

To Become a Leading Company of Choice for the Customers through the Implementation of Sustainability Management

Senior Managing Executive Officer;
Chief Sustainability Officer (CSO)
Chief of Sustainability Division (Integrated);
Chief of Clean Energy & Environment Business
Promotion Division

Jiro TANIYAMA

Fellow (Sustainability),
Mitsubishi UFJ Research and
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Mari YOSHITAKA

CSO × Expert
SDGs
Dialogue



The Taisei Group has targeted the front-runner status in the environmental sector, accelerating its initiatives towards carbon neutrality, and aims at the enhancement of corporate value and sustainable development by solving environmental and social issues through its business.

This time, we invited Ms. Mari YOSHITAKA, an environmental financial consultant and a pioneer in environmental business, to have a dialogue with Mr. Jiro TANIYAMA, Chief of Sustainability Division (Integrated) and Chief Sustainability Officer (CSO). They discussed the prospect of roles the Taisei Group is currently expected to play in sustainability management, and future possibilities.

Global Trends in Decarbonization

YOSHITAKA: Since July 2022, the government has been hosting the meetings of the GX (Green Transformation) Implementation Council chaired by the Prime Minister. In February 2023, the Cabinet approved a Basic Policy aimed at implementing GX. The policy sets advancing decarbonization efforts and implementing “growth-oriented carbon pricing schemes” to realize the economic growth, while mitigating climate change and ensuring a stable energy supply. Efforts towards GX are accelerating, for

instance, the policy has been announced to realize GX investment of more than ¥150 trillion by the public and private sectors combined over the next decade.

Over 20 years ago, I studied environmental economics and business management, including emissions trading, in the United States. Although the significance of environmental management was not as widely recognized as it is today, the environment surrounding the green business has dramatically changed over the last two decades. For instance, companies are now required to include sustainability issues such as the measures to mitigate climate

change in their Annual Securities Reports, in accordance with TCFD recommendations. It goes without saying that companies shall take such measures to mitigate climate change and it is also required for the companies to undertake proactive efforts and disclose information, being connected to improve their corporate value beyond such initiatives.

Similarly, Mitsubishi UFJ Financial Group has established specialized departments focusing on sustainable business. We are assessing investment and loan recipients and expanding our business through ongoing engagement with companies. I have a keen interest in the sustainability initiatives and future prospects of the Taisei Group.

TANIYAMA: Concerning the national policy of GX investment of ¥150 trillion, we definitely want to leverage it to expand our business opportunities. I have heard that you attended the 27th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27) held in Egypt in November 2022. How was it going there?

YOSHITAKA: While COP27 did have some achievements, such as the decision to establish a dedicated fund to support measures against “loss and damage” in developing countries affected by climate change, I feel that numerous issues to be discussed continuously remained, such as conflicts between developed and developing countries as well as among developed countries themselves.



TANIYAMA: Our Company participated in the Japan Pavilion for the first time and exhibited our T-Green® Multi Solar and T-eConcrete® technologies. I heard that the booth attracted a large number of visitors throughout the event, making it quite a success.

YOSHITAKA: I was there, and it was indeed favorable. I was aware of a high level of interest from developing countries, particularly in technologies such as T-eConcrete®, that absorb CO₂ through concrete. Despite some negative media coverage in Japan, citing that Japan received the Fossil Award for its substantial public funding for fossil fuels, environmental technologies from Japan are highly valued globally. I think Taisei Corporation should more actively promote such technologies.

Challenges to Achieving Carbon Neutrality

YOSHITAKA: In October 2020, the government declared its aim to achieve carbon neutrality and decarbonized society by 2050 by reducing overall greenhouse gas emissions to net zero. Evolving further initiatives by private companies is crucial for achieving this target, but I believe there are multiple challenges facing companies as well. First, let me ask about your supply chain initiatives. The construction industry has a broad reach, involving companies of various sizes and types—from the leading general contractors such as your company to small and medium-sized contractors in regions. How do you plan to achieve carbon neutrality throughout the supply chain, by involving these companies that are upstream of Scope 3 on your business? When I spoke with the top management of another construction company before, they said that supply chain was a challenge, and while their own efforts could be effective, it was very challenging to instill such awareness into the end of the supply chain.

TANIYAMA: Unlike general manufacturing business, the construction business lacks fixed production facilities, and supply chain changes depending on the projects construction companies undertake. It is a significant challenge to instill our sustainability practices consistently into such a diverse range of companies, some of which are publicly

traded and others are family-owned. However, we believe it is part of our duty as the prime contractor to continue with persistent efforts such as briefings, surveys, and interviews.

YOSHITAKA: Cautiousness might also be required in routine operations, for instance, to what extent the prime contractor may intervene in the business activities of the companies in the supply chain or instruct to such companies, or if such operations are regarded as abusing a superior bargaining position.

Next, I would like to talk about the issue of cost. Innovative technologies such as T-eConcrete® which we mentioned before will contribute to solving social issues only if they are widely adopted. Many companies still operate under the notion that it costs for environmental initiatives, and I think there are cost-related challenges in being widely adopted environmental technologies such as T-eConcrete® and connecting them to the business within the Taisei Group.

TANIYAMA: Absolutely, the cost of using those technologies is currently higher than that of traditional methods and materials. We need efforts to seek understanding from our customers as part of their Scope 3 decarbonization efforts. We believe the key to broader adoption lies in reducing the costs by continuing to run demonstration experiments, identify and address issues, and collaborating with various companies.

