15th consecutive year.

We will continue to proactively work to increase the number of employees with disabilities while collaborating with schools and support organizations for persons with disabilities.

#### Trends in the Employment Rate for Persons with Disabilities (as of June 1 of each year)



\* Statutory rate: Statutory employment rates were 1.8% until March 31, 2013, 2.0% until March 31, 2018, and are 2.2% since April 1, 2018.

# Value Chain Management

Aiming to build a relationship of mutual trust with each stakeholder in the value chain and achieve sustainable development together.

## Quality and Safe Products

### Approach

In 1998, the year of Taiheiyo Cement's inception, we established a quality policy based on our management policy. We revised the policy by incorporating a visual description of the code of conduct. Through those efforts we have since continually raised awareness of the policy across the organization. It represents our aspiration to continue to be a company that customers trust and rely on by sharing a sense of achievement through each employee's actions and by providing high-quality products and services, leveraging our high technological capabilities and quality assurance system.

### Quality Policy

All of our employees adopt a global perspective, striving to boost customer satisfaction and contribute to society by providing environmentally-friendly products and quality that matches our customers' needs.

#### In order to achieve the aims of our policy

- 1 We develop specific product quality targets based on our Quality Policy and disseminate them within the company.
- 2 We focus our efforts and work positively to achieve the quality targets.
- 3 We carefully review the levels of customer satisfaction and product quality that have been achieved.
- 4 We implement a quality management system and continually improve our products.

### Quality Management

► GRI416-1

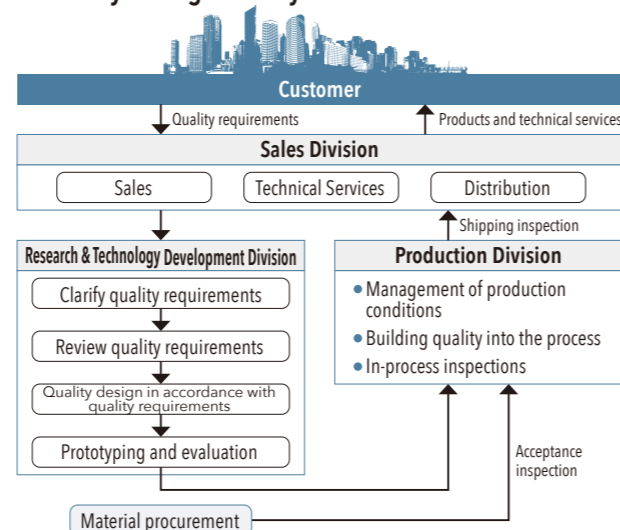
We focus on stabilizing and improving product quality while capitalizing on the production and quality control technologies we have developed over the years. We are further enhancing product quality control by deploying advanced technologies to ensure improved stability such as an online analysis system for raw materials, clinker and cement, the measurement of clinker minerals by X-ray diffraction and our proprietary Taiheiyo Cement Quality Predictive System (TQPS). Whilst maintaining we also make effective use of industrial waste and by-products and in doing so manufacture cement that pays due attention to the conservation of the global environment.

All of our Portland cement plants in Japan, including those of group companies, have obtained ISO 9001 certification, the international standard for quality management systems. Furthermore, all of our overseas cement plants in countries

that adopt ISO have obtained ISO 9001 certification. To ensure product quality and improve business operations, we obtained ISO 9001 (JIS Q9001) certification from the Japan Testing Center for Construction Materials. The scope of our certification encompasses the development, design and production of a range of cement, cement clinker and cement-based soil stabilizer products.

We will continue to enhance our efforts to "supply products that meet customer needs" and "improve customer satisfaction" whilst actively utilizing the ISO 9001 system.

### Quality Management System



### Safe Cement and Cement Products

► GRI416-1

Today every product is expected to be safe; as a construction material that is indispensable for developing social infrastructure cement is no exception. The cement industry has long made use of industrial waste and by-products such as blast furnace slag, coal ash and by-product gypsum as substitutes for natural mineral resources. Furthermore, we use technologies we developed to recycle household waste, such as the AK system to recycle municipal waste and our incineration residue recycling system. We also recycle construction-related soil and waste materials into raw material and fuel for cement production. When our cement plants accept waste we prevent its dispersal and minimize the release of odor by transporting the waste in a tightly sealed panel truck and storing it in a fully enclosed facility to protect the environment of the surrounding area as well as that inside the plant.

We have already established fixed standards for the management of heavy metals contained in natural resources, and are constantly enhancing the control of minor components as

the volume of waste we receive increases. When we receive new types of waste or waste from new sources, we strictly apply rules under which we conduct three kinds of inspection related to the source of the waste, its chemical composition and the results of trial use to identify any potentially negative impact on product quality or the surrounding environment. We will then make a final decision on whether to receive the waste. These measures help us ensure product safety.

### Ensuring Product Safety Following a Nuclear Accident

► GRI416-1, 417-1

As a consequence of the nuclear accident at the Fukushima Daiichi Nuclear Power Station of Tokyo Electric Power Company Holdings, Inc. in 2011, we discovered that some industrial waste used for making cement contained specified radioactive material. We have established a system to ensure that the radioactive concentration in cement shipped from our plants is below the safety limit\* set by the Japanese government by strictly controlling the radioactive concentrations in raw materials and fuels for cement. In the interest of full disclosure, we post the measurement results on our website every month.

\* The Japanese government set a limit of 100 Bq/kg as the safety standard for radioactive concentrations in cement, effective from May 2011.

 Please see our website for more information about radioactive concentrations in our products. (in Japanese)  
<https://www.taiheiyo-cement.co.jp/news/sokutei.html>

### Provision of Information Using SDS and Labeling

► GRI417-1

To ensure the safety of cement users we prepare Safety Data Sheets which contain hazard identification details and make these sheets available on our website. GHS labels are also attached to bags and flexible containers.

### Minor Components of Ordinary Portland Cement

(Unit: mg/kg)

		FY1988	FY2018	FY2019	FY2020	FY2021	FY2022
Fluorine	Average	—	448	427	435	409	395
	Max.	—	543	504	578	512	449
	Min.	—	339	355	337	326	311
Total chromium	Average	—	79	77	84	79	75
	Max.	—	88	95	95	85	88
	Min.	—	69	64	75	73	65
Water-soluble hexavalent chromium	Average	17.4	7.4	8.6	7.9	8.0	7.1
	Max.	32.3	9.3	11.4	9.8	11.1	8.9
	Min.	5.3	6.0	5.4	6.6	5.5	5.9
Zinc	Average	556	530	600	554	609	560
	Max.	1059	659	772	677	734	742
	Min.	137	390	449	493	464	434
Lead	Average	221	57	62	63	66	61
	Max.	668	84	84	77	88	82
	Min.	18	41	38	43	39	43
Copper	Average	122	223	274	263	267	253
	Max.	233	319	415	359	442	404
	Min.	17	162	163	181	168	159
Arsenic	Average	17	12	18	13	15	14
	Max.	39	43	47	28	47	39
	Min.	2	2	6	7	6	6
Selenium	Average	—	0.7	0.5>	0.8	0.8	0.7
	Max.	—	1.2	0.5>	0.9	0.9	0.8
	Min.	—	0.5>	0.5>	0.6	0.5>	0.5>
Cadmium	Average	1.5	1.3	1.3	2.0	1.7	1.5
	Max.	2.6	2.0	2.0	3.0	2.0	2.0
	Min.	0.6	1.0>	1.0>	1.0>	1.0>	1.0
Mercury	Average	—	0.008	0.005>	0.007	0.010	0.008
	Max.	—	0.015	0.005>	0.011	0.020	0.012
	Min.	—	0.005>	0.005>	0.005>	0.005>	0.005>

## Responsible Sourcing and Supply

### Approach

▶ GRI-102-16

We believe that we grow along with our business partners. In order that we may build relationships of mutual trust and work in tandem with our business partners, our dealings with them are based on fair contracts and we strictly adhere to our agreements. We have established fundamental policies in order to clearly establish our stance towards fair trade, under the “Dealing outside the company in good faith” section of our Standards of Conduct and based on the principle that “we will act in an ethical manner and abide by the laws and regulations of those countries in which we operate” defined in our Business Principles, and our supply chain management is in accordance with these policies.

### Fundamental Policies

- 1 We will conduct fair marketing and bidding, and not engage in unfair practices such as collusion and cartels.
- 2 We will maintain appropriate and transparent relationships with our contractors.
- 3 We will select business partners in a fair and equitable manner.
- 4 We will not offer entertainment or gifts to customers that go beyond what is legally and socially acceptable.
- 5 Our advertising, displays and briefing sessions will be honest and sincere.
- 6 We will respond appropriately to customer feedback.
- 7 We will maintain transparent relationships with governments and local authorities.
- 8 We will respect the cultures and customs of the places where we operate.

In addition, we established the Basic Policy Concerning Procurement in October 2017 to consolidate commitments 2 (“We will maintain appropriate and transparent relationships with our contractors”) and 3 (“We will select business partners in a fair and equitable manner”), and request ethical conduct from our contractors.

 Please see our website for more information about the Taiheiyo Cement Basic Policy Concerning Procurement.  
<https://www.taiheiyo-cement.co.jp/english>  
 Sustainability ▶ Collaborating with Society  
 ▶ Supply Chain Management

In response to the strengthening of international regulations against acts of bribery and to strengthen our initiatives against corruption as stated in commitments 4 (We will not offer

entertainment or gifts to customers that go beyond what is legally and socially acceptable) and 7 (We will maintain transparent relationships with governments and local authorities), we established our Anti-Bribery Policy in January 2017, and concurrently released a statement by our president proclaiming the group’s stance against bribery.

 Please see our website for more information about the Taiheiyo Cement Basic Policy Concerning Procurement.  
<https://www.taiheiyo-cement.co.jp/english>  
 Sustainability ▶ Corporate Governance  
 ▶ Risk Management and Compliance

### Our Business Partners

▶ GRI102-9

Our main business activities are involved with cement and concrete. Limestone is the main raw material used and group companies are largely in charge of aspects such as the operation and management of the quarries. Coal, however, which is a source of thermal energy and also part of the raw materials we use, is sourced from companies outside the group. Moreover, the waste and by-products that we recycle in our cement production process come from many different industries and a variety of locations.

Most of our production divisions are mechanized and there are almost no labor-intensive processes. Tasks such as production equipment maintenance are outsourced to partner companies and contractors as and when necessary.

Our cement products are mainly marketed to building materials companies. Raw materials and products are transported by group companies and also by companies outside the group.

In our business activities we strive to communicate closely with the local governments of the countries and regions where our business sites are located. We deem it essential that our supply chain respects human rights, in particular the banning of forced labor and child labor, complies with laws and responds to demands.

### Safety of Business Partners Working at Our Production Sites

▶ GRI-403-1, 3

Operations at our cement production sites and quarries are increasingly being mechanized. Since some tasks are performed in elevated places or at high temperatures, ensuring worker safety at our production sites is essential. We do our best to ensure that employees of contractors working at our sites avoid any accidents. They receive various types of training when they start work at the site, are required to submit a work plan that includes a safety plan, and are given guidance with regard to that plan.

### Enhancing Our Relationship with Our Customers

We place the highest priority on achieving greater customer satisfaction. Business units periodically exchange information and link up to strengthen production focused on quality that meets customer expectations.

We gather information about customer requirements concerning product quality and services from our sales and technical staff at branches and sales offices. We then analyze that information, make improvements, and provide feedback. To encourage overseas customers to adopt our high-quality products we have started to incorporate local needs into product quality, just as we do for domestic customers, and we are fine-tuning our products to meet the requirements of each overseas market. We respond sincerely to every quality issue raised by our customers, and strive to improve product quality and customer satisfaction.

We actively identify potential quality risks, investigate their causes and implement stringent cross-divisional countermeasures with the aim of establishing an even more reliable quality assurance system.

In addition, we are expanding our quality assurance system to include the products of our group companies as well as Taiheiyo Cement Corporation products. We systematically strive to identify and address material issues via cross-divisional initiatives, and aim to boost the reliability of the Taiheiyo brand as well as customer satisfaction.

### User Societies and Industry Associations

▶ GRI417-1

We have founded and manage various cement user societies and industry associations that support participants in vitalizing their business operations and developing technological competitiveness. The National Taiheiyo Cement Ready-mixed Concrete Society, the largest of these user societies, is made up of ten Taiheiyo Cement Ready-mixed Concrete Societies, in locations ranging from Hokkaido to Kyushu. We hold technical sessions and presentations, as well as conduct activities under specific themes suited to local conditions. We also focus on providing support for users in obtaining qualifications such as Authorized Concrete Engineer, Authorized Chief Concrete Engineer, and Authorized Concrete Diagnosis and Maintenance Engineer.

In addition to the Ready-mixed Concrete Society, we have established other associations such as the Taiheiyo Cement Association for the Paving Block Industry and SPLITTON Association Japan to proactively deliver technical support for the mutual development of concrete product companies. We will continue to support activities that benefit cement users.

### Initiatives of the Taiheiyo Cement Association for the Paving Block Industry

Since its establishment in 2003, the Taiheiyo Cement Association for the Paving Block Industry has promoted the increased use of block paving through the exchange of information on concrete block pavement design, manufacturing and construction techniques, and the development of new products and technologies.

Labor shortages have become a major issue in recent years, which requires a prompt response via productivity improvement and reduction of labor demand in order to maintain and expand the volume of pavement block construction. In order to promote mechanized construction, the association is working together with its members nationwide to build a system from manufacturing plant and transportation through to construction, and to study more effective installation conditions.

The association is also actively working to address the SDGs. As block paving has excellent durability, it can be expected to materially contribute to reducing environmental impact by lowering life-cycle costs and reducing waste. For this reason, we are also focusing on advertising activities to gain the understanding of specifiers and end-users.

The association will contribute to society through more vigorous activities to expand the applications and popularity of block paving.

### Activities of the National Taiheiyo Cement Ready-mixed Concrete Society

Region	Details
Hokkaido	Occupational health and safety survey
Tohoku	Survey on qualification acquisition and education
Tokyo	Online workshop for young and mid-career engineers
Kanto	Concrete Forum (Online on-demand format)
Hokuriku	Preparatory courses for concrete engineer, chief engineer, and diagnostician qualification exams
Chubu	On-line virtual workshop on setting the application period of the structural strength correction value.
Kansai	Survey of ready-mixed concrete basic data and preparation of model basic data
Shikoku	Online basic training course on concrete quality control
Chugoku	Publication of “Examples of Responses to Complaints”
Kyushu	Publication of “Response Manual for Concrete in Hot Weather” (2nd Edition)



## Stakeholder Engagement

### Approach

We are promoting timely and appropriate information disclosure and communication with our stakeholders based on our belief that in order to remain a sustainable company, it is essential for us to fulfill our social responsibility and continue to build good relationships in response to the expectations and

demands of our diverse stakeholders.

We will continue to strive to make better use in our management of the opinions and requests we receive from our stakeholders, and to further promote human capital management so that our employees, who are the greatest asset of a company, can work enthusiastically.

Stakeholders	Stakeholders' Interests		Results (FY2022)	Future Issues
<b>Shareholders, investors</b>	<ul style="list-style-type: none"> <li>Financial strategy</li> <li>● Timely and appropriate disclosure</li> <li>● Shareholders and investors' opinions on our business and mission</li> </ul>		<ul style="list-style-type: none"> <li>● IR activity results                             <ul style="list-style-type: none"> <li>- Financial results briefing (online live broadcast): 2</li> <li>- Individual investor meetings: 174</li> <li>- Online investor conference: 2</li> <li>- Online ESG seminar: 1</li> </ul> </li> <li>● Publication of Integrated Report: 1</li> </ul>	<ul style="list-style-type: none"> <li>● Reflecting the perspectives of shareholders and investors</li> <li>● Promoting direct dialogue between shareholders and investors and management</li> <li>● Timely and appropriate disclosure of information and obtaining appropriate evaluation from the market</li> </ul>
<b>Local communities</b>	<ul style="list-style-type: none"> <li>● Engagement with local communities</li> <li>● Biodiversity</li> <li>● Reduction of the company's own waste generation</li> <li>● Appropriate Use of Water Resources</li> <li>● Appropriate Management of Chemical Substances</li> </ul>		<ul style="list-style-type: none"> <li>● Engagements with local communities: 2,135</li> <li>- Global environmental conservation activities: 1,054</li> <li>- Revitalization of local culture and exchange: 816</li> <li>- Regional development: 148</li> <li>- Education and human resources development: 61</li> <li>- Disaster relief: 24</li> <li>- Other: 32</li> </ul>	<ul style="list-style-type: none"> <li>● Reviewing activities under the COVID-19 pandemic</li> <li>● Exploring activities based on the needs of communities</li> </ul>
<b>Customers and business partners</b>	<ul style="list-style-type: none"> <li>● Delivering of carbon neutrality</li> <li>● Compliance</li> <li>● Contributing to a recycling-based society</li> <li>● Conservation of the global environment</li> <li>● Quality Control</li> <li>● Improving customer satisfaction</li> </ul>		<ul style="list-style-type: none"> <li>● Efforts Related to CO<sub>2</sub> Emissions Reduction in the Cement Production Process</li> <li>● Business activities based on our Basic Compliance Policy and Anti-Bribery Policy</li> <li>● Resource recycling with industry and local communities</li> <li>● Disclosure of maintenance and management information on our six directly-controlled domestic plants pursuant to the Waste Disposal and Public Cleaning Law: monthly</li> <li>● Acquisition of ISO 14001 certification through our company-wide environmental management system (including plants, headquarters, branches and Central Research Laboratory)</li> <li>● Acquisition of ISO 9001 certification: 100% in Japan, 100% in overseas cement production sites in countries where ISO is the mainstream standard</li> <li>● National Taiheiyo Cement Ready-mixed Concrete Society: Individual activities in 10 regions in Japan</li> <li>● Various user groups: Taiheiyo Cement Association for the Paving Block Industry, SPLITTON Association Japan, etc.</li> </ul>	<ul style="list-style-type: none"> <li>● Promoting initiatives based on the Carbon Neutral Strategy 2050</li> <li>● Ensuring compliance and anti-bribery throughout the group</li> <li>● Achieving group environmental targets (reduction of CO<sub>2</sub> and main air pollutant emissions)</li> <li>● Increasing customer satisfaction and trust in the Taiheiyo brand</li> <li>● Continuing support activities to meet the needs of users</li> </ul>
<b>Employees</b>	<ul style="list-style-type: none"> <li>● Creating a safe and secure workplace</li> <li>● Promotion of diversity and inclusion</li> <li>● Respect for human rights</li> <li>● Work arrangement reform</li> <li>● Human resource development</li> </ul>		<ul style="list-style-type: none"> <li>● Safety promotion activities with KPIs set by the Companywide Health &amp; Safety Committee</li> <li>● Promotion of initiatives based on the "General Employer Business Action Plan" in accordance with the Act on Promotion of Women's Participation and Advancement in the Workplace.</li> <li>● Promotion of employment of people with disabilities: Exceeded the statutory employment rate (15 consecutive years)</li> <li>● Signatory to the UN Global Compact: May 2022</li> <li>● Promotion of work-life management</li> <li>● Promotion of H&amp;PM: periodic health examinations (once/employee), stress checks (once/employee), mental health consultation service (as needed)</li> </ul>	<ul style="list-style-type: none"> <li>● Achieving safety-related KPIs</li> <li>● Continuing efforts to achieve the CSR Objectives for 2025 (Diversity)</li> <li>● Promoting barrier-free accessibility at each business site</li> <li>● Identifying human rights risks throughout the supply chain</li> </ul>



**Communities**

**Approach**

We believe that by making social contributions in the areas where we operate, both domestically and overseas, we can create social and environmental value and contribute to a sustainable society and sustainable development of our business. Through active communication with local communities we aim to understand their respective needs and challenges and, by making contributions that leverage the characteristics of our business, we aim to build trust with local communities and grow together with them.

**Practical Mechanical Equipment Maintenance Workshop for Local High School Students** (Ofunato Plant)



Ofunato Plant has held workshops on mechanical equipment maintenance, a part of the "Kesen Manufacturing Industry Human Resource Development Network Project" led by Iwate Prefecture, for local high school students since 2020.

Graduates from the school who currently work at Ofunato Plant served as the instructors and provided guidance on machine maintenance while the students had real contact with the machines and tools.

**Providing a Plant Site For Health Checkups for Local Residents** (Oita Plant)



In response to a request from the local city of Tsukumi, the Oita Plant offers its premises free of charge every year for use by three adult disease screening vehicles during regular health checkups for residents of the Kegoya district. As there are no health checkup centers within walking distance in the Kegoya district, local residents have expressed gratitude for the opportunity to receive checkups in the neighborhood without having to travel far.

**Acceptance of Interns and Work Experience Students** (Myojo Cement Co., Ltd.)



Myojo Cement accepted interns from Itoigawa Hakurei High School and work experience students from Itoigawa Junior High School, both in Itoigawa city. The program involved an employee explaining the social role of the cement industry and a tour of the limestone quarry and cement plant. We hope to expand it to other schools in Itoigawa.

**Tree Planting Festival**

(Buko Mining Co., Ltd.)



Buko Mining Co., Ltd. holds an annual Tree Planting Festival with the aim of protecting the landscape of the area. In FY 2022, trees were planted along the "Poppo Road", a promenade built on the former freight rail line in Hidaka City. At Buko Quarry, we are planting trees on old quarry areas where operations have completely ended with the cooperation of the Yokoze Town Council and other local residents. We will continue our efforts to preserve the local environment through our quarry greening activities.

**Reconstruction Support for Typhoon-Stricken Areas**

(Taiheiyō Cement Philippines, Inc., Philippines)



A large typhoon that hit the central Philippines region in December 2021 caused extensive damage to Cebu Island. In a disaster in which many residents were forced to evacuate, Taiheiyō Cement Philippines donated relief money to the Province of Cebu and Municipality of San Fernando, where its plant is located, donated a total of 20,000 liters of water for daily use and drinking, mainly to evacuation centers in the town, and also provided support for the early recovery of the local community.

**Donation of Ventilators to Thanh Hoa Province**

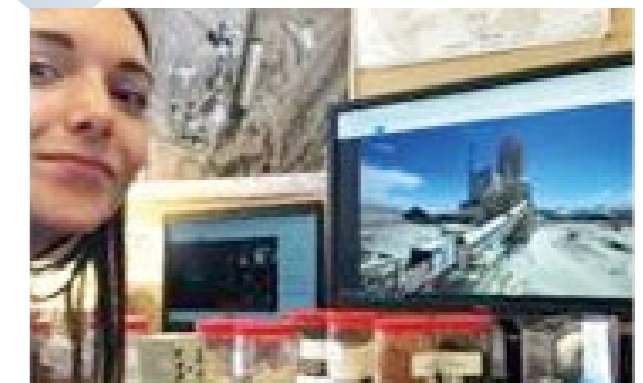
(Nghị Sơn Cement Corporation, Vietnam)



Nghị Sơn Cement donated three ventilators to Thanh Hoa Province, where the company's headquarters and plant are located, during the construction of a new hospital specializing in treating severely ill COVID-19 patients. Thanh Hoa Province expressed its gratitude to Nghị Sơn Cement who aim to grow together with the local community.

**Online Lecture to Junior High School Students**

(CalPortland Company, U.S.)



CalPortland provided an online lecture on cement production to 200 junior high school students in the High Desert region of California where their operations are based. The importance of concrete as a construction material and the variety of careers available in the industry were also explained. Also, CalPortland provided kits to allow students to experience mixing concrete and intend to continue various activities to improve the understanding of the cement industry among students and the local community.

# Management Supporting Value Creation

# GOVERNANCE

## Our Directors and Corporate Auditors



Back row

Independent Corporate Auditor  
**Yoshio Fujima**

Corporate Auditor (Standing)  
**Katsuhide Fukuhara**

Independent Director  
**Shinhachiro Emori**

Director and Senior Executive Officer  
**Tetsuya Ohashi**

Director and Senior Executive Officer  
**Hideaki Asakura**

Director and Senior Executive Officer  
**Yukimasa Nakano**

Independent Director  
**Hideyuki Furikado**

Corporate Auditor (Standing)  
**Masahiro Karino**

Front row

Independent Director  
**Yoshiko Koizumi**

Vice President and Representative Director  
**Yuuichi Kitabayashi**

President and Representative Director  
**Masafumi Fushihara**

Vice President and Director  
**Kunihiro Ando**

Independent Corporate Auditor  
**Wakako Mitani**

Directors



**Masafumi Fushihara**  
President and Representative Director

**Career Summary**

- Apr. 1978 Joined Onoda Cement Co., Ltd.
- Apr. 2007 General Manager of Business Promotion Department of Environmental Business Company, Taiheyo Cement Corporation
- May 2009 General Manager of Sales Department of Environmental Business Company
- Oct. 2010 General Manager of Environmental Business Development Department
- Apr. 2012 Executive Officer and General Manager of Environmental Business Development Department
- Apr. 2015 Managing Executive Officer
- Jun. 2015 Director and Managing Executive Officer
- Apr. 2016 Director and Managing Executive Officer Senior General Manager of Cement Business Division
- Apr. 2017 Director and Senior Executive Officer Senior General Manager of Cement Business Division
- Apr. 2018 President and Representative Director (to present)

**Experience and Knowledge**

Since 2015, Mr. Masafumi Fushihara has engaged in the management of the company as a director and was appointed as president and representative director in April 2018 after serving as senior general manager of Cement Business Division. He possesses a wealth of managerial experience, achievements and management insights. He continuously strives to increase the corporate value of the group and significantly contributes to its development, while also identifying key management issues and supervising business execution.



**Yuuichi Kitabayashi**  
Vice President and Representative Director

**Career Summary**

- Apr. 1978 Joined Nihon Cement Co., Ltd.
- May 2009 General Manager of Kamiiso Plant, Taiheyo Cement Corporation
- Apr. 2011 Executive Officer and General Manager of Production Department
- Apr. 2013 Managing Executive Officer
- Jun. 2013 Director and Managing Executive Officer
- Apr. 2016 Senior Executive Officer and Representative Director
- Apr. 2017 Vice President and Representative Director (to present)
- Apr. 2021 Vice President and Representative Director Overseeing the Carbon-Neutral Technology Development Project Team and Philippines Renovation Construction Project Team (to present)

**Experience and Knowledge**

Since 2013, Mr. Yuuichi Kitabayashi has engaged in the management of the company as a director and was appointed as a representative director in 2016. He possesses a wealth of managerial experience, achievements and management insights. In addition, as the officer in charge of the Carbon-Neutral Technology Development Project Team and the Philippines Renovation Construction Project Team since 2021, he is effective in the role of a director in striving to continuously increase the corporate value of the group as he significantly contributes to its development while also identifying key management issues and supervising business execution.



**Kunihiro Ando**  
Vice President and Director

**Career Summary**

- Apr. 1980 Joined Onoda Cement Co., Ltd.
- Apr. 2011 General Manager of Ofunato Plant, Taiheyo Cement Corporation
- Apr. 2013 Executive Officer and General Manager of Oita Plant
- Apr. 2015 Executive Officer and General Manager of Mineral Resources Business Department
- Apr. 2016 Managing Executive Officer
- Jun. 2016 Director and Managing Executive Officer
- Apr. 2020 Director and Senior Executive Officer
- Jun. 2022 Vice President and Director (to present)

**Experience and Knowledge**

Since 2016, Mr. Kunihiro Ando has engaged in the management of the company as director. As the officer in charge of mineral resources business and environmental business divisions, he is effective in the role of a director in striving to continuously increase the corporate value of the group and significantly contribute to its development while also identifying key management issues and supervising business execution.



**Tetsuya Ohashi**  
Director and Senior Executive Officer

**Career Summary**

- Apr. 1982 Joined Onoda Cement Co., Ltd.
- Oct. 2010 President of Taiheyo Cement U.S.A. Co., Ltd.
- Apr. 2015 Senior General Manager of International Business Division, Taiheyo Cement Corporation
- Apr. 2016 Executive Officer and Senior General Manager of International Business Division
- Apr. 2019 Managing Executive Officer
- Jun. 2019 Director and Managing Executive Officer
- Jun. 2020 Managing Executive Officer
- Apr. 2021 Senior Executive Officer
- Jun. 2021 Director and Senior Executive Officer (to present)

**Experience and Knowledge**

Since 2019, Mr. Tetsuya Ohashi has engaged in the management of the company as a director and significantly contributes to the development of the group as the officer in charge of corporate planning and human resources divisions. He is effective in the role of a director in striving to continuously increase the corporate value of the group as he significantly contributes to its development while also identifying key management issues and supervising business execution.



**Hideaki Asakura**  
Director and Senior Executive Officer

**Career Summary**

- Apr. 1982 Joined Nihon Cement Co., Ltd.
- Apr. 2011 President of Nghi Son Cement Corporation
- Apr. 2016 Executive Officer, Taiheyo Cement Corporation President of Nghi Son Cement Corporation
- Apr. 2018 Executive Officer and General Manager of Sales Department of Cement Business Division
- Apr. 2019 Managing Executive Officer
- Jun. 2019 Director and Managing Executive Officer
- Jun. 2020 Managing Executive Officer
- Apr. 2022 Senior Executive Officer
- Jun. 2022 Director and Senior Executive Officer (to present)

**Experience and Knowledge**

Since 2019, Mr. Hideaki Asakura has engaged in the management of the company as a director and significantly contributes to the development of the group as the officer in charge of accounting, legal and internal auditing departments and real estate division. He is effective in the role of a director in striving to continuously increase the corporate value of the group.



**Yukimasa Nakano**  
Director and Senior Executive Officer

**Career Summary**

- Apr. 1982 Joined Onoda Cement Co., Ltd.
- Apr. 2012 General Manager of Chubu Hokuriku Branch, Taiheyo Cement Corporation
- Apr. 2015 General Manager of Sales Department of Cement Business Division
- Apr. 2016 General Manager of Kyushu Branch
- Apr. 2017 Executive Officer and General Manager of Kyushu Branch
- Apr. 2018 Executive Officer and General Manager of Tokyo Branch
- Apr. 2020 Managing Executive Officer and Senior General Manager of Cement Business Division
- Apr. 2022 Senior Executive Officer and Senior General Manager of Cement Business Division
- Jun. 2022 Director and Senior Executive Officer and Senior General Manager of Cement Business Division (to present)

**Experience and Knowledge**

Since 2022, Mr. Yukimasa Nakano has engaged in the management of the company as a director and significantly contributes to the development of the group as the officer in charge of cement business division. He is effective in the role of a director in striving to continuously increase the corporate value of the group.



**Yoshiko Koizumi**  
Independent Director

**Career Summary**

- Apr. 1972 Registered as a lawyer (Daini Tokyo Bar Association)
- Jan. 1980 Partner, Masuda and Ejiri Law Office (now Nishimura & Asahi)
- Jan. 2008 Counsel of Nishimura & Asahi
- Apr. 2009 Partner of City-Yuwa Partners (to present)
- Jun. 2015 Independent Director of Taiheyo Cement Corporation (to present)
- Jun. 2015 Independent Director of Dowa Holdings Co., Ltd. (to present)
- Jun. 2016 Independent Director of Sumitomo Bakelite Co., Ltd.
- Sep. 2017 Independent Corporate Auditor of Nippon Koei Co., Ltd. (to present)

**Experience and Knowledge**

After working as counsel and partner at law firms, Ms. Yoshiko Koizumi was appointed as an independent director of the company in June 2015. She has a wealth of corporate law experience and provides precise recommendations and advice from an objective standpoint. Independent of the management team that executes business in the Board of Directors, she also monitors and supervises overall management.



**Hideyuki Furikado**  
Independent Director

**Career Summary**

- Apr. 1977 Joined the Ministry of Finance
- Jul. 2004 Deputy Director-General of Financial Services Agency
- Jul. 2010 President, Policy Research Institute, Ministry of Finance, Japan
- Dec. 2013 Retired from Ministry of Finance
- Jun. 2014 Senior Managing Director of Trust Companies Association of Japan
- Jun. 2021 Independent Director of Taiheyo Cement Corporation (to present)

**Experience and Knowledge**

After serving at the Ministry of Finance and as the managing director of a general incorporated association, Mr. Furikado was appointed as an independent director of the company in June 2021. He has extensive administrative experience as a government official, and provides precise recommendations and advice from an objective standpoint. Independent of the management team that executes business in the Board of Directors, he also monitors and supervises overall management.

Corporate Auditors



**Katsuhide Fukuhara**  
Corporate Auditor (Standing)

**Career Summary**

- Apr. 1981 Joined Onoda Cement Co., Ltd.
- Apr. 2013 General Manager of Corporate Planning Department, Taiheyo Cement Corporation
- Apr. 2015 Executive Officer and General Manager of Corporate Planning Department
- Apr. 2017 Managing Executive Officer
- Jun. 2017 Director and Managing Executive Officer
- Jun. 2020 Managing Executive Officer
- Jun. 2021 Corporate Auditor (Standing) (to present)

**Experience and Knowledge**

Mr. Katsuhide Fukuhara possesses a wealth of professional experience and expertise as a director and managing executive officer with extensive responsibilities in construction materials business and group company administrative divisions whose work includes advancing our group management. He effectively audits the execution of duties by directors to continuously improve the corporate value of the group.



**Wakako Mitani**  
Independent Corporate Auditor

**Career Summary**

- Apr. 2000 Registered as a lawyer (Daiichi Tokyo Bar Association)
- Jul. 2001 Joined TANABE & PARTNERS
- Apr. 2012 Partner, TANABE & PARTNERS (Current position)
- Feb. 2018 Independent Corporate Auditor of Taiheyo Cement Corporation (to present)

**Experience and Knowledge**

After working as a partner at a law firm Ms. Wakako Mitani was appointed as an independent corporate auditor of the company in February 2018. As a lawyer she has considerable experience, achievements and insights in the field of corporate legal affairs, and effectively audits the execution of duties by directors from an independent, objective and fair standpoint.



**Shinhachiro Emori**  
Independent Director

**Career Summary**

- Apr. 1975 Joined Toyo Soda Manufacturing Co., Ltd. (currently TOSOH CORPORATION)
- Jun. 2010 Director of TOSOH CORPORATION
- Jun. 2011 Managing Director of TOSOH CORPORATION
- Jun. 2012 Representative Director and Managing Executive Officer of TOSOH CORPORATION
- Jun. 2015 President and Representative Director of TAIYO VINYL CORPORATION
- Jun. 2020 Independent Director of Taiheyo Cement Corporation (to present)

**Experience and Knowledge**

After serving as representative managing director of Tosoh Corporation and president and representative director of Taiyo Vinyl Corporation, Mr. Shinhachiro Emori was appointed as an independent director of the company in June 2020. He possesses a wealth of experience, achievements and insight as a corporate manager. He provides precise recommendations and advice from an objective standpoint. Independent of the management team that executes business in the Board of Directors, he also monitors and supervises overall management.



**Masahiro Karino**  
Corporate Auditor (Standing)

**Career Summary**

- Apr. 1980 Joined Nihon Cement Co., Ltd.
- Mar. 1980 Registered as a certified public accountant
- Apr. 2004 General Manager of Legal Department, Taiheyo Cement Corporation
- Apr. 2013 Executive Officer and General Manager of Legal Department
- Apr. 2016 Managing Executive Officer
- Jun. 2016 Director and Managing Executive Officer
- Apr. 2019 Director and Senior Executive Officer
- Apr. 2022 Director
- Jun. 2022 Corporate Auditor (Standing) (to present)

**Experience and Knowledge**

Mr. Masahiro Karino possesses a wealth of professional experience and expertise as a director and managing executive officer with extensive responsibilities in human resources, legal and auditing divisions, whose work includes advancing our group management. He effectively audits the execution of duties by directors to continuously improve the corporate value of the group.



**Yoshio Fujima**  
Independent Corporate Auditor

**Career Summary**

- Nov. 1974 Joined Chuo Audit Corporation (now MISUZU Audit Corporation)
- Mar. 1980 Registered as a certified public accountant
- Sep. 1990 Employee, Chuo Shinko Audit Corporation (now MISUZU Audit Corporation)
- Aug. 1996 Representative Partner, Chuo Audit Corporation (now MISUZU Audit Corporation)
- Jul. 2007 Retired from MISUZU Audit Corporation
- Jun. 2011 Independent Corporate Auditor, JIEC Co., Ltd.
- May 2012 Independent Corporate Auditor, Prime Works Co., Ltd. (now Neos Corporation)
- May 2016 Independent Director (Audit and Supervisory Committee Member), JIEC Co., Ltd.
- Jun. 2019 Independent Corporate Auditor of Taiheyo Cement Corporation (to present)

**Experience and Knowledge**

After serving as a representative partner of an auditing firm and an independent director and auditor of operating companies, Mr. Yoshio Fujima was appointed as an independent corporate auditor of the company in June 2019. As a certified public accountant, he has abundant experience, achievements and insights, including many years of practical experience in corporate accounting. He effectively audits the execution of duties by directors from an independent, objective and fair standpoint.

## Roundtable Discussion by the Independent Directors

We want to see the company further strengthen its group governance and enhance communication with stakeholders about its efforts to create corporate and social value.



Independent Director  
**Shinhachiro Emori**

Independent Director  
**Yoshiko Koizumi**

Independent Director  
**Hideyuki Furikado**

We asked our three Independent directors to discuss the status and issues of the group's corporate governance structure and make recommendations, in particular regarding the ideal form of group governance. They also identified that we should be more proactive in promoting our initiatives to solve social issues in order to increase external recognition of our efforts.

### Recommendations Based on Their Careers as Independent Directors

**Koizumi:** My first exposure to the world was working as an interpreter at the 1964 Tokyo Olympics, which inspired me to be active in the global society and pursue a career as an international lawyer. Since then, I have been involved mainly in corporate overseas expansion, international transactions and dispute resolution, and I am now in my 50th year. I am able to offer analysis and suggestions as an international lawyer on corporate legal affairs such as barriers and solutions for further globalization of the group, which has its overseas production and sales bases mainly in the Pacific Rim, as well as candid opinions based on my experience as an independent director and independent corporate auditor at other companies.

**Emori:** My background is working for a chemical manufacturer that also manufactures cement, where I spent most of my career in the sales, human resources and corporate planning departments, and also served as both a representative of the parent company and of the group companies. As an independent director who knows the practicalities of corporate management, I believe that my role is not only to put the brakes on management, but to also step on the accelerator occasionally. I believe that I can enhance the effectiveness of the Board of Directors by providing useful advice when difficult business decisions must be made.

**Furikado:** I have been involved in the design and introduction of various systems centered around financial policy as a civil servant at the national level. Constructive dialogue with investors based on the Stewardship Code and Corporate Governance Code has become the norm, and I helped lay the foundations for designing the system to build such relationships between companies and investors. As I also have experience in the development of laws and systems related to the governance of financial institutions, I believe

that my role is to contribute to the enhancement of corporate value by fully utilizing this knowledge, promoting constructive dialogue with investors, and making recommendations to enhance group governance.

### Corporate Governance of the Taiheiyo Cement Group

#### Spreading corporate governance from the parent company to the group

**Koizumi:** Since becoming an independent director in 2015, I have continued to have the impression that this is a solid company. From a legal perspective, its rules and regulations are developed and implemented well. The company has been improving its business activities from a CSR perspective under the CSR Management Committee chaired by the President, while also enhancing corporate governance, and I believe that the company has both steadiness, which is backed by its history, as well as a progressive spirit.

**Furikado:** Thorough explanations of each agenda item are provided in advance, which enables the independent directors to fully demonstrate our individual expertise at Board of Directors meetings, and regular business reports are provided weekly. I consider the fact that we can immediately receive a direct explanation from the department in charge when we request additional information as an indication of management's strong intention to improve management transparency and corporate governance.

**Emori:** While I have the same view about the management's efforts towards steadiness backed by history and corporate governance, I believe that the group's sustainable development depends on how this attitude and effort can be developed throughout the entire group. The group consists of more than 270 group companies, each of which not only sufficiently performs its own function in the cement supply

chain, from the extraction of raw materials, such as limestone, to the manufacture and sale of ready-mixed concrete and concrete products. I also consider the group to be a well-balanced corporate entity, with consolidated net sales more than double the parent company's net sales. A relationship of trust between the parent company and each group company is essential to build and spread group governance, and from my practical experience as a manager, I believe that the accumulation of daily communication is extremely important in fostering this relationship.

**Koizumi:** Overseas subsidiaries account for about 40% of the group's cement production capacity and more than half of consolidated operating income. In addition, since growth investments in the U.S. and Southeast Asia are expected to continue in the future, it will be important how we can instill the company's spirit and ensure effective governance in our overseas subsidiaries, which have different histories, features and cultures, even more so than the domestic group companies.

**Furikado:** In order to unite group companies with different histories, business categories and corporate cultures, the



parent company should break free from a top-down structure and improve interactive communication with the group companies. If the voice of the group companies is regularly reaching the headquarters, we will be able to identify issues that will enhance the governance of the group companies even more than before, which should foster a strong sense of unity throughout the group.

#### Toward Improving the Effectiveness of the Board of Directors

**Koizumi:** The effectiveness of the Board of Directors is evaluated through a self-assessment questionnaire of all directors, the results of which are analyzed and evaluated by the Chairman of the board and the independent directors as the evaluation entity. The Board of Directors' meetings feature open and constructive comments and active discussions, with independent directors and corporate auditors making a particularly significant contribution to the deliberations by making proposals and raising issues. One issue is the lack of progress reports on the execution of important projects and feedback on the opinions and suggestions received from institutional investors at investor meetings.

**Emori:** While I also consider it is important to provide independent directors with information on the status of execution of important projects, I believe that if there is a more detailed explanation of the matters discussed within the company prior to the proposal being submitted to the Board of Directors, we will gain a clearer image of the proposal and the quality of the discussion at the Board meeting will be enhanced.

**Furikado:** Independent directors are expected to reflect the perspective of investors gained through dialogue with them in the discussions at board meetings, as well as to provide information and explanations to investors and others as a supervisor of management. While the directors receive timely reports through investor interviews after financial



results are published and ESG interviews, as an independent director I believe that increasing the opportunities for direct dialogue with investors and other stakeholders would improve the quality of proposals to the Board of Directors and the effectiveness of the Board.

#### Sustainability Initiatives

**Koizumi:** Sustainability is deeply ingrained in the group's DNA and it is investing in quarry developments and strengthening of plant facilities in a planned manner with a view to the next 100 years and towards sustainable growth. I believe that developing and utilizing the diverse human resources that will succeed this DNA is also an important issue. In addition to setting diversity targets in the CSR Objectives for 2025 and promoting the active participation of women, the company is also promoting a mid- to long-term training program for excellent human resources in Japan and overseas as part of our efforts to utilize diverse human resources. If we can go one step further in the utilization of human resources, such as by appointing people from overseas group companies

as officers of the parent company, I expect that innovation will also be created naturally.

**Furikado:** Along with the development and utilization of human resources, the protection of human rights is also an extremely important management issue. The Group signed the United Nations Global Compact in May 2022, expressing its commitment to manage its operations with an even greater emphasis on human rights. The signing was also used as the opportunity for commencing human rights due diligence in the supply chain.

**Emori:** The group has long been involved in environmental issues and has contributed to the creation of a recycling-based society by reusing waste and by-products in the cement production process. As a leading company in Japan's cement industry, the early establishment of carbon neutral technology that can be implemented in society is also seen as an important growth strategy. I want to accurately disseminate such information on our corporate activities to meet the expectations of our stakeholders.



# Corporate Governance

We have established the Basic Policy on Corporate Governance and are working to continually enhance it with the aim of fulfilling our management responsibility towards all our stakeholders, including shareholders, and to achieve sustainable growth while maximizing our corporate value.

## Corporate Governance

▶ GRI102-18, 19, 22, 23, 24, 28, 29, 30, 33, 35, 36, 37

Toward sustainable growth and maximizing our corporate value, we are working to enhance corporate governance.

Please refer to our website for the "Taiheiyō Cement Corporation Basic Policy on Corporate Governance."  
<https://www.taiheiyō-cement.co.jp/english>  
 About Us ▶ Corporate Governance

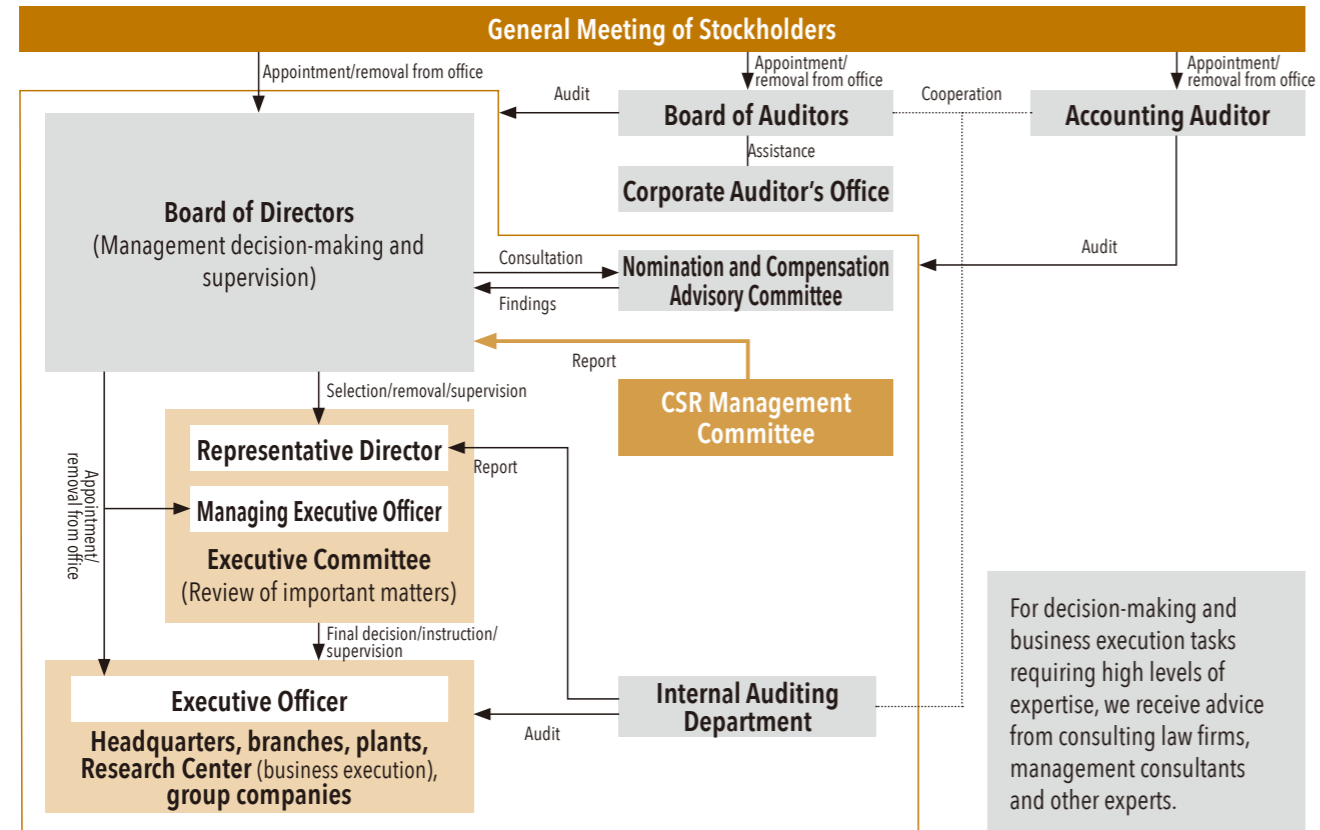
## Corporate Governance System

We are building a system that accurately recognizes and addresses corporate governance issues, governance effectiveness and governance themes in order to deploy a sustainable business model on a global scale.

Our management structure is based upon the Board of Directors and Board of Auditors. We have also introduced an executive officer system and are endeavoring to separate management decision-making and monitoring/supervisory functions from business execution. Our Corporate Auditor's Office provides comprehensive support for corporate auditors in the performance their duties. We have set up an internal control system in the Internal Auditing Department and, by means of internal audits, strive to ensure that operations are properly executed in the company and group companies.

We have also established a CSR Management Committee with the aim to promote sustainability. Under that we have established specialized committees on human rights and labor, environmental management and quality control, and are working to enhance our corporate governance.

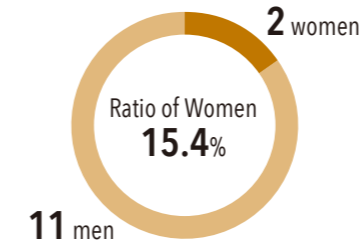
## Corporate Governance System



## Outline of Our Governance System (As of June 29, 2022)

	No. of people etc.
Organizational structure	Company with a Board of Auditors
Chairman of the board	President
No. of directors (No. of female directors)	9 (1)
No. of independent directors included in that figure	3 (1)
No. of independent directors included in that figure	3 (1)
Tenure of a director	1 year
Executive officer system	Yes
No. of corporate auditors (No. of female corporate auditors)	4 (1)
No. of independent directors included in that figure	2 (1)
No. of independent directors included in that figure	2 (1)

## Ratio of Women Directors



## Attendance at Board of Directors meetings in FY2022 (number of meetings attended / number of meetings held)

Name	Board of Directors
Shuji Fukuda	15 / 15 (100%)
Masafumi Fushihara	15 / 15 (100%)
Yuuchi Kitabayashi	15 / 15 (100%)
Masahiro Karino	15 / 15 (100%)
Kunihiro Ando	15 / 15 (100%)
Tetsuya Ohashi	11 / 11 (100%)
Yoshiko Koizumi	14 / 15 (93%)
Shinhachiro Emori	15 / 15 (100%)
Hideyuki Furikado	11 / 11 (100%)
Shigeru Matsushima	15 / 15 (100%)
Katsuhide Fukuhara	11 / 11 (100%)
Wakako Mitani	15 / 15 (100%)
Yoshio Fujima	14 / 15 (93%)

Number of Board of Directors meetings held during the term of office: 15, except for Mr. Tetsuya Ohashi and Mr. Hideyuki Furikado, where 11 meetings were held after they became directors, and Mr. Katsuhide Hattori, where 11 meetings were held after he became a corporate auditor.

## Major Meetings Held

Meeting	No. of times held	Presence of independent officers	Overview
Board of Directors	15	98%	In principle, the Board of Directors meets once a month and at other times when necessary, to make decisions on matters required by law and important matters related to the management of the company. The Board of Directors consists of nine directors, three of whom are independent directors. In addition, all of the corporate auditors attend the Board of Directors meetings. 15 meetings were held in FY2022, with 99% attendance by directors and 98% attendance by corporate auditors.
Board of Auditors	16	100%	The Board of Auditors, consisting of two internal corporate auditors and two independent corporate auditors, fulfills its supervisory and auditing function over management by attending the Board of Directors meetings and other important meetings, questioning the directors and others about the performance of their duties, and inspecting important approval documents. In addition, in order to enhance the audits, the corporate auditors visit branches, plants and subsidiaries to investigate the status of the business operations of the company and group companies. Also, regular corporate auditor liaison meetings are held for the corporate auditors to exchange opinions among themselves (and including those in charge of related divisions when necessary) and share information to build a system that enables fair and appropriate auditing.
Executive Committee	14	—	The Executive Committee consists of all internal directors and managing executive officers except the Chairman of the Board, and makes decisions on important matters other than those that are to be decided by the Board of Directors in accordance with the Companies Act. A standing corporate auditor attends the Executive Committee meetings. Although the independent directors and independent corporate auditors do not attend these meetings, the Corporate Planning Department reports regularly to the independent directors (weekly in principle), and a liaison meeting is held for independent corporate auditors (weekly in principle) where the standing corporate auditors report on the details of important internal meetings such as the Executive Committee, share information and assist them in the execution of their duties.

### Overview of Our Directors and Corporate Auditors

Name	Position	Independent officer	Nomination and Compensation Advisory Committee	Expertise and experience					
				Corporate management	Production Technologies Research	Sales Marketing	Finance Accounting	Legal Risk management	Global business
Masafumi Fushihara	Representative Director President			●		●	●	●	●
Yuuichi Kitabayashi	Representative Director Vice President			●	●			●	●
Kunihiro Ando	Director Vice President		○	●	●	●			●
Tetsuya Ohashi	Director Senior Executive Officer			●	●		●		●
Hideaki Asakura	Director Senior Executive Officer			●		●	●	●	●
Yukimasa Nakano	Director Senior Executive Officer			●		●	●		●
Yoshiko Koizumi	Director	○	○ (Chairperson)	●				●	●
Shinhachiro Emori	Director	○	○	●		●	●		
Hideyuki Furikado	Director	○	○				●	●	●
Katsuhide Fukuhara	Corporate Auditor (Standing)			●	●		●	●	●
Masahiro Karino	Corporate Auditor (Standing)			●				●	●
Wakako Mitani	Corporate Auditor	○					●	●	
Yoshio Fujima	Corporate Auditor	○					●	●	

### Appointment of Board Members Nomination and Appointment of Prospective Directors

The President proposes prospective directors to the Board of Directors selected from a diverse pool of talent, both within and independent of the company, in accordance with the Basic Policy on Corporate Governance. The Board of Directors deliberates and nominates them as prospective directors, who are then appointed by resolution of the General Meeting of Shareholders. During the nomination of prospective directors, the Nomination and Compensation Advisory Committee deliberates and reports the results of its deliberations to the Board of Directors.

### Nomination and Appointment of Prospective Corporate Auditors

After gaining the approval of the Board of Auditors, the President proposes to the Board of Directors prospective corporate auditors endowed with the ability to fairly audit the overall duties of the directors, having suitable experience and skills, and possessing adequate expertise in financial affairs,

accounting and legal affairs. After deliberation by the Board of Directors, nominated candidates are appointed by resolution of the General Meeting of Shareholders.

### Nomination and Appointment of Prospective Independent Officers

Prospective independent officers must satisfy the company's Independence Criteria for Independent Officers and be capable of supervising our directors and management from an independent, external standpoint, and of providing proper and appropriate advice based on their experience and insights from careers in professions such as lawyer, corporate manager, certified public accountant or government official.

 Please see our website for more information about the Independence Criteria for Independent Officers  
<https://www.taiheiyo-cement.co.jp/english>  
 About Us ▶ Corporate Governance  
 ▶ Taiheiyo Cement Corporation Basic Policy on Corporate Governance

### Evaluating the Effectiveness of the Board of Directors

We strive to share information among the internal and external officers in order for the Board of Directors to supervise the execution of the business and make appropriate decisions. Efforts are made to enhance the effectiveness of the directors by providing timely and appropriate information and providing them with opportunities to inspect business sites, including overseas and affiliate companies. In addition, we analyze and evaluate the overall effectiveness of the Board of Directors on an annual basis. All directors and corporate auditors fill out a questionnaire, asking them to freely and openly express their opinions on the structure, operations, agenda, deliberations and other aspects of the Board of Directors. The Chairman of the board and independent directors perform an analysis and assessment and report the details to the Board of Directors. Future challenges and measures are then discussed and confirmed. We have made improvements to the structure and operations of the Board of Directors on the basis of the results, and the evaluation has deemed that the overall effectiveness of our Board of Directors is being ensured.

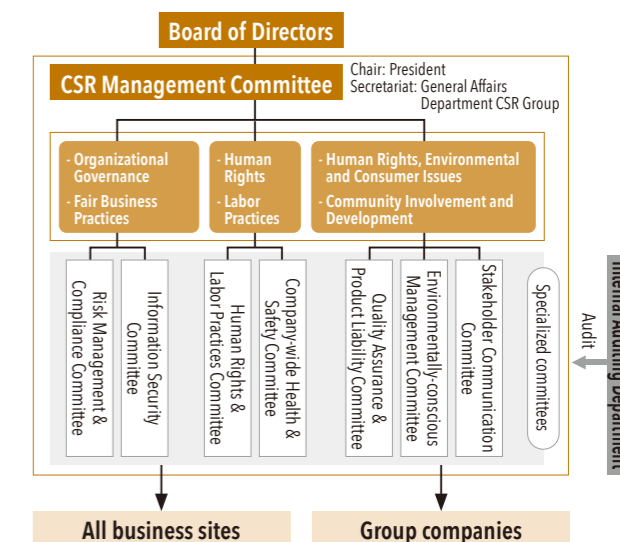
### Activities of the Nomination and Compensation Advisory Committee

We established the Nomination and Compensation Advisory Committee in March 2021 with the aim of further enhancing corporate governance by improving the fairness, transparency and objectivity of the procedures for nominating directors and managing executive officers, and determining their compensation. The Committee consists of four directors appointed by resolution of the Board of Directors, three of whom are independent directors. The Committee is chaired by an independent director appointed by resolution of the Board of Directors.

The Committee deliberates and reports to the Board of Directors on policies regarding the nomination of directors, the appointment and removal of directors, policies for determining the compensation of individual directors, and the details of the compensation of directors.

### The System to Promote CSR Management

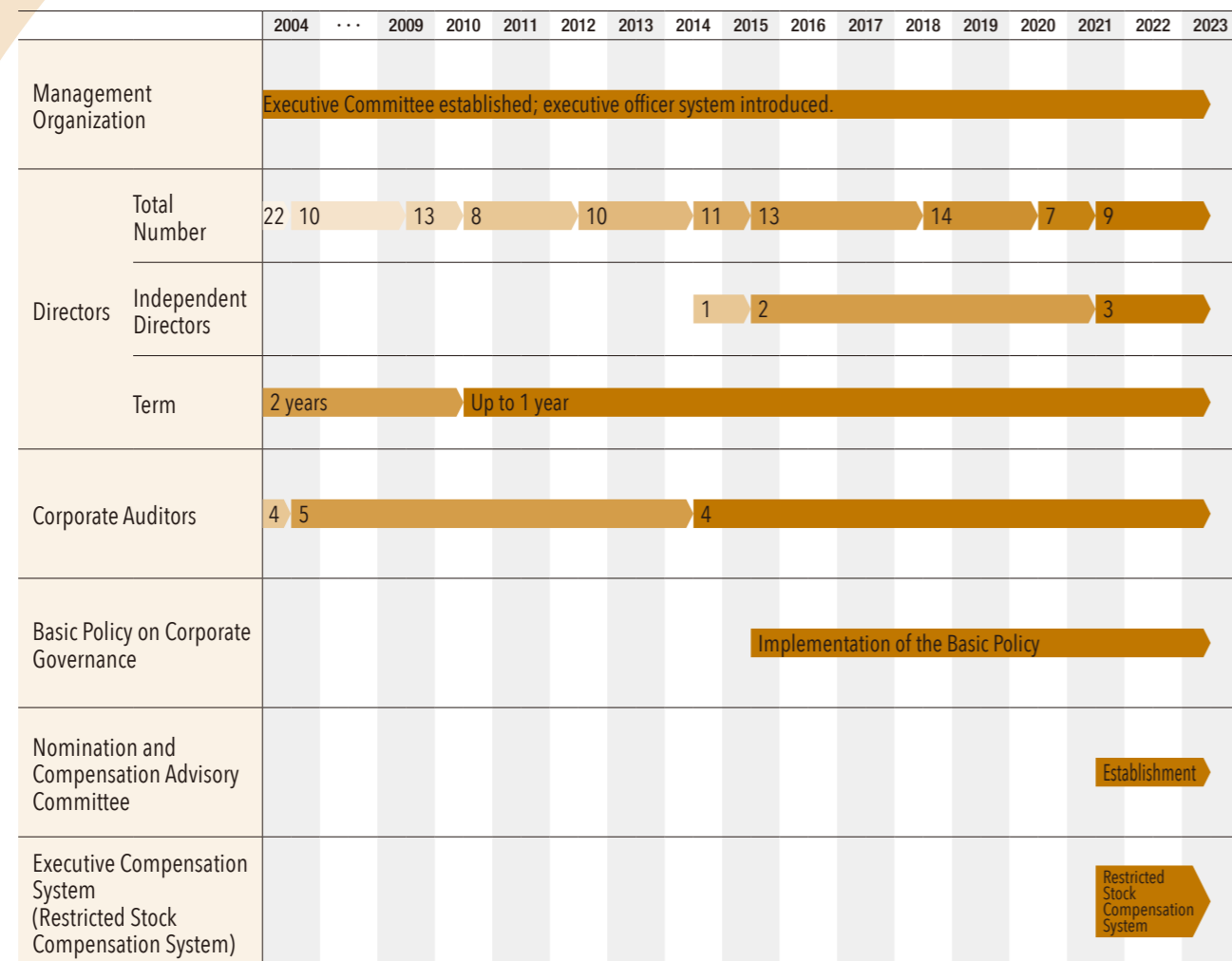
To promote our CSR management we have created a cross-departmental CSR Management Committee, chaired by the president with all board directors and all managing executive officers as members, under the direct oversight of the Board of Directors. The CSR Management Committee's role is to screen CSR action plans and other important matters, and review their progress. Reporting to this committee are seven specialized committees for individual CSR subjects, each chaired by the director responsible for that area. The department most closely associated with any given issue acts as the secretariat for the related committee.



### CSR Management Committee Meetings

Date	Main Details
1st: May 20, 2021 (online)	● Preparation of the Integrated Report
2nd: September 28, 2021	● Interim report on the FY2022 activities of the seven specialized committees ● Countermeasures against the spread of COVID-19
3rd: December 21, 2021	● Status of response to the ESG investment survey
4th: March 29, 2022	● Report on the FY2022 activities of the seven specialized committees ● Planning of the FY2023 activities of the seven specialized committees ● Progress of the CSR Objectives for 2025

### Changes in Governance



### Specific Activities of Independent Directors

(Board Meeting Attendance)

#### FY2022

Name	Board Meeting Attendance	Details of Contribution
Yoshiko Koizumi	14/15	Providing appropriate comments mainly based on her extensive experience as an attorney and broad insight into corporate legal affairs.
Shinhachiro Emori	15/15	Providing appropriate comments mainly based on his extensive experience and broad insight as the manager of a business corporation.
Hideyuki Furikado	11/11*	Providing appropriate comments mainly based on his extensive experience and broad insight as a national public servant.

\* 15 Board of Directors meetings were held during the fiscal year, of which 11 were held after Mr. Hideyuki Furikado assumed the role.

### Internal Control System

▶ GRI102-30

We follow the Basic Policy for Building an Internal Control System to ensure suitable and efficient operations at the company and group companies. Our basic approach is to improve and strengthen systems that are currently in operation, and to review and reappraise essential matters.

Audits were carried out at six Taiheiyo Cement business sites and fourteen domestic group companies in FY2022. Matters in need of improvement were identified, and advice and recommendations are being given.

### Board Member Remuneration

#### Determining Board Member Remuneration

In order to ensure the fairness, transparency and objectivity of decisions regarding the nomination of directors and executive officers and their compensation, the Nomination and Compensation Advisory Committee was established on March 31, 2021 as an advisory body to the Board of Directors, consisting of a majority of independent directors and chaired by an independent director.

In the process for determining the compensation for directors, the Committee deliberates and reports its findings to the Board of Directors, which respects those findings. The decision is then entrusted to the representative directors, within the scope decided at the General Meeting of Shareholders and determined by our company regulations.

The remuneration system for directors (excluding independent directors) consists of fixed compensation, share-based compensation and performance-based compensation, while the remuneration system for the independent directors consists solely of fixed compensation. The remuneration system for auditors also consists solely of fixed compensation.

- Fixed compensation is set according to position.
- Performance-based compensation is calculated by multiplying profit attributable to owners of parent company shares for the fiscal year under review by 1% (up to 400 million yen) and a coefficient according to position.
- Share-based compensation is calculated according to position and issued yearly in the form of share options with restrictions on transfer. In principle, the restrictions on transfer are rescinded on the day the director retires.

#### Composition of Compensation

##### Directors (excluding independent directors)

Fixed compensation	Performance-based compensation	Share-based compensation
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##### Independent Directors, Corporate Auditors

Fixed compensation
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#### Annual Remuneration of Board Members

Remuneration for directors was decided at the General Meeting of Shareholders on June 29, 2022. After the meeting, there are nine directors (of whom three are independent directors), for whose annual remuneration there is a maximum of 1.2 billion yen (of which 100 million yen is for independent directors). Included in that is a maximum annual sum of 200 million yen (200 thousand shares) as transfer-restricted share-based remuneration.

Remuneration for corporate auditors was decided at the General Meeting of Shareholders on June 29, 2000. Since the meeting, there are four corporate auditors, for whose monthly remuneration there is a maximum of 13 million yen.

#### Annual Remuneration of Board Members (FY2022)

Category	No. of board members remunerated	Amount of remuneration paid (million yen)
Directors	9	512
Corporate Auditors	5	72
Sub-total	14	584

The above count of board members and corporate auditors who received remuneration includes one corporate auditor who resigned at the conclusion of the 23rd Ordinary General Meeting of Shareholders held on June 29, 2021.

#### Cross-shareholdings

From the perspective of maintaining and strengthening stable and long-term business relationships with our business partners, we acquire and hold shares in such business partners as cross-shareholdings when it is determined that it will contribute to the enhancement of our medium- to long-term corporate value.

Further, the Board of Directors confirms the necessity of such holdings each year by examining the medium- to long-term economic reasonableness and future prospects of each individual cross-shareholding, based on whether the purpose of holding the shares is appropriate and whether the benefits and risks associated with holding the shares are commensurate with the capital costs.

We do not hold any investment securities where the purpose is purely investment.



# Risk Management and Compliance

Relevant SDGs



We manage risks based on our Basic Risk Management Policy with the aim to reduce management uncertainties and achieve management objectives.

## Basic Risk Management and Compliance Policies

▶ GRI102-16

### Basic Risk Management Policy and Regulations

In our Business Principles we declare “we will strive to anticipate the changing business environment to assess new opportunities for growth”. We consider risk management to be fundamental for reducing management uncertainties and achieving management objectives. Based on our basic risk management policy, we manage risks that make the achievement of management goals uncertain, such as social change, changes in the global environment, natural disasters, accidents and scandals. In addition, we have established risk management regulations to incorporate the risk management policy into specific risk management activities. Our risk management regulations include responses to emergencies.

### Basic Risk Management Policy

- 1 We prevent and reduce risks in order to ensure the quality and safety of our products and services, protect the lives and safety of our employees and their families, and earn greater trust from our stakeholders.
- 2 We create a system to appropriately manage a wide range of risks associated with our business activities.
- 3 We promote risk management through a plan-do-check-act cycle.
- 4 We quickly and appropriately deal with risks as they are identified.
- 5 In collaboration with group companies, we build a system for immediately detecting new risks arising from changes in our business environment and for quickly and appropriately dealing with risks at the group level.

### Basic Compliance Policy

Under our Business Principles we pledge that we will act in strict compliance with the law and in accordance with social mores. Fully aware that compliance is the foundation of CSR management, in March 2005 we published the Basic Compliance Policy and simultaneously created compliance rules. We do not limit our definition of compliance to legal compliance; our definition includes compliance with the social mores from which our laws originate, the mission and business principles of our group, and internal regulations.

### Basic Compliance Policy (Summary)

- Compliance with our Mission, Business Principles and social norms
- Maintaining internal systems and rules and ensuring broad-based awareness of them
- Cooperation with all group companies and promotion of educational and enlightenment activities
- Establishing appropriate responses and policies for when problems occur
- Timely and appropriate disclosure and communication of necessary information
- Compliance with international standards and rules, and respect for local cultures and customs
- Rejection of illegal and unwarranted demands from antisocial forces or organizations

Please see our website for more information about risk management and compliance.  
<https://www.taiheiyocement.co.jp/english>  
 Sustainability ▶ Corporate Governance  
 ▶ Risk Management and Compliance

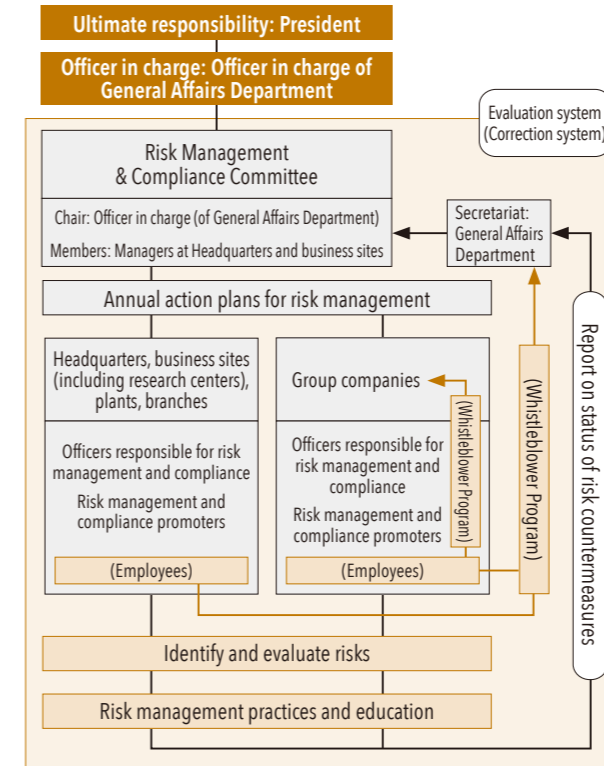
### Risk Management and Compliance Promotion System

▶ GRI102-17, 30, 31

Our president has ultimate responsibility for risk management and compliance promotion. The officer in charge of both areas (officer in charge of the General Affairs Department) is appointed by the president to preside over and run the Risk Management & Compliance Committee and systematically promote organized activities.

The committee plays a core role in our risk management and compliance promotion for the entire group. It deploys the policy, identifies, evaluates and specifies company-wide risks, implements risk management activities based on PDCA cycles and promotes compliance. Moreover, it studies and proposes the creation and revision of rules for risk management and compliance, and provides instructions for advancing the awareness and education of employees. Under the guidance of this committee, each business site and group company have an officer responsible for risk management and compliance, and a risk management and compliance promoter, who carry out specific duties. We held four Risk Management & Compliance Committee meetings in FY2022.

### Risk Management and Compliance Promotion System

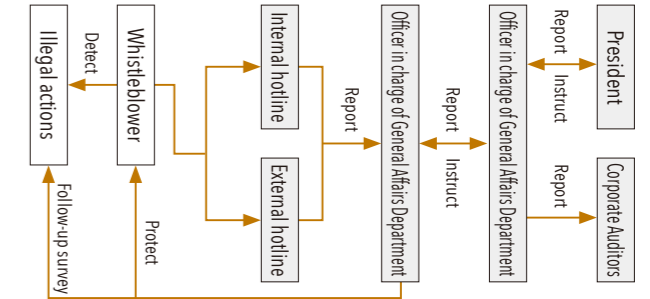


\* Subject to risk management: 101 group companies (as of March 31, 2022)

### Whistleblower Program

Reports and requests are handled properly in accordance with normal company procedures. We have also set up whistleblower hotlines to receive reports directly without the need for the usual company procedures. Whistleblowers have the option of either disclosing their identity, or reporting anonymously to mitigate any potential psychological constraints. We have whistleblower hotlines both internally (at the CSR Group of our General Affairs Department) and externally (at a law firm). Our internal hotline is in a dedicated, locked room equipped with dedicated phone and fax lines, as well as a computer with a dedicated address, in order to safeguard the privacy of those submitting reports. Our external hotline is also available to all employees of group companies in an effort to strengthen group governance, improve program effectiveness and reduce the burden on individual companies. In addition, we created the Whistleblower Program Regulations so whistleblowers using the program are not subject to unfavorable treatment.

### Whistleblower Program



### Results\* of the Whistleblower Program (FY2022)

Hotline	Reports
Internal (CSR Group, General Affairs Department)	6
External (Kajitani Law Offices)	1

\* Cases that should be regarded as reports according to the Whistleblower Program Regulations.

\* Taiheiyocement Corporation and group companies subject to risk management by the Risk Management & Compliance Committee are subject to aggregation.

### Risk Management and Compliance Promotion Activities

▶ GRI102-11, 17, 201-2, 205-2

#### Identifying, Evaluating and Specifying Companywide Risks

In FY2020 we decided to identify the impact of anticipated changes in social and environmental conditions over the next ten years on uncertainties in group management, and then formulate measures to avoid and reduce those uncertainties. Such risks were identified and evaluated accordingly.

For more information  
**Risks and Opportunities** → P.22

#### Measures to Reduce the Impact of Risks

Based on evaluations of identified company-wide risks, our Risk Management & Compliance Committee takes the lead in specifying those to be addressed every year and implementing activities to reduce risk impact through PDCA cycles. The challenges addressed in FY2022 were (1) the establishment of a system to prevent scandals such as accounting irregularities, and (2) the revision of compliance-related rules.

**Examples of Overseas Risk Countermeasures**

We have created and regularly revise the Riot/Terrorism Response Manual. In addition, for countries deemed high-risk to which our employees are dispatched, we clearly state the procedure for deciding on local evacuations, have created a tool for evaluating the emergency evacuation level according to changes in local situations, and provide training using the tool. We also list and secure supplies (food, clothes, hygiene supplies and medicines), as well as cash and other resources needed in the event of evacuation or an emergency at our overseas business sites.

**Emergency Task Force**

If an event such as a disaster, accident or misconduct has occurred, the affected business site informs the general manager of the General Affairs Department. The general manager considers the severity of the event and determines if an emergency task force should be established or if the response to the event can be delegated to the site management. Appropriate action is then taken by the emergency task force or local management.

14 such events were reported in FY2022. Important information, including how the situation is handled, is reviewed by the CSR Management Committee.

As preparation for responding to disasters and accidents, we also conducted Shake Out earthquake drills that assumed a large-scale earthquake at each business site. We also provided training for plant staff so they would understand how to appropriately communicate in the event of an accident or incident.

**COVID-19 Response**

When COVID-19 began to spread in January 2020, we established the Emergency Task Force and Response Council headed by the president, and have taken various measures for business continuity while prioritizing the safety of customers, business partners, local communities around business sites and our employees and those of our group companies. As a result, we were able to maintain a stable supply of cement and resource products essential for the maintenance and construction of social infrastructure in FY2022 and were able to fulfill our responsibilities as an essential industry.

In May 2022, at the two-year mark since the start of the pandemic, the Emergency Task Force and Response Council reviewed the parent company's initiatives. As a result, remote working has been strongly promoted through various measures and a certain level of effectiveness in preventing infection has been confirmed. At the same time, work style reforms and flexible work methods have become widespread, and the IT environment to support such reforms has been improved. On the other hand, the lack of opportunities for in-depth communication between employees and on-the-job training among due to limited opportunities for direct person-to-person contact also stood out.

We will continue to search for solutions to these issues and take various measures to flexibly respond to government policies and measures as well as the infection status to ensure the continuation of our group's stable operation. We will continue our response to COVID-19 in order to remain a corporate group that delivers safety and security to society as an essential industry.

**Risk Management and Compliance Promotion Training**

We provide risk management and compliance training for managers and compliance officers at the company's business sites and group companies. In FY2022, we invited outside lecturers to give talks to the managers at our group companies. Training sessions included "Creating a Comfortable Workplace for Both Men and Women" and "Review of Major ESG Issues (Company-wide Risks)" and were attended by managers from 74 companies. The training program was conducted via streaming video due to COVID-19 measures.

**Compliance Training**

In order to fulfill our mission and uphold our business principles, we formulated Standards of Conduct to guide all our officers and employees in the performance of their daily duties. The standards consist of 35 items in 6 categories that draw upon Taiheiyō Cement's policies, regulations and president's messages delivered within and outside the company.

We have created and distributed to all our employees, as well as all those of our main group companies, the Standards of Conduct (Casebook) which describes specific examples on how to act in line with the Standards of Conduct. We regularly revise the Standards of Conduct (Casebook) to reflect the latest information.

In addition, for all company employees, including those on loan to group companies, we conduct monthly quiz tests as part of e-learning programs to provide education on the Standards of Conduct (Casebook) and other materials so they learn how to act in individual situations. In FY2022, 87.8% of employees participated in the program.

 Please see our website for more information about our Standards of Conduct (Casebook). (in Japanese)  
<https://www.taiheiyō-cement.co.jp/>  
 Sustainability ▶ Corporate Governance  
 ▶ Risk Management and Compliance  
 ▶ Risk Management and Compliance Promotion Activities

**Legal Roundtables for Group Companies**

Since FY2006 we have been holding roundtable discussions attended by management and legal affairs representatives from our group companies. These provide opportunities to share legal information (mainly responses to revisions of laws) in order to further our understanding of major laws relating to corporate management and to assist in the creation of our group's compliance regime.

The roundtables held in FY2022 are as listed in the table below. We plan to hold them in an appropriate form again in FY2023, based on the COVID-19 situation and other considerations.

**Legal Roundtables for Group Companies (FY2022)**

No.	Date	Attendance	Theme
31st	February/ March 2022 (Online)	66 companies 127 participants	Directors' liability under the Companies Act and amendments to the Whistleblower Protection Act

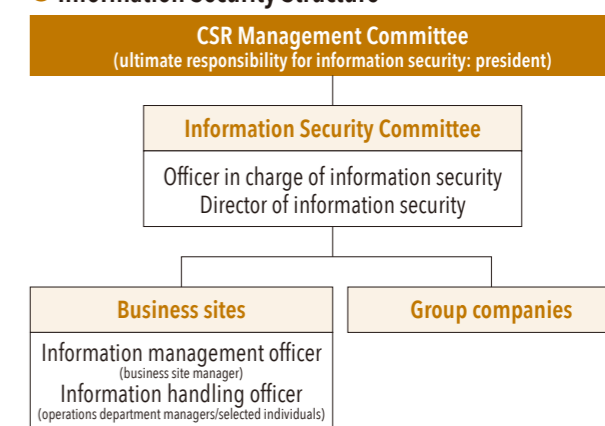
**Information Security**

**System to Promote Information Security**

To ensure and maintain the security of information assets, we have established the Basic Information Security Policy and the Information Security Management Regulations. Under the management system in accordance with these regulations we are actively working to maintain information security.

Our president has ultimate responsibility for information security. The president appoints the officer in charge of information security (officer in charge of the Corporate Planning Department), who presides over and runs the Information Security Committee in order to advance systematic, organized activities to promote information security.

**Information Security Structure**



 Please see our website for more information about our Basic Information Security Policy and Privacy Policy.  
<https://www.taiheiyō-cement.co.jp/english>  
 Sustainability ▶ Corporate Governance ▶ Information Security

**Result of the Investigation into the Explosion at Saitama Plant**

We apologize profoundly for the trouble and anxiety we caused to local residents, our customers, related companies, the authorities concerned and many others due to the explosion that occurred on April 26, 2021 at the on-site power generation facility installed at our Saitama Plant.

We established an accident investigation committee that included external experts in June 2021, which met a total of four times to investigate the cause of the accident and to compile measures to prevent recurrence. The investigation report\* was published on our website on November 9, 2021.

The accident was found to have been a steam explosion caused by the rupture of an evaporator tube that had deteriorated over time. The evaporator tube is located in a device called the fluidized-bed external heat exchanger, a component of the circulating fluidized bed boiler which forms part of the power generation facility. Inspections of the power generation facility had been conducted properly in accordance with laws and regulations since it started operation in 1996 but, since 2009, only visual inspections had been conducted so it was not possible to detect wear of the evaporator tube.

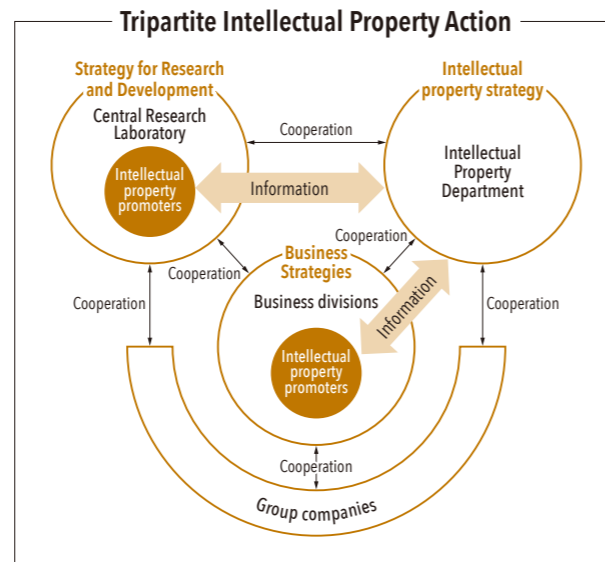
The lesson learned from this accident is the recognition once again that safety is the most important issue, and we will steadily implement safety measures that are considered effective, not only at the Saitama Plant, but also for the power generation facilities and other onsite facilities at our other plants, and we will do our utmost to restore confidence in the company.

\* Explosion Investigation Report  
 For details, please refer to our press release "Fourth Report Regarding the Explosion at Our Saitama Plant" dated November 9, 2021 (in Japanese) and the documents attached to the press release.  
<https://www.taiheiyō-cement.co.jp/news/2021.html>

### Activities to Promote Information Security

In FY2022 we used a portal site on our intranet to remind and educate all employees, and increase awareness of information security. We also hired outside experts to carry out a vulnerability analysis to assess security risks from working at home. The analysis report concluded that the risk is low. We also held a gathering for the information departments of group companies at which we promoted information security measures. In addition, we conducted disaster recovery drills based on hypothetical emergencies, and carried out a security level survey of group companies and information security training designed to enhance our security system. No serious incidents related to information security occurred in FY2022.

We will continue our efforts to improve the security levels of our domestic and overseas group companies.



### Protection and Use of Intellectual Property

#### Fundamental Intellectual Property Policy

Based on our policy of boosting the competitiveness and brand value of the Taiheiyo Cement Group via business-oriented intellectual property activities, we have identified three objectives of building an inventory of intellectual property rights that support our business, providing useful information through intellectual property solution activities based on information analysis, and strengthening the intellectual property capabilities of the entire group. We are promoting such activities to contribute to the sustainable growth of the group.

#### System to Promote Intellectual Property Action

We have formulated and apply our Rules for Handling Intellectual Property Rights and the Taiheiyo Cement Group Intellectual Property Management Guidelines to ensure the appropriate management of intellectual property.

IP Promoters, who are responsible for activities in collaboration with the Intellectual Property Department, are assigned to business units and the Central Research Laboratory to efficiently and effectively promote intellectual property rights acquisition and IP landscape activities.

We have also established the Group Intellectual Property Promotion Committee with our main group companies in order to promote and invigorate the intellectual property activities of each group company by supporting their resolution of issues by analyzing intellectual property information, in addition to regular information sharing within the group.

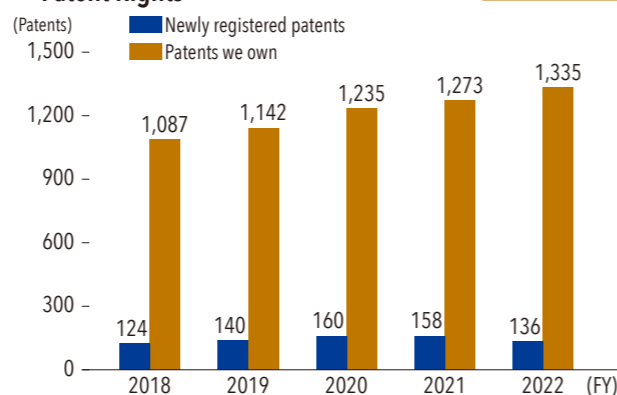
#### Outline of Our Intellectual Property

As of the end of March 2022, the company owned 1,335 domestic and 261 overseas patents, 269 domestic and 146 overseas trademarks, and 7 domestic design rights.

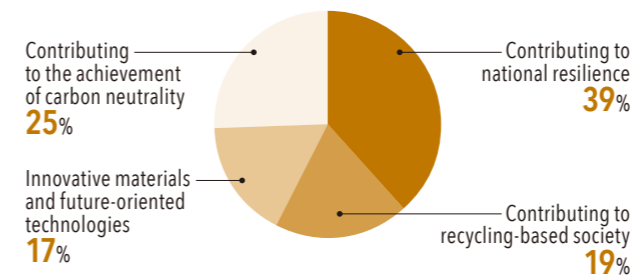
While maintaining our performance in submitting patent applications in the cement and concrete sector that contribute to national resilience and innovative materials and future-oriented technologies, the ratio concerning carbon neutrality has been increasing.

As we proceed with the construction of robust patent clusters by submitting applications and establishing rights to peripheral and improved technologies, we comprehensively determine the importance of inventions and the level of difficulty in detecting infringement by other companies in order to decide whether or not to conceal the know-how.

#### Number of Newly Registered and Current Domestic Patent Rights



#### Patent Application Ratio by Technical Field (FY2022)



#### Risk Management for Intellectual Property

To ascertain recent developments and prevent infringement of other companies' intellectual property rights, we periodically circulate patent information, monitor obstructive patents and conduct various patent surveys. We also take appropriate risk management measures by implementing countermeasures according to the situation.

Regarding risk strategies for overseas intellectual property, in addition to making sure that any differences in legal systems from those in Japan and the practices concerning intellectual property in other countries are well-known through regular intellectual property promotion committee meetings with our business divisions and group companies, we are also building a support system that draws upon external country specific experts.

To date, we have never been sued for infringing intellectual property rights, and therefore have not suffered any ensuing business obstacles.

#### Action to Boost Awareness of Intellectual Property

We are promoting education at each job level in cooperation with related departments in order to make employees aware of intellectual property and boost the group's intellectual property capabilities. We promote the development of the group's human resources through in-house training and taking the national Intellectual Property Management Skills Test.

Our in-house training program includes sessions for newly hired employees, basic training for employees who have little experience dealing with intellectual property, patent description training for young inventors, and training for newly appointed managers, each of which are held annually, as well as patent research skills training which is held regularly. By making remote participation in these in-house training courses possible, we have had more participants than ever before from regional branches, plants and group companies.

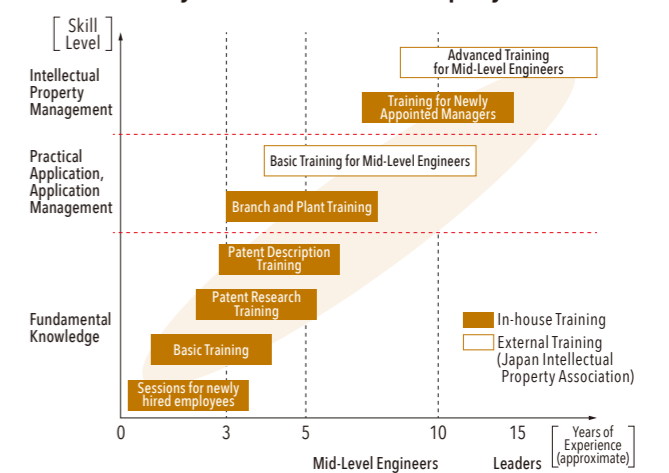
We are also incorporating training by external organizations such as the Japan Intellectual Property Association, to ensure that trainees acquire knowledge appropriate to their level and expertise.

#### In-house Attendance at Intellectual Property Training Sessions (FY2022)

Training Content	Taiheiyo Cement Corporation	Group companies	Total
Basic Training	57	32	89
Patent Description Training	17	25	42
Patent Research Training	13	0	13
External Training	46	26	72
Total	133	83	216

(Unit: People)

#### Education System for Intellectual Property



To boost awareness we have performance rewards for inventors and conduct Intellectual Property Awards for employees who have created outstanding inventions or made other achievements related to intellectual property rights. Payment of performance rewards and the various intellectual property activities are deliberated and decided by the Intellectual Property Rights Management Committee (Chairperson: Director in charge of the Intellectual Property Department).



Patent description training held in an online hybrid format

## ESG Data

E Environment				
	Scope	FY2020	FY2021	FY2022
Cement production (tonnes)	GCCA*1	33,795,197	32,351,093	32,041,021
Cement production in Japan		19,828,804	19,333,769	19,095,708
Cement production overseas		13,966,393	13,017,324	12,945,313
CO <sub>2</sub> emissions (million tonnes/year)	GCCA			
Scope 1 Emissions		25.0	24.0	23.7
Net CO <sub>2</sub> emissions		22.8	21.8	21.6
Scope 2 Emissions		0.896	0.855	0.983
Scope 3 Emissions		–	1.769	1.639
Category 1 (purchased goods and services)		–	0.752	0.635
Category 3 (fuel- and energy-related activities not included in Scope 1 and 2)		–	1.017	1.004
1 Reduction rate of specific net CO <sub>2</sub> emissions (compared with FY2000) (%)		8.3	8.3	8.3
Reduction rate of specific CO <sub>2</sub> emissions across the supply chain (compared with FY2000) (%)		–	9.0	9.6
Clinker/cement ratio (%)		82.8	82.4	83.0
Total energy consumption for clinker production	GCCA			
Energy consumption (TJ)		92,897	89,402	88,414
Fossil energy		79,791	76,693	74,866
Alternative energy		11,433	10,938	11,741
Biomass Energy		1,647	1,770	1,807
Energy intensity (MJ/t-clinker)		3,298	3,321	3,291
Rate of alternative fuel use (%)		14.1	14.2	15.3
Alternative fuel rate (%)		12.3	12.2	13.3
Biomass fuel rate (%)		1.8	2.0	2.0
Use of alternative raw materials	GCCA			
Alternative raw materials rate (%)		15.5	15.8	15.7
Amount and intensity of waste and by-products used	GCCA			
Amount of waste and by-products used (tonnes)		6,386,997	6,108,031	6,244,458
Intensity of waste and by-products (kg/t-cement)		409.5	402.7	405.2
Specific Emissions of Main Pollutants (g/t-clinker)	GCCA			
NO <sub>x</sub>		1,227	1,282	1,193
SO <sub>x</sub>		63	42	39
Dust		30	20	16
Water use (1,000m <sup>3</sup> )	GCCA			
Total water withdrawal		174,979	173,424	173,234
Total water discharge		161,051	159,815	160,308
Total fresh water used		13,933	13,745	13,095
Fresh Water Withdrawal per Unit of Production (m <sup>3</sup> /t-cementitious)		0.817	0.832	0.822
Volume of waste to landfill (t)	Non-consolidated	13	27	49
Environmental conservation expenditure (million yen)	Non-consolidated			
Environmental conservation investment		7,393	6,006	7,592
Business area costs		3,624	3,964	3,249
Details				
Pollution prevention		2,128	1,904	1,599
Global environmental conservation		1,352	1,667	1,351
Resource recycling		144	393	299
Upstream and downstream		3,020	1,255	2,594
Administrative		113	78	36
R&D		539	537	1,707
Social activity		0	0	0
Environmental remediation		97	172	6
Environmental conservation expenses		17,636	16,793	14,406
Business area costs		10,834	9,456	8,309
Details				
Pollution prevention		3,927	3,980	3,645
Global environmental conservation		6,427	4,907	4,186
Resource recycling		481	569	478

	Scope	FY2020	FY2021	FY2022
Upstream and downstream		5,741	6,189	4,991
Administrative costs		149	151	12
R&D costs		770	867	949
Social activity costs		33	43	28
Environmental remediation costs		109	87	117
Total R&D expenditure (million yen)	Non-consolidated	1,154	1,246	1,402

1 CSR Objectives for 2025: Reduction of greenhouse gas emissions

S Social				
	Scope	FY2020	FY2021	FY2022
Occupational health and safety (incidents)	Group*2			
2 Fatalities		0	0	1
Lost-time injuries		30	42	37
Total number of work-related accidents		94	121	103
Absence rate (%)		0.580	0.337	0.604
Number of employees (consolidated)	Group	13,119	12,586	12,542
Employees	Non-consolidated			
Number of employees (excl. seconded employees, etc.)		1,798	1,838	1,874
Number of female employees		192	205	213
Ratio of female employees (%)		10.7	11.2	11.4
Ratio of women in management positions (%)		0.8	1.1	1.5
Average age (years)		41.2	40.7	40.4
Number of employees (Total)		2,332	2,339	2,337
Number of female employees		209	216	218
Ratio of female employees (%)		9.0	9.2	9.3
Ratio of women in management positions (%)		0.7	1.0	1.3
Ratio of women in new management positions (%)		8.0	10.7	6.3
Average years of service (overall) (years)		19.2	18.5	18.1
Average years of service - men (years)		20.0	19.2	18.8
Average years of service - women (years)		12.3	12.3	12.8
Number of graduates hired (non-area specific positions)		69	67	63
Number of females		14	14	11
Ratio of females (%)		20.3	20.9	17.5
Number of graduates hired (area specific positions)		39	42	42
Number of females		4	4	3
Number of mid-career hires		10	11	9
Number of females		1	0	0
Turnover rate within 3 years of employment (%)		FY2018 recruits 16.0	FY2019 recruits 7.6	FY2019 recruits 8.3
Number of non-Japanese employees		6	7	8
Ratio of employees with disabilities (%)		2.30	2.50	2.55
Total annual hours worked (hours)		1,909	1,921	1,911
Overtime and holiday work (monthly average) (hours)		17.3	17.5	17.9
Ratio of annual paid leave taken (%)		79	75	73
Days of annual paid leave taken (days)		15.0	14.2	13.9
Ratio of male employees taking childcare leave or leave for childcare purposes (%)		91	79	91
Ratio of male employees taking childcare leave (%)		29	19	18
Average number of days of childcare leave taken by male employees (days)		5.5	7.1	18.4
Number of employees taking nursing care leave		0	1	2
Education and training expenditure per employee (yen)		74,796	33,893	41,974
Average annual salary (yen)		7,363,166	7,280,071	7,298,681
Ratio of women's wages to men's wages (%) All employees*4		64.3	65.6	67.2
Full-time employees (%)		64.4	65.9	67.4
Part-time and fixed-term employees (%)		67.7	60.6	61.9

	Scope	FY2020	FY2021	FY2022
Support for Health Maintenance	Non-consolidated			
Health examinations				
Ratio of employees receiving periodic health examinations (%)		100	100	99.9
Ratio of employees receiving detailed examination after periodic health examinations (%)		—	84.0	64.6
Preventive measures against lifestyle-related diseases				
Ratio of smokers among employees 40 years and older (%)		31.6	29.7	30.1
Ratio of employees 40 years and older that drink alcohol (occasionally or daily) (%)		77.6	73.9	73.1
Ratio of employees 40 years and older that exercise regularly (30 minutes or more of exercise) (%)		23.2	25.9	26.9
Ratio of employees 40 years and older that eat breakfast (%)		81.8	82.3	80.8
Ratio of employees receiving specific health guidance (%)		25.4	29.9	19.9
Walking event participation rate (%)		—	3.47	4.44
Ratio of employees with BMI greater than 25 (%)		—	33.0	33.0
Mental health support				
Ratio of employees taking stress checks (%)		95.4	98.1	97.5
Ratio of employees with high stress (%)		6.9	7.1	8.2
Ratio of employees taking health literacy training (%)		—	—	83.4
Efforts to protect human rights	Non-consolidated			
Number of reports to the internal harassment hotline				
Sexual harassment (cases)		1	1	1
Power harassment (cases)		8	2	5
Other (cases)		0	0	0
Number of reports to the external harassment hotline				
Sexual harassment (cases)		1	0	0
Power harassment (cases)		4	1	3
Other (cases)		1	0	0
Number of human rights slogan submissions (number)		1,507	1,637	1,650
IR Activities (cases)	Non-consolidated	152	143	179

② CSR Objectives for 2025: Disaster Prevention

③ CSR Objectives for 2025: Diversity

## G Governance

	Scope	FY2020	FY2021	FY2022
Governance structure	Non-consolidated			
Directors		14	7	9
Independent directors		2	2	3
Female directors		1	1	1
Ratio of female directors (%)		7.1	14.3	11.1
Corporate auditors		4	4	4
Independent corporate auditors		2	2	2
Female corporate auditors		1	1	1
Ratio of female corporate auditors (%)		25.0	25.0	25.0
Ratio of female board members (%)		11.1	18.2	15.4
Annual remuneration of board members (million yen)				
Directors		853(18)	552(15)	512(9)
Corporate auditors		72(6)	72(4)	72(5)
Internal Carbon Pricing (yen/tonne-CO <sub>2</sub> )	Non-consolidated	—	—	1,500
Ratio of employees taking e-learning (%)	Non-consolidated	73.3	77.4	87.8
Number of reports to the internal whistleblowing hotline	Group*3	3	7	7
Intellectual property (Number)	Non-consolidated			
Number of new patent registrations in Japan		160	158	136
Number of patents held in Japan		1,235	1,273	1,335

\*1 Subject of GCCA KPI data acquisition

\*2 Group companies that are business sites required to submit accident reports under the Taiheiyō Cement Group's Safety, Security and Health Management Regulations.

\*3 Group companies subject to risk management by the Risk Management &amp; Compliance Committee

\*4 Calculated based on the "Calculation Method of the Gender Pay Gap" in the "General Employer Action Plan (July 2022 Revision)" based on the Act for Promotion of Women's Participation and Advancement in the Workplace.

## External Evaluation (as of September 2022)

### CDP [Scored B for climate change, B- for water]

An international NGO headquartered in the United Kingdom. The evaluation is based on an 8-point scale from A to D- for the company's initiatives and information disclosure in the environmental field, in the three areas of climate change, water resources and forest protection.



### "Kurumin" [Acquired "Kurumin" certification for the third time in July 2021]

Certified as a "Child Rearing Support Company" under the Law for Measures to Support the Development of the Next Generation.



### DJSI [selected as a component stock in the Asia-Pacific region for the eighth consecutive year]

DJSI is an abbreviation of the Dow Jones Sustainability Indices, a leading global ESG investment indices developed by Dow Jones (USA) and RobecoSAM (Switzerland).



### DBJ environmental rating [highest rating for seven consecutive years]

"Development Bank of Japan (DBJ) Environmental Rating" financing is the world's first financing system that uses a screening system (rating system) developed by the DBJ to score companies on their level of environmentally-conscious management and select those that excel.



### JCR [Consecutive A rating since 2020]

The Japan Credit Rating Agency is one of Japan's leading rating agencies that provides ratings for long-term and short-term credit.



### R&I [Consecutive A- rating since 2018]

Rating & Investment Information, Inc. is one of the leading rating agencies in Japan, focusing on major rating business.



## Collaboration with Outside Organizations

### Global Cement and Concrete Association (GCCA)

The organization was founded in 2018 and took over the activities of the Cement Subcommittee of the WBCSD in January 2019. It is composed of approximately 40 of the world's major cement companies and covers 40% of the world's cement production capacity (70% excluding China). Taiheiyō Cement is a founding member and the only Japanese manufacturer to participate in its activities.



### INNOVANDI (Global Cement and Concrete Research Network)

INNOVANDI is a research network launched by GCCA in 2020. It conducts research and development such as sustainable concrete and cement and CO<sub>2</sub> capture and recovery, and we have participated since its inception.



### UNGC (UN Global Compact)

An initiative proposed by the United Nations and signed by more than 17,500 companies and organizations in 160 countries at the time of 2021. It requires the top management to commit to 10 principles related to the protection of human rights, elimination of unfair labor practices, environmental considerations and preventing corruption.



### Industrial Federation for Human Rights, Tokyo

Established in November 1979, the federation now consists of 123 companies, most of which are headquartered in Tokyo. Under its basic philosophy of voluntary management and full participation, the federation endeavors to resolve the "Dowa issue" (discrimination against a caste-like minority of ethnic Japanese) and other human rights issues from a company perspective.

## Cement production process (material balance)

This is an overall picture (material balance) of the environmental impact of Taiheiyo Cement's cement production on a non-consolidated basis. Inputs are water resource consumption, energy consumption and raw material consumption at our quarries and plants, at the quarries of our subsidiary companies that supply raw materials to us, and affiliated companies that conduct power generation business, while outputs are the total amount of products by each business and their respective total emissions of substances.

### INPUT

	Unit	FY2020	FY2021	FY2022
<b>Water withdrawal</b>				
Total water withdrawal		167,314	191,429	190,882
Tap water	1,000m <sup>3</sup>	1,836	1,497	1,495
Industrial water		3,316	4,173	3,335
River water		5,123	5,306	5,491
Ground water		11,125	12,350	11,190
Rainwater		354	300	343
Seawater		145,561	167,803	169,029
<b>Energy</b>				
Coal	t	2,192,325	2,225,888	2,053,143
Petroleum coke		275,462	250,883	280,329
Heavy oil	kl	20,011	24,262	29,318
Diesel oil		20,753	20,544	19,803
Recycled fuels	t	690,075	1,096,581	992,170
Purchased electricity	MWh	591,471	551,542	692,211
<b>Materials</b>				
Additives, etc.	t	8,823	7,735	8,086
Explosives		3,996	3,818	3,720
Refractory materials		14,671	9,017	8,743
Grinding media/steel casings		3,174	2,453	2,539
Lubricants/Chemicals	kl	6,259	3,567	5,893
Other	t	33,938	34,010	36,886
<b>Raw materials</b>				
Natural resources	t	38,384,315	36,646,775	37,290,212
Limestone		36,550,209	34,940,122	35,693,961
Silica		1,707,189	1,616,798	1,487,742
Gypsum		119,361	77,888	99,040
Other		7,556	11,967	9,469
Waste and by-products	t	5,447,453	5,268,724	5,365,916
Iron waste		226,404	195,727	206,576
By-product gypsum		461,690	470,110	471,517
Fly ash, coal ash		2,090,550	2,125,467	2,257,413
Blast furnace slag		837,738	780,452	761,716
Other clay substitutes		1,831,071	1,696,968	1,668,694

Scope of data: The data aggregated are for our four business segments (cement, mineral resources, environment and power generation) collected at our (non-consolidated) quarries and plants, at the quarries shown below of subsidiaries that supply us with materials (nine quarries of eight companies) and at affiliated companies engaged in the power generation business (3 companies).

Ryushin Mining Co., Ltd.	Ofunato Quarry (Iwate Prefecture)	Oita Taiheiyo Mining Corporation	Shin-Tsukumi Quarry (Oita Prefecture)	Tosayama Taiheiyo Mining Corporation	Tosayama Quarry (Kochi Prefecture)
Buko Mining Co., Ltd.	Buko Quarry (Saitama Prefecture)	Myojo Cement Co., Ltd.	Toumi Quarry (Niigata Prefecture)	Ofunato Power Inc.	Ofunato Power Plant (Iwate Prefecture)
Chichibu Mining Co., Ltd.	Mido Quarry (Saitama Prefecture)	Chichibu Taiheiyo Cement Corporation	Miwa Quarry (Saitama Prefecture)	Tosa Power Inc.	Tosa Power Plant (Kochi Prefecture)
Ishizaki Co., Ltd.	Fujiwara Quarry (Mie Prefecture)		Kanouyama Quarry (Gunma Prefecture)	Itoigawa Power Inc.	Itoigawa Power Plant (Niigata Prefecture)

### Products by Business

	Unit	FY2020	FY2021	FY2022
<b>Power generation</b>				
Power generation	MWh	1,903,870	2,396,837	2,319,721
<b>Mineral Resources</b>				
Aggregates	t	8,413,475	7,827,271	7,989,127
Limestone products		1,988,852	4,663,324	4,802,545
Other		336,086	359,604	297,941
<b>Cement</b>				
Portland cement	t	12,852,306	12,029,436	12,461,884
Blended cement		2,139,201	1,741,877	1,736,653
Cement based soil stabilizers		581,192	529,085	493,464
Clinker (for export)		1,890,704	2,288,118	2,061,621
<b>Environment</b>				
Flue-gas desulfurization	t	122,718	104,585	130,627
Fly-ash products		216,204	156,627	121,412

### OUTPUT

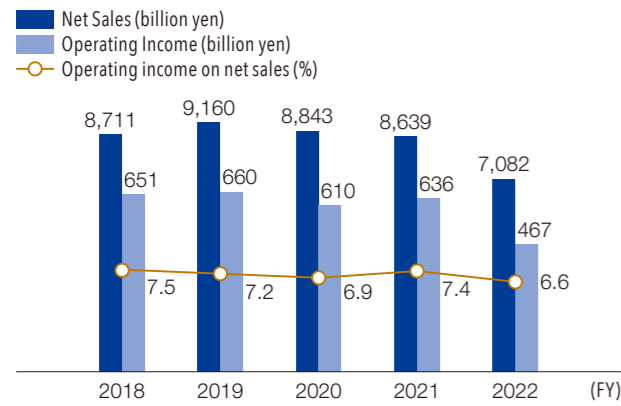
	Unit	FY2020	FY2021	FY2022
<b>CO<sub>2</sub> Emissions</b>				
CO <sub>2</sub>	t	13,052,744	14,269,840	14,325,999
From purchased electricity		204,611	189,608	231,694
<b>NO<sub>x</sub> Emissions</b>				
NO <sub>x</sub> *	t	22,413	24,020	24,519
<b>SO<sub>x</sub> Emissions</b>				
SO <sub>x</sub> *	t	2,239	1,538	1,343
<b>Dust emissions</b>				
Dust*	t	367	283	213
<b>Dioxin Emissions</b>				
Dioxins*	g-TEQ	0.15	0.24	0.24
<b>Waste Emissions</b>				
Waste externally consigned for treatment	t	483	632	634
Waste sent to landfills		13	27	49
Valuables such as scrap metals		5,563	6,701	6,773
<b>Water Discharge</b>				
Wastewater	1,000m <sup>3</sup>	158,102	181,846	184,214
Seawater		145,561	167,934	169,193
Fresh water		12,274	13,621	12,504
Household wastewater		267	292	2,517

\* Cement and power generation business only (excluding purchased electricity)

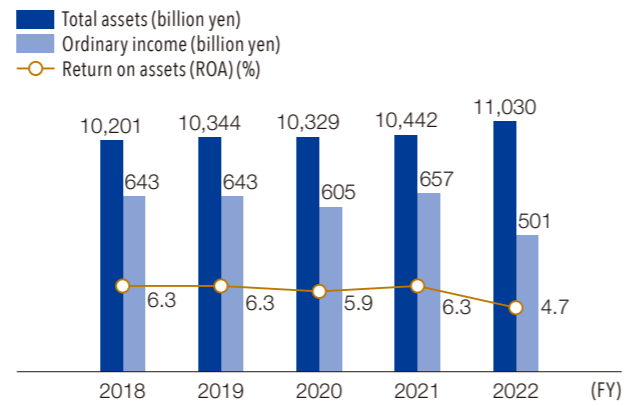
# Financial and Non-financial Highlight

## Financial Data

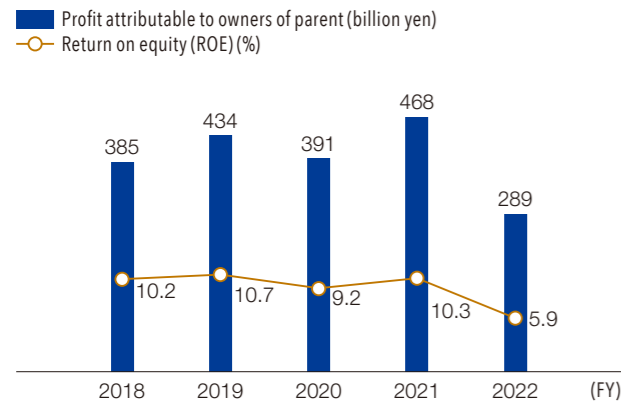
**Net Sales, Operating Income and Operating Income on Net Sales**



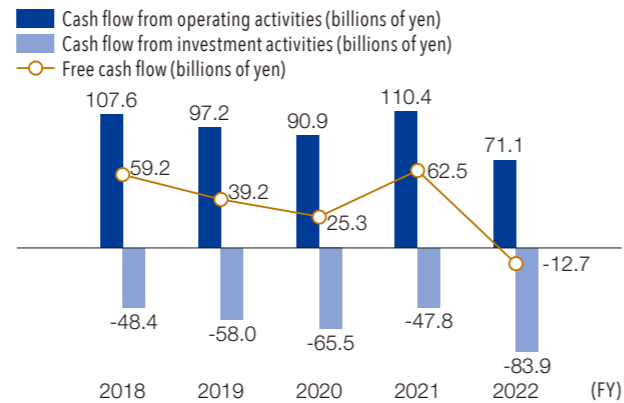
**Total Assets, Ordinary Income and Return on Assets (ROA)**



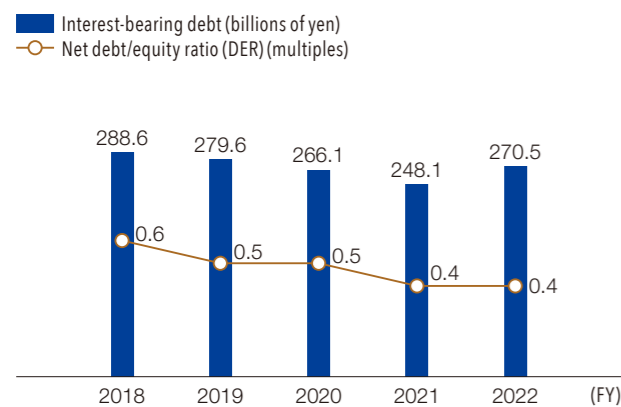
**Profit Attributable to Owners of Parent and Return on Equity (ROE)**



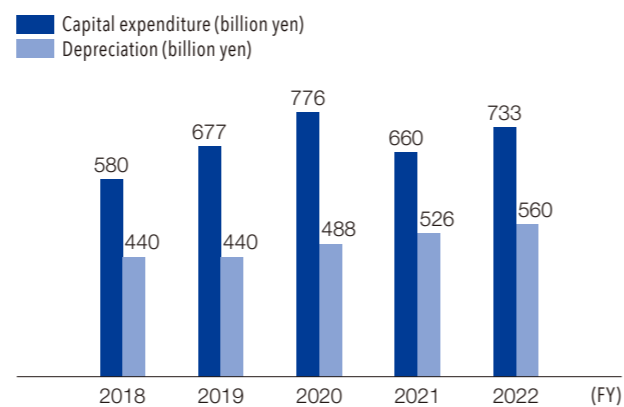
**Cash Flow**



**Interest-bearing Debt and Net Debt/Equity Ratio (DER)**

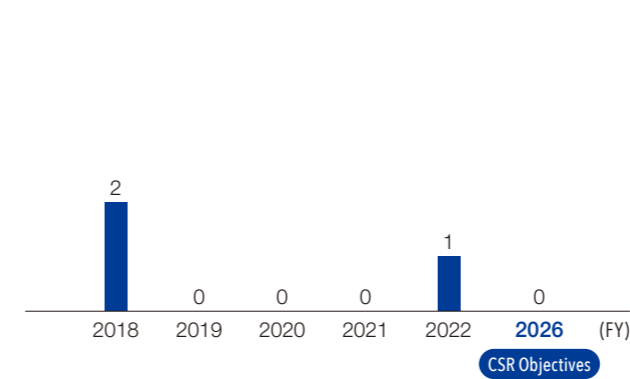


**Capital Expenditure and Depreciation**



## Non-financial Data

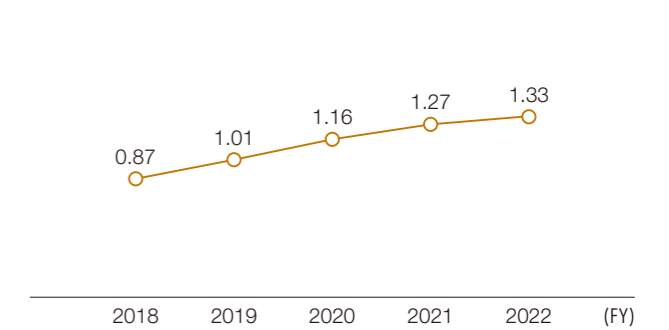
**No. of Fatal Accidents**



\* Taiheiyō Cement and group companies that are business sites required to submit accident reports under our Safety, Security and Health Management Regulations are the subject of aggregation.

**Prevention of Accidents**

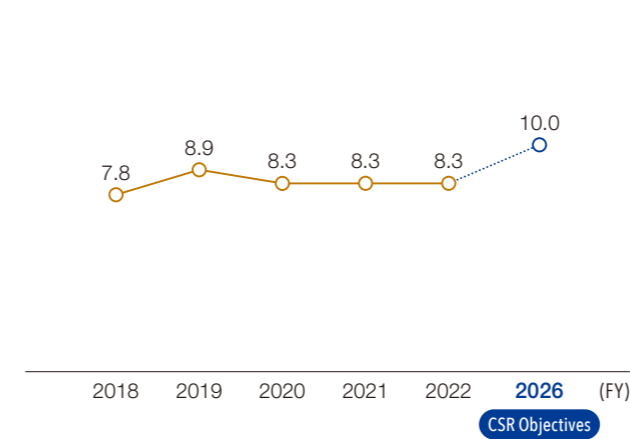
**Lost-time Injury Frequency Rate (per million working hours) GCCA**



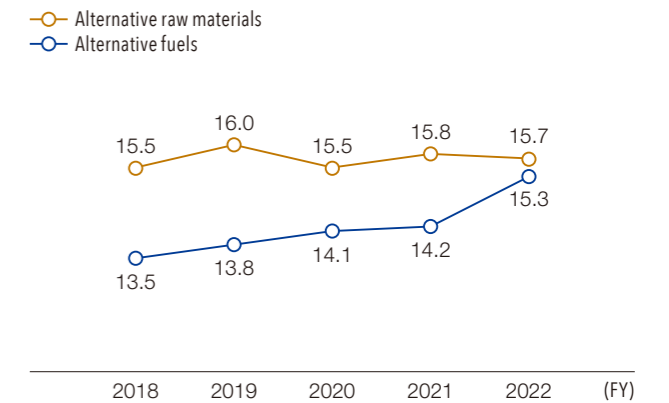
Please see notes 1 and 6 on p128 for the scope of the aggregation.

**Reduction of Greenhouse Gas Emissions**

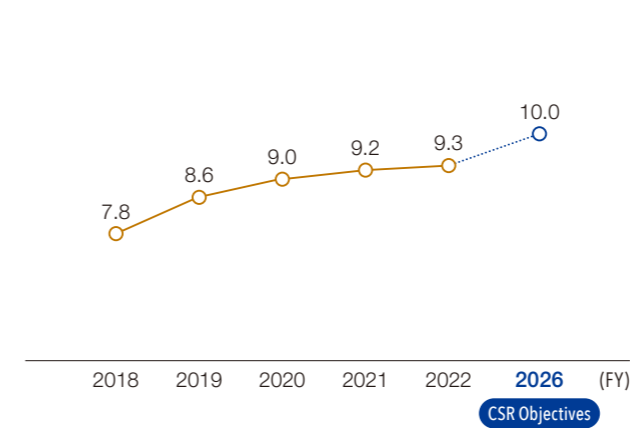
**Reduction Rate of Specific Net CO<sub>2</sub> Emissions (%) GCCA**



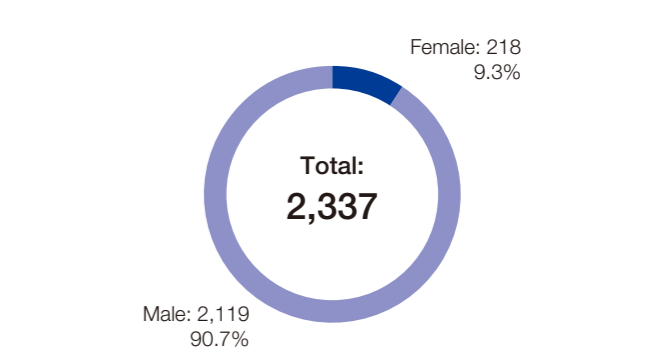
**Ratio of Alternative Raw Materials and Fuels (%) GCCA**



**Ratio of Female to Male Employees (%) (as of March 31, 2022) Non-consolidated**



**Number of Employees by Gender (%) (as of March 31, 2022) Non-consolidated**



# Primary Consolidated Financial Data (12-Year)

	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
<b>Statement of Income (million yen)</b>												
Net sales	726,475	727,849	747,616	840,288	842,848	835,359	798,588	871,113	916,071	884,350	863,903	708,201
Operating Income	16,433	29,185	40,659	70,434	65,406	60,433	63,235	65,129	66,012	61,008	63,610	46,701
Ordinary income	7,412	18,496	32,667	69,590	67,890	60,225	59,802	64,366	64,306	60,541	65,744	50,193
Profit attributable to owners of parent	4,450	7,845	11,329	35,223	44,114	36,404	47,597	38,525	43,452	39,151	46,800	28,971
<b>Financial Condition (million yen)</b>												
Net assets	166,819	196,144	219,826	273,312	347,490	357,073	400,034	432,326	450,645	473,241	506,821	544,799
Total assets	998,741	982,231	982,473	1,015,564	1,040,602	1,014,075	1,015,415	1,020,111	1,034,428	1,032,923	1,044,227	1,103,007
Interest-bearing debt	566,171	510,184	473,959	435,118	399,138	394,497	340,930	288,606	279,615	266,115	248,102	270,587
<b>Per Share Data* (yen)</b>												
Book-value per share	1,492.8	1,380.9	1,558.5	1,955.7	2,463.1	2,591.1	2,930.2	3,193.7	3,388.4	3,567.6	3,971.3	4,362.2
Earnings per share	47.3	71.6	92.2	286.7	359.1	296.3	383.9	311.4	351.7	319.9	387.8	245.8
<b>Cash Flow (million yen)</b>												
Cash flows from operating activities	36,995	36,624	61,505	88,558	77,000	75,627	94,433	107,683	97,283	90,902	110,403	71,191
Cash flows from investing activities	14,177	(17,252)	(16,441)	(27,926)	(31,377)	(71,099)	(10,394)	(48,460)	(58,025)	(65,534)	(47,809)	(83,919)
Cash flows from financing activities	(100,480)	(19,227)	(51,792)	(62,269)	(52,713)	(4,027)	(81,855)	(65,818)	(33,753)	(29,436)	(43,952)	(3,742)
Cash and cash equivalents at end of fiscal year	61,265	59,785	54,408	55,604	50,645	50,072	51,974	44,976	50,084	45,748	63,819	50,213
<b>Financial Indicators</b>												
Operating income on net sales	2.3	4.0	5.4	8.4	7.8	7.2	7.9	7.5	7.2	6.9	7.4	6.6
Return on assets (ROA) (ordinary income)	0.7	1.9	3.3	7.0	6.6	5.9	5.9	6.3	6.3	5.9	6.3	4.7
Return on equity (ROE)	3.0	5.1	6.3	16.3	16.3	11.7	14.0	10.2	10.7	9.2	10.3	5.9
Equity ratio	14.1	17.3	19.5	23.7	29.1	31.4	35.6	38.7	40.1	42.3	45.1	46.3
<b>Other (million yen)</b>												
Capital expenditure	32,429	35,785	32,524	39,094	42,160	44,076	54,384	58,087	67,796	77,677	66,003	73,373
Depreciation	43,097	41,624	39,422	40,553	42,401	43,957	44,459	44,003	44,008	48,863	52,683	56,010
R&D expenses	4,022	3,684	3,846	4,052	4,422	4,228	4,538	4,452	4,311	4,431	4,606	5,284

\* The Company, effective October 1, 2017, conducted a reverse stock split for its common stock at a ratio of one for 10. Per share information are calculated assuming the share consolidation took place at the year to March 2011.

## 10 Mid-term Management Plan ► Business Restructuring

### Business Restructuring in Light of the Abandonment of Quantitative Targets Listed in the 10 Medium-Term Management Plan

Faced with a harsh business environment due to a far sharper decline in domestic cement demand than had been anticipated, we decided to abandon the quantitative target for the final year of the 10 Medium-Term Management Plan (which ended in FY2011) and to implement business structural reforms aimed at creating a "new Taiheiyo Cement."

### Main business restructuring measures, and consequent improvement in income

- Review and restructuring of our production system in Japan
- Review of our organizational and personnel systems
- Review of our domestic cement sales structure and streamlining of logistics

16 billion yen/year improvement

## 14 Medium-Term Management Plan FY2013-FY2015

### Business Strategies

#### Fulfill our social mission

Make maximum contributions to projects related to recovery from the Great East Japan Earthquake

#### Pursue our main businesses

Establish sustainability in the domestic cement business and fulfill our responsibilities as part of a social infrastructure industry

#### Expand our growth fields

Promote our materials business, and further advance our overseas business expansion

### FY2015 Results

- Operating income on net sales: 7.8%
- ROA (ordinary income): 6.6%
- Net DER: 1.1

## 17 Medium-Term Management Plan FY2016-FY2018

### Business Strategies

Enhance existing businesses, and formulate and implement growth strategies  
Strengthen management foundations  
Provide support for national projects  
Enhance research and development

### FY2018 Results

- Operating income on net sales: 7.5%
- ROA (ordinary income): 6.3%
- Net DER: 0.6

## 20 Medium-Term Management Plan FY2019-FY2021

### Business Strategies

Strengthen the earnings capacity of existing businesses  
Formulate and implement growth strategies  
Provide support for national projects

### FY2021 Results

- Operating income on net sales: 7.4%
- ROA (ordinary income): 6.3%
- Net DER: 0.4

## 23 Medium-Term Management Plan FY2022-FY2023



# Financial Statements

## Consolidated Balance Sheets

Item	(Unit: million yen)	
	End of FY2021 (As of March 31, 2021)	End of FY2022 (As of March 31, 2022)
<b>Assets</b>		
Current assets		
Cash and deposits	73,074	<b>60,271</b>
Notes and accounts receivable - trade	142,515	—
Notes, accounts receivable and contract assets	—	<b>143,178</b>
Electronically recorded monetary claims - operating	19,234	<b>23,354</b>
Merchandise and finished goods	29,421	<b>34,409</b>
Work in process	2,079	<b>1,277</b>
Raw materials and supplies	43,873	<b>58,502</b>
Short-term loans receivable	2,557	<b>1,921</b>
Other	15,373	<b>17,942</b>
Allowance for doubtful accounts	(795)	<b>(307)</b>
Total current assets	327,333	<b>340,550</b>
Non-current assets		
Property, plants and equipment		
Buildings and structures	491,247	<b>515,145</b>
Accumulated depreciation	(352,836)	<b>(361,439)</b>
Buildings and structures (net)	138,410	<b>153,705</b>
Machinery, equipment and vehicles	913,284	<b>968,234</b>
Accumulated depreciation	(759,076)	<b>(797,800)</b>
Machinery, equipment and vehicles (net)	154,207	<b>170,433</b>
Land	164,193	<b>156,031</b>
Leased assets	51,601	<b>39,955</b>
Accumulated depreciation	(31,201)	<b>(20,891)</b>
Leased assets (net)	20,400	<b>19,064</b>
Construction in progress	37,186	<b>32,676</b>
Other	68,239	<b>65,708</b>
Accumulated depreciation	(42,294)	<b>(39,790)</b>
Other (net)	25,944	<b>25,917</b>
Total property, plants and equipment	540,342	<b>557,829</b>
Intangible assets		
Goodwill	159	<b>80</b>
Other	28,033	<b>27,485</b>
Total intangible assets	28,192	<b>27,566</b>
Investments and other assets		
Investment securities	91,926	<b>118,359</b>
Long-term loans receivable	1,538	<b>1,391</b>
Retirement benefit assets	23,099	<b>22,680</b>
Deferred tax assets	9,635	<b>11,081</b>
Other	28,296	<b>25,431</b>
Allowance for doubtful accounts	(6,137)	<b>(1,883)</b>
Total investments and other assets	148,358	<b>177,061</b>
Total non-current assets	716,893	<b>762,457</b>
Total assets	1,044,227	<b>1,103,007</b>

Item	(Unit: million yen)	
	End of FY2021 (As of March 31, 2021)	End of FY2022 (As of March 31, 2022)
<b>Liabilities</b>		
Current liabilities		
Notes and accounts payable - trade	73,596	<b>79,685</b>
Electronically recorded obligations - operating	7,744	<b>8,751</b>
Short-term borrowings	103,538	<b>102,986</b>
Commercial papers	—	<b>21,000</b>
Current portion of bonds	10,000	—
Income taxes payable	4,590	<b>4,198</b>
Provision for bonuses	6,265	<b>6,246</b>
Other provisions	404	<b>213</b>
Other	98,691	<b>86,685</b>
Total current liabilities	304,831	<b>309,768</b>
Non-current liabilities		
Bonds payable	50,000	<b>60,000</b>
Long-term borrowings	84,563	<b>86,600</b>
Deferred tax liabilities	8,130	<b>10,020</b>
Retirement benefit liabilities	24,703	<b>22,701</b>
Provision for retirement benefits for directors	503	<b>512</b>
Provision for special repairs	180	<b>258</b>
Provision for product compensation	—	<b>3,330</b>
Other provisions	511	<b>478</b>
Lease obligations	14,352	<b>13,481</b>
Asset retirement obligations	7,821	<b>8,703</b>
Other	41,807	<b>42,352</b>
Total non-current liabilities	232,574	<b>248,440</b>
Total liabilities	537,405	<b>558,208</b>
<b>Net assets</b>		
Shareholders' equity		
Share capital	86,174	<b>86,174</b>
Capital surplus	60,292	<b>49,729</b>
Retained earnings	365,593	<b>384,154</b>
Treasury shares	(26,113)	<b>(13,766)</b>
Total shareholders' equity	485,946	<b>506,291</b>
Accumulated other comprehensive income		
Valuation difference on available-for-sale securities	12,429	<b>11,737</b>
Deferred gains or losses on hedges	1	<b>6</b>
Revaluation reserve for land	4,898	<b>4,897</b>
Foreign currency translation adjustment	(29,917)	<b>(11,322)</b>
Remeasurements of defined benefit plans	(2,438)	<b>(992)</b>
Total accumulated other comprehensive income	(15,025)	<b>4,325</b>
Non-controlling interests	35,899	<b>34,181</b>
Total net assets	506,821	<b>544,799</b>
Total liabilities and net assets	1,044,227	<b>1,103,007</b>

## Consolidated Statements of Income and Consolidated Statements of Comprehensive Income

Item	(Unit: million yen)	
	FY2021 (from April 1, 2020 to March 31, 2021)	FY2022 (from April 1, 2021 to March 31, 2022)
Net sales	863,903	<b>708,201</b>
Cost of sales	672,631	<b>532,818</b>
Gross profit	191,272	<b>175,382</b>
Selling, general and administrative expenses		
Amortization of goodwill	53	<b>54</b>
Other	127,608	<b>128,626</b>
Total selling, general and administrative expenses	127,661	<b>128,681</b>
Operating income	63,610	<b>46,701</b>
Non-operating income		
Interest income	601	<b>551</b>
Dividend income	1,273	<b>1,641</b>
Rental income from real estate	107	<b>90</b>
Share of profit of entities accounted for using equity method	1,879	<b>1,913</b>
Foreign exchange gains	1,042	<b>453</b>
Other	3,524	<b>3,660</b>
Total non-operating income	8,428	<b>8,311</b>
Non-operating expenses		
Interest expenses	3,498	<b>2,195</b>
Other	2,797	<b>2,623</b>
Total non-operating expenses	6,295	<b>4,819</b>
Ordinary income	65,744	<b>50,193</b>
Extraordinary income		
Gain on disposal of non-current assets	3,247	<b>6,386</b>
Gain on sales of investment securities	3,567	<b>615</b>
Other	411	<b>1,051</b>
Total extraordinary income	7,226	<b>8,054</b>
Extraordinary losses		
Loss on disposal of non-current assets	5,494	<b>7,301</b>
Loss on sales of investment securities	61	<b>428</b>
Loss on valuation of investment securities	47	<b>20</b>
Impairment loss	969	<b>2,407</b>
Loss on temporary suspension of operations	547	<b>277</b>
Product compensation expense	—	<b>3,506</b>
Other	744	<b>1,485</b>
Total extraordinary losses	7,865	<b>15,426</b>
Profit before income taxes	65,105	<b>42,820</b>
Income taxes - current	9,170	<b>11,542</b>
Income taxes - deferred	6,285	<b>227</b>
Total income taxes	15,455	<b>11,769</b>
Profit	49,649	<b>31,051</b>
Profit attributable to non-controlling interests	2,848	<b>2,079</b>
Profit attributable to owners of parent	46,800	<b>28,971</b>
Profit	49,649	<b>31,051</b>
Other comprehensive income		
Valuation difference on available-for-sale securities	5,516	<b>(544)</b>
Deferred gains or losses on hedges	1	<b>5</b>
Foreign currency translation adjustment	(9,345)	<b>18,596</b>
Remeasurements of defined benefit plans	7,463	<b>1,447</b>
Share of other comprehensive income of entities accounted for using equity method	201	<b>2,559</b>
Total other comprehensive income	3,837	<b>22,063</b>
Comprehensive income	53,487	<b>53,115</b>
Comprehensive income attributable to		
Comprehensive income attributable to owners of parent	51,561	<b>48,324</b>
Comprehensive income attributable to non-controlling interests	1,925	<b>4,790</b>

## Consolidated Statements of Cash Flows

Item	(Unit: million yen)	
	FY2021 (from April 1, 2020 to March 31, 2021)	FY2022 (from April 1, 2021 to March 31, 2022)
<b>Cash flows from operating activities</b>		
Profit before income taxes	65,105	<b>42,820</b>
depreciation	52,683	<b>56,010</b>
Amortization of goodwill	53	<b>54</b>
Share of loss (profit) of entities accounted for using equity method	(1,879)	<b>(1,913)</b>
Loss (gain) on valuation of investment securities	47	<b>20</b>
Decrease (increase) in net retirement benefit asset and liability	(905)	<b>(302)</b>
Increase (decrease) in provision for retirement benefits for directors	(17)	<b>8</b>
Increase (decrease) in provision for bonuses	107	<b>(19)</b>
Increase (decrease) in allowance for doubtful accounts	(74)	<b>(4,129)</b>
Increase (decrease) in other provisions	0	<b>3,185</b>
Interest and dividend income	(1,874)	<b>(2,193)</b>
Interest expenses	3,498	<b>2,195</b>
Loss (gain) on sales of investment securities	(3,505)	<b>(187)</b>
Loss (gain) on disposal of non-current assets	2,246	<b>914</b>
Impairment loss	969	<b>2,407</b>
Decrease (increase) in trade receivables	8,418	<b>(1,904)</b>
Decrease (increase) in inventories	(122)	<b>(15,714)</b>
Increase (decrease) in trade payables	(6,568)	<b>5,679</b>
Other	3,866	<b>(4,162)</b>
Subtotal	122,048	<b>82,769</b>
Interest and dividends received	2,455	<b>2,807</b>
Interest paid	(3,521)	<b>(2,199)</b>
Income taxes paid	(10,579)	<b>(12,186)</b>
Cash flows from operating activities	110,403	<b>71,191</b>
<b>Cash flows from investing activities</b>		
Decrease (increase) in time deposits	(3,675)	<b>182</b>
Purchase of non-current assets	(58,656)	<b>(67,326)</b>
Proceeds from sales of non-current assets	4,187	<b>6,458</b>
Purchase of other depreciated assets	(167)	<b>(440)</b>
Proceeds from sales of other depreciated assets	38	<b>2</b>
Purchase of investment securities	(117)	<b>(24,123)</b>
Proceeds from sales and redemption of investment securities	709	<b>1,010</b>
Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation	6,318	<b>10</b>
Loan advances	(2,723)	<b>(2,150)</b>
Collection of loans receivable	3,302	<b>2,458</b>
Other	2,974	<b>(2)</b>
Cash flows from investing activities	(47,809)	<b>(83,919)</b>
<b>Cash flows from financing activities</b>		
Net increase (decrease) in short-term borrowings	(19,596)	<b>(5,936)</b>
Increase (decrease) in commercial papers	(12,000)	<b>21,000</b>
Proceeds from long-term borrowings	21,179	<b>40,743</b>
Repayments of long-term borrowings	(36,573)	<b>(34,035)</b>
Proceeds from issuance of bonds	30,000	<b>10,000</b>
Redemption of bonds	—	<b>(10,000)</b>
Purchase of treasury shares	(10,064)	<b>(5,036)</b>
Dividends paid	(7,292)	<b>(7,648)</b>
Dividends paid to non-controlling interests	(873)	<b>(1,404)</b>
Other	(8,731)	<b>(11,423)</b>
Cash flows from financing activities	(43,952)	<b>(3,742)</b>
Effect of exchange rate change on cash and cash equivalents	(569)	<b>2,864</b>
Net increase (decrease) in cash and cash equivalents	18,071	<b>(13,606)</b>
Cash and cash equivalents at beginning of period	45,748	<b>63,819</b>
Cash and cash equivalents at end of period	63,819	<b>50,213</b>

# GCCA Key Performance Indicators

▶ GRI301-2, 302-1, 3, 303-1, 305-4, 5, 7, 403-2, 9, MM2

The Taiheiyo Cement Group's performance with regard to CO<sub>2</sub> and climate protection, emissions monitoring and reporting, health and safety, and water has been subjected to independent limited assurance by KPMG AZSA Sustainability Co., Ltd.

## ● FY2022 Key Performance Indicators (KPI)\*<sup>1</sup>

CO <sub>2</sub> and Climate Protection (CO <sub>2</sub> emissions, energy consumption)		FY2020	FY2021	FY2022
Number of facilities using the GCCA "The Cement CO <sub>2</sub> and Energy Protocol" guidelines for emissions inventory		18	17	17
Ratio of facilities using the GCCA "The Cement CO <sub>2</sub> and Energy Protocol" guidelines for emissions inventory (%)		100	100	100
Total CO <sub>2</sub> emissions (million tonnes/year)	Scope 1 emissions* <sup>2</sup>	25.0	24.0	23.7
	Gross emissions* <sup>3</sup>	23.7	22.7	22.5
	Net emissions* <sup>4</sup>	22.8	21.8	21.6
CO <sub>2</sub> emissions per tonne of cementitious product* <sup>5</sup> (kg-CO <sub>2</sub> /t-cementitious)	Gross emissions	701	701	703
	Specific net emissions	675	675	675
Emissions from electricity purchased (million tonnes/year) (Scope 2 emissions)		0.896	0.855	0.983
Indirect emissions other than Scope 1 and 2 (emissions of other companies related to the activities of the calculation entity) (million tonnes/year) (Scope 3 emissions)		—	1.769	1.639
Category 1 (purchased goods and services)* <sup>6</sup>		—	0.752	0.635* <sup>8</sup>
Category 3 (fuel- and energy-related activities not included in Scope 1 and 2)* <sup>7</sup>		—	1.017	1.004* <sup>8</sup>
Specific calorific value for clinker production (MJ/t-clinker)		3,298	3,321	3,291
Alternative fuel rate: Ratio of alternative fuels used by kilns (% of thermal energy consumption)		12.3	12.2	13.3
Biomass fuel rate: Ratio of biomass fuel used by kilns (% of thermal energy consumption)		1.8	2.0	2.0
Clinker/cement (equivalent) factor: Ratio of the total clinker consumption and cement produced, calculated according to the GCCA Cement CO <sub>2</sub> and Energy Protocol guidelines		82.8	82.4	83.0
Use of Alternative Raw Materials		FY2020	FY2021	FY2022
Alternative raw materials rate: Consumption of alternative raw materials, as a percentage of total raw materials for cement and clinker production (%), calculated on a dry weight basis		15.5	15.8	15.7
Health and Safety* <sup>9</sup>		FY2020	FY2021	FY2022
Fatalities				
Number of fatalities for directly employed personnel		0	0	0
Fatality rate per 10,000 directly employed personnel		0	0	0
Number of fatalities for indirectly employed personnel (contractors and subcontractors)		1	0	0
Number of fatalities involving third parties (not employed)		0	0	0
Lost-time injuries				
Number of lost-time injuries for directly employed personnel		9	15	15
Injury frequency rate of directly employed personnel (per million working hours)		1.16	1.27	1.33
Number of lost-time injuries for indirectly employed personnel (contractors and subcontractors)		7	18	19
Emission Monitoring and Reporting		FY2020	FY2021	FY2022
Percentage of clinker produced by kilns covered by a monitoring system, either continuous or discontinuous, for the main and other pollutants		100	100	100
Percentage of clinker produced by kilns which have adopted continuous measurement for the main pollutants	NOx	100	100	100
	SOx	84.0	83.3	82.4
	Dust	100	100	100
Total emissions (tonnes/year)	NOx	34,565	34,758	32,049
	SOx	1,778	1,139	1,047
	Dust	839	544	431
	NOx	1,227	1,282	1,193
Specific emissions (g/t-clinker)	SOx	63	42	39
	Dust	30	20	16
Community Impact		FY2020	FY2021	FY2022
Percentage of sites with community engagement plans in place		100	100	100
Percentage of active sites with appropriate quarry rehabilitation plans in place		100	100	100
Number of active sites where biodiversity issues are addressed		17	17	17
Water		FY2020	FY2021	FY2022
Withdrawal (thousand m <sup>3</sup> )	Fresh water	27,607	27,192	26,341
	Seawater	147,372	146,232	146,894
Discharge (thousand m <sup>3</sup> )	Fresh water	13,674	13,447	13,246
	Seawater	147,377	146,368	147,062

\*1 The KPI report for FY2022 is in accordance with "GCCA Sustainability Guidelines for the monitoring and reporting of CO<sub>2</sub> emissions from cement manufacturing Ver. 0.1", "GCCA Sustainability Guidelines for the monitoring and reporting of safety in cement manufacturing Ver. 1.0", "GCCA Sustainability Guidelines for the monitoring and reporting of emissions from cement manufacturing Ver. 0.1" and "GCCA Sustainability Guidelines for the monitoring and reporting of water in cement manufacturing Ver. 0.1". With regard to CO<sub>2</sub> and climate protection, emissions monitoring and reporting, and water, we have aggregated data from cement plants and quarries belonging to Taiheiyo Cement and our subsidiaries. With regard to health and safety, we have aggregated data from Taiheiyo Cement, the cement businesses of our 63 subsidiaries and affiliated companies, and the construction materials, aggregates and ready-mixed concrete businesses of those amongst our 55 subsidiaries and affiliated companies that are considered to be business sites required to submit accident reports under our health and safety management regulations. For Scope 3, we refer to the "Emissions Unit Values for Accounting of Greenhouse Gas Emissions, etc.", by Organizations Throughout the Supply Chain (Ver. 3.2); Ministry of the Environment (FY2021 and FY2022) and "For Calculating Supply Chain Greenhouse Gas Emissions (FY2021: IDEAv2, FY2022: IDEAv3.2)".

\*2 CO<sub>2</sub> emissions that are not included in the items for disclosure mandated by the GCCA but are derived from raw materials and fuels in the cement manufacturing process (including from on-site power generation) and fall under Scope 1.

\*3 CO<sub>2</sub> emissions derived from raw materials and fuels in the cement manufacturing process (excluding CO<sub>2</sub> emissions generated from on-site power generation).

\*4 CO<sub>2</sub> emissions derived from raw materials and fuels in the cement manufacturing process (excluding CO<sub>2</sub> emissions generated from alternative fuels and on-site power generation).

\*5 Cementitious product: Sum total of clinker and admixtures

\*6 Calculated by multiplying the input volume (physical data) of raw materials purchased by the business site subject to the data collection of environmental performance in the GCCA KPI (hereinafter referred to as "business site") from outside the business site by the emission intensity of each raw material.

\*7 Calculated by multiplying the amount of electricity, fuel, etc. procured by the business site by each specific emissions unit.

\*8 The impact on total emissions by the IDEAv version change is negligible.

\*9 Since the aggregation range of "GCCA Sustainability Guidelines for the monitoring and reporting of safety in cement manufacturing Ver. 1.0" has been expanded to include companies that manufacture cement-related products, as of FY2021 the Taiheiyo Cement Group includes in our aggregation subsidiaries and subsidiaries and affiliated companies that are also considered to be business sites required to submit accident reports under our health and safety management regulations.

# Independent Assurance Report on GCCA Key Performance Indicators

▶ GRI102-56

## Independent Assurance Report

To the President and Representative Director of Taiheiyo Cement Corporation

We were engaged by Taiheiyo Cement Corporation (the "Company") to undertake a limited assurance engagement of the environmental and social performance indicators (the "Indicators") included under the following headings in the GCCA Key Performance Indicators section of its Taiheiyo Cement Report 2022 (the "Report") for the fiscal year ended March 31, 2022.

- CO<sub>2</sub> and climate protection (CO<sub>2</sub> emissions, energy consumption)<sup>1</sup>
- Health and safety<sup>2</sup>
- Emission monitoring and reporting<sup>1</sup>
- Water<sup>1</sup>

<sup>1</sup> Periodic accounting is based on the fiscal year 2021 for domestic plants and the calendar year 2021 for overseas plants.

<sup>2</sup> Periodic accounting is based on the calendar year 2021 for domestic and overseas plants.

### The Company's Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the "Company's reporting criteria"), as described in the Report.

### Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with the 'International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information' and the 'ISAE 3410, Assurance Engagements on Greenhouse Gas Statements' issued by the International Auditing and Assurance Standards Board. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing the Company's responsible personnel to obtain an understanding of its policy for preparing the Report and reviewing the Company's reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical procedures on the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company's reporting criteria, and recalculating the Indicators.
- Visiting the following six plants out of a total of 17 plants of the Taiheiyo Cement Group, selected on the basis of a risk analysis. (Scopes 1 and 2 CO<sub>2</sub> emissions covered by these six plants correspond to 30% \* of the combined total of the Group's Scopes 1 and 2 CO<sub>2</sub> emissions.)

\* Based on the amount of absolute gross CO<sub>2</sub> for the fiscal year 2021 for domestic plants and the calendar year 2021 for overseas plants.

#### Overseas plants

- CalPortland Company: Rillito Cement Plant, Mojave Cement Plant and Oro Grande Cement Plant

#### Domestic plants

- Taiheiyo Cement Corporation: Kumagaya Plant and Saitama Plant  
- Tsuruga Cement Co., Ltd.

- Evaluating the overall presentation of the Indicators.

### Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Report are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Report.

### Our Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Control 1, we maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

/s/ Kazuhiko Saito  
Kazuhiko Saito, Partner, Representative Director  
KPMG AZSA Sustainability Co., Ltd.  
Tokyo, Japan  
December 16, 2022

This is a copy of the Independent Assurance Report and the original copies are kept separately by the Company and KPMG AZSA Sustainability Co., Ltd.

# Glossary

## A

### AFR Burner

Equipment that supplies alternative energy such as waste plastic from the kiln's burner. A dedicated port is usually installed on the main burner.

### Aggregate classification plant

Equipment that is used to control the fineness of aggregate within a specified range, which contributes to the production of concrete of consistent quality.

### Aggregate yard

A yard for storing aggregates.

### Agitator truck

A truck that transports ready-mixed concrete in a rotating cylindrical container which agitates the concrete during transportation. It is also sometimes called a cement truck or concrete mixer truck.

### Alkali-silica reaction (ASR)

A phenomenon of concrete deterioration, in which cracks are observed as a result of volume expansion caused by the reaction of certain silica minerals with alkaline elements such as sodium and potassium in the concrete.

### Anti-washout underwater concrete additive

An additive that increases viscosity and adhesion of ready-mixed concrete to reduce the separation of the cement and other ingredients when the fresh concrete is poured directly into water, resulting in superior quality concrete.

### Autoclaved lightweight concrete (ALC)

Concrete which contains many air bubbles that is made from silica, cement, quicklime and aluminum, and cured under high temperature and pressure conditions. Also called ALC, its uses include the exterior walls of buildings due to its superior fire resistance and heat insulation properties.

## B

### Bag filter

Equipment that is used to filter dust that is contained in an air stream. Cloth is usually used for the filter material. When applied to a cement kiln, the amount of dust in the exhaust gas can be reduced to extremely low levels, contributing to a reduction in environmental impact.

### Bargaining power

The relative negotiation strengths of two or more parties.

## C

### Cap-and-trade emissions trading system

A system that is a policy tool designed to incentivize emissions reductions, such as for CO<sub>2</sub>, where an emission limit is set and a quantity of emissions allowances are issued consistent with that cap. Business sites must hold allowances sufficient for their emissions and may buy or sell emission allowances depending on if they either exceed the cap or reduce their emissions to below the cap.

### CCS (Carbon dioxide capture and storage)

A generic term for technology that separates, captures and stores CO<sub>2</sub>, especially underground.

### CCUS (Carbon dioxide capture, utilization and storage)

A generic term for technology that captures CO<sub>2</sub> and either utilizes it or stores it permanently.

### Cement based soil stabilizer

A cement-based ground improvement material containing several active ingredients used to provide long-term, stable strength enhancement to a wide range of soil types.

### Cement calcination

This refers to the calcination of cement raw materials to produce clinker which is then ground with a predetermined amount of gypsum.

### Clinker

An intermediate, nodular cement product produced when the raw materials for cement, namely limestone, clay, silica, and iron waste, are fired in a kiln.

### Clinker cooler

Equipment that rapidly cools high-temperature clinker that has been fired in a cement kiln, using air supplied from a cooling fan. Heat is captured from the clinker and the high-temperature air is used for clinker firing, contributing to energy conservation.

### CO<sub>2</sub> sequestration technology

Technology for the effective utilization of CO<sub>2</sub> by converting the captured CO<sub>2</sub> to a carbonate in order to prevent it being released into the atmosphere.

### CO<sub>2</sub>-cured cement

Ordinary cement cures when mixed with water, but CO<sub>2</sub>-cured cement cures by absorbing CO<sub>2</sub>.

### Concrete sludge

Sludge consisting of wash water from mixer equipment and agitator trucks at ready-mixed concrete plants, and from residual concrete from ready-mixed concrete pouring sites, unused ready-mixed concrete, etc.

## D

### Dark web analysis

An analysis to determine if personal information has been leaked to the dark web and prevent illegal trading of personal information.

## E

### Emissions inventory

A list that displays to what extent a specific substance has been emitted and from which source during a specific period of time.

## F

### Fly ash

Ash derived from coal which is generated from a coal-fired thermal power plant. It is usually collected from the exhaust gas airstream by an electrostatic precipitator.

### Functional hollow particles

Minute, lightweight ceramic spheres with an average particle size of 10 micrometers or less, which provide weight reduction and thermal insulation/shielding properties for use in coating materials for home appliances, electronic components, resin products etc.

## G

### Global Cement and Concrete Association (GCCA)

The members of the GCCA cover 40% of the world's production capacity, including the European majors.

## H

### Heavy metal immobilizer

A material for mixing into soil that enables the safer treatment of construction soil by inhibiting the leaching of heavy metals that are specified in the Soil Contamination Countermeasures Act.

### Hexavalent selenium

One of the ions of the element selenium. Hexavalent selenium is soluble in water as selenate ions and is carried in surface and groundwater.

### Hydrated raw material mixing system

A device that is used to uniformly mix powdered and granular materials that partially contain water, with a mixing impeller that is designed to effectively apply shear to the mixture.

## I

### Innovandi

A worldwide research and development network developed by the GCCA.

### Input system for anti-washout underwater concrete additive

A device capable of semi-automatic production and input of anti-washout underwater concrete additive slurry, with automatic and accurate metering of the water and plasticizer used for slurring.

### Interlocking pavement blocks

Interlocking blocks for the paving of areas that vehicles drive over. The shape and other specifications have been standardized nationwide, making it easier to obtain materials when conducting repairs.

## K

### Kiln burner

A burner that generates thermal energy for firing cement raw materials in a kiln. A pulverized coal burner is normally used.

### Kiln control

The act of finely adjusting the feed rate of raw materials, kiln speed, kiln temperature, temperature distribution, etc. in an operating kiln.

### Kiln operation

The series of operations in which the kiln is operated and the cement material is fired.

## L

### Load transferability

The property that indicates the characteristic of transferring load at the joints of blocks in concrete pavements made from multiple blocks.

## N

### NETIS

The New Technology Information System operated by the Ministry of Land, Infrastructure, Transport and Tourism.

### NSP kiln

An NSP (New Suspension Preheater) kiln is a cement firing kiln which boasts excellent thermal efficiency and is equipped with a preheater consisting of a cyclone cascade and a combustion furnace called a calciner.

## P

### Pilot plant

A pre-commercial demonstration facility employing new technologies or processes, often at a reduced scale.

### Portland cement

Cement is a gray powder that is one of the materials used to make concrete. Currently, cement can be broadly divided into three categories: Portland cement, blended cement and specialty cement. Portland cement is the type which is seen most often.

### Precasting

A process used to manufacture concrete products and elements, such as columns, beams and slabs, at a factory and assembled at the construction site to effectively shorten the construction period and achieve higher quality. Often used for the construction of high-rise buildings and condominiums.

## Q

### Quarry face

The location where quarrying is conducted, usually with the use of explosives.

## R

### Ready-mixed concrete sludge

It is the same as concrete sludge.

### Resource-recycling calcium carbonate concrete

Completely recycled concrete that is cured and formed by re-crystallizing calcium carbonate from a calcium bicarbonate solution produced from calcium carbonate. Research and development for its industrialization is currently in progress.

### Rutting

A continuous indentation that extends along a road at the point where the wheels of vehicles travel on it, which especially occurs in asphalt pavement. It is more likely to occur on roads with a lot of heavy vehicle traffic.

## S

### Scope 3 Guidelines

A document that explains a method of calculating CO<sub>2</sub> emissions in the supply chain.

### Scope Emissions

The classification of CO<sub>2</sub> emitted by businesses; Scope 1 refers to direct emissions from fuel combustion, Scope 2 refers to indirect emissions from purchased electricity and heat, and Scope 3 refers to emissions in the supply chain associated with the procurement of raw materials, transportation and use of the product.

### Shake Out drill

An earthquake practice drill that is designed for employees to cultivate the ability to spontaneously protect themselves in the event of an earthquake at their current location.

### Shipping Yard

A yard for shipping and/or loading aggregates.

### Slag

A by-product of the iron and steel making process.

### Slag substitution

The replacement of blast furnace slag, which is sometimes used as a concrete admixture to improve durability, etc., with an alternative material that exhibits similar characteristics, such as coal ash or natural pozzolans.

### Sludge

A mixture of dirt and liquid. In particular, concrete sludge is generated during the production and pouring of ready-mixed concrete.

### Suspension preheater

One of the main pieces of equipment in cement production and consisting of four or five cascade cyclones used in the stage before the raw materials enter the kiln. The raw materials for cement are heated in the preheater using combustion gas from the kiln, causing a calcination reaction in the limestone.

## T

### Tapper

Percussion diagnosis is a method of concrete diagnosis using a small hammer. The tapper is a type of hammer powered by an electric motor that can perform continuous diagnosis, and its applications include automatic measurement by percussion diagnosis.

### Thermal energy consumption of clinker production

The thermal energy per tonne of clinker required to fire clinker in a kiln, which is an indicator of a cement plant's thermal efficiency. A smaller value indicates higher energy conservation performance.

### Total basin risk score

An assessment indicator of water risk; the WWF's Water Risk Filter and the WRI's Aqueduct are standardly used.

## U

### Unconscious bias

A biased view of a subject that is held unconsciously, which is also called unconscious prejudice.

# Corporate Information

## Company Outline (as of March 31, 2022)

Company name	TAIHEIYO CEMENT CORPORATION
Established	May 3, 1881
Capital	86,174,248,572 yen
Headquarters	BUNKYO GARDEN GATE TOWER, 1-1-1, Koishikawa, Bunkyo-ku, Tokyo 112-8503, Japan
Number of employees	Consolidated: 12,542 Non-consolidated: 1,874 (not including seconded staff)
Net sales	Consolidated: 708.2 billion yen Non-consolidated: 287.5 billion yen



## Website Information

- Home page  
<https://www.taiheiyo-cement.co.jp/english>
- Organizational and Business Information
- About us  
<https://www.taiheiyo-cement.co.jp/english/company/index.html>
- Products and Services  
[https://www.taiheiyo-cement.co.jp/english/service\\_product/index.html](https://www.taiheiyo-cement.co.jp/english/service_product/index.html)
- Research and Development  
<https://www.taiheiyo-cement.co.jp/english/rd/index.html>
- IR Information  
Investor Relations  
<https://www.taiheiyo-cement.co.jp/english/ir/index.html>
- Sustainability Information  
Sustainability  
<https://www.taiheiyo-cement.co.jp/english/csr/index.html>

## List of Internationally Registered Trademarks of Taiheiyo Cement Corporation Appearing in this Report

CARBOFIX	ChiccaLight
C2SP kiln	TQPS
Ceraclean	DENITE
CellSpheres	Nanolitia

# Stock Overview

## Stock Overview (as of March 31, 2022)

Fiscal year	April 1 - March 31	
General Meeting of Stockholders	Late June	
Common stock	Authorized	197,730,800
	Outstanding	121,985,078 (including 4,619,188 of treasury shares)
	Number of shareholders	52,322
Registrar of shareholders	Sumitomo Mitsui Trust Bank, Ltd.	

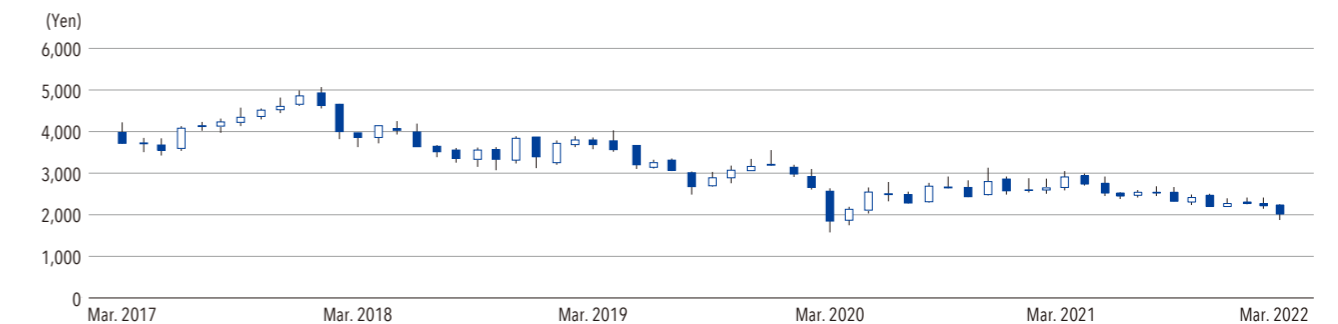
## Major Shareholders (as of March 31, 2022)

Shareholder	Shares owned (in thousands)	Holding (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	18,982	16.1
Custody Bank of Japan, Ltd. (Trust Account)	6,304	5.3
JP MORGAN CHASE BANK 385632	4,460	3.8
STATE STREET BANK AND TRUST COMPANY 505001	4,174	3.5
GOLDMAN SACHS INTERNATIONAL	2,852	2.4
JP MORGAN CHASE BANK 380072	2,394	2.0
Mizuho Bank, Ltd.	2,000	1.7
NORTHERN TRUST CO. (AVFC) RE U.S. TAX EXEMPTED PENSION FUNDS	1,902	1.6
STATE STREET BANK AND TRUST COMPANY 505103	1,659	1.4
Meiji Yasuda Life Insurance Company	1,527	1.3

(1) The Company owns 4,619,188 treasury shares.

(2) The shareholding ratio has been calculated after subtracting our treasury shares.

## Stock Price Transitions



\* The Company, effective October 1, 2017, conducted a reverse stock split for its common stock at a ratio of one for 10. Prices prior to September 2017 have been calculated taking the reverse stock split into account.

## Total Shareholder Return (TSR) Transitions

	Mar. 2018	Mar. 2019	Mar. 2020	Mar. 2021	Mar. 2022
Total Shareholder Return (%)	105.51	102.96	55.11	85.24	63.15
Comparison index: Dividend included TOPIX (%)	115.87	110.03	99.57	141.53	144.34

\* TSR (Total Shareholder Return): This represents the total amount reaped from an equity investment and is expressed as a percentage calculated by dividing the revenue gained from the stock investment (principally dividend and capital gain) by the stock price (investment expenditure). In this example the investment was made at the closing price at the end of March 2017 and the closing price calculated at the end of each fiscal year (March 31).

## The Distribution of Shares (in Thousands) by Owner Category (as of March 31, 2022)