Carbon Neutrality and Regional Cooperation

YOSHITAKA: Carbon neutrality is not an issue that can be resolved by companies alone. Naturally, it requires support from the national government as well as co-creative activities with local governments. The Ministry of the Environment has selected “Decarbonization Leading Areas,” focusing primarily on local governments and also involving local companies and financial institutions, has resolved regional issues in accordance with each area’s unique characteristics, and will indicate a direction towards decarbonization while improving the quality of life for residents. I serve on the Evaluation Committee for these Decarbonization Leading Areas and have observed very interesting initiatives being launched in various regions. For construction companies whose operational field includes both domestic and international locations, I believe such initiatives offer a business opportunity to simultaneously enhance corporate value and solve issues.

TANIYAMA: I fully agree with you. In April of this year, we established a specialized department focusing on regional cooperation within our Sustainability Division (Integrated), and have started to reinforce such cooperation throughout the entire company. We have received various requests and inquiries from local governments and have made proposals that utilize our cutting-edge technologies towards achieving carbon neutrality. Some of these initiatives are already underway. In “Medium- to Long-Term Vision: TAISEI VISION 2030” formulated in 2021, we aim to be “a

pioneering corporate group contributing to the development of a resilient society where people can live affluent and cultured lives,” and consider that it is our crucial duty to contribute to regional revitalization and development through our business activities.

YOSHITAKA: While there is a strong public perception that “measures to mitigate climate change equals decarbonization,” and thus interest in clean energy tends to dominate, adaptation to climate change is also a significant global challenge. To achieve carbon neutrality is a goal for the future—2030 or 2050—but natural disasters due to climate change are happening right now, and accordingly a balanced approach that also includes disaster prevention and recovery initiatives is essential.

Even in the case of renewable energy initiatives, each local government is seeking not only reduction of electricity cost but also solutions that can serve as infrastructure during disasters, as part of its Business Continuity Plan (BCP). I believe that the expertise of construction companies is indispensable not only for the energy sector but also for comprehensive urban planning that anticipates natural disasters.

The selection criteria of local governments for Decarbonization Leading Areas which I mentioned earlier emphasize how to incorporate energy-saving and energy-creating measures into existing facilities and evolving such facilities. I believe your company’s environmental technologies, including “Green Renewal ZEB,” offer valuable solutions for local governments, both from the perspectives of carbon neutrality and BCP in times of disaster.

Initiatives for Environmental Due Diligence

YOSHITAKA: I would like to shift our discussion from carbon neutrality to broader environmental issues. I understand that Taisei Corporation has begun considering environmental due diligence, is that correct?

TANIYAMA: Yes, we revised our Environmental Policy in March 2023 to include “Continuous Implementation of Environmental Due Diligence.” We have already implemented risk measures related to the environment, such as establishing an environmental management system (EMS) and formulating the Taisei Group Sustainable Procurement Guidelines. Currently, we are identifying environmental risks as a part of systematically implementing a PDCA

(Plan-Do-Check-Act) cycle, including the identification and assessment of environmental risks, the implementation of preventative and mitigative measures, the verification of their effectiveness, and disclosure of the information.

YOSHITAKA: Historically in Japan, there has been an attitude that all we have to do is to comply with environment-related laws and regulations. However, from an ESG perspective, compliance with environment-related laws and regulations falls under Governance (G). To strive for more ambitious goals for the future is part of the Environmental (E) aspect. Therefore, I think it is commendable that you are establishing a mechanism for environmental due diligence. I look forward to continuing to monitor your company’s progressive initiatives.

Sustainability Management Attracts Human Capital

YOSHITAKA: I am also a lecturer at several universities, and when I talk to students, I find that they tend to be more interested in finding a job or starting a business in

the IT or environmental fields rather than in joining a large company, and have high expectations of being able to do something new, demonstrate their abilities, and contribute to society. My biggest concern is the gap between the values of sustainability natives like them and our generation. I believe that if companies continue to manage

themselves with being tied down to conventional values, they will eventually lose the interest of these students, making it difficult to secure human capital in the future.

TANIYAMA: I share similar concerns. I was deeply involved in the formulation of TAISEI VISION 2030 which I mentioned earlier, as the then Chief of Corporate Planning Office. The focus was on solving sustainability issues through our business, and we had an in-depth discussion how to link this to the power to generate capital for growth for the Taisei Group over the long term and continuously. It is important to equate corporate value with indicators such as net sales and profits. But, not only do we have to emphasize such short-term corporate value, but also do we have to take various measures by backcasting what our future goals should be, in more long-term; otherwise, sustainability natives like the ones you mentioned may not join our Group. TAISEI VISION 2030 embodies the idea that one major issue is to seriously address both business challenges and sustainability.

Additionally, our Company established the Taisei Group Philosophy “to create a vibrant environment for all members of society” in 1990. More than 30 years have passed since this Philosophy was established, and I believe it serves as both a guide and *raison d’être* that the current Taisei Group’s sustainability management should aim at.

YOSHITAKA: The term “ESG investment” was first introduced as an official phase at the United Nations in 2006. Financial institutions had been conducting screening to prevent negative societal impact even before that time, but the idea that ESG investment shall be linked to economic growth became common between 2010 and 2015, following the global financial crisis, “the collapse of Lehman Brothers.” This means your company had integrated sustainability into its management even before such an approach became mainstream globally. That is probably why your company was able to celebrate its 150th anniversary this year.

Taisei Group's Challenges and Expectations

YOSHITAKA: How do the ESG initiatives of your company distinguish themselves from those of your competitors in the construction industry? As the materiality in this sector tend to be quite similar across companies, I often find it hard to identify a unique angle. It is crucial for the investors to see that there are distinct strengths and unique strategies identified as the character of the Taisei Group, even when the Company’s identifiers are masked. I expect the Taisei Group to demonstrate such differentiated initiatives and public disclosures. Also, it is essential to present not only your current initiatives but also a roadmap and future vision outlining further evolutions and steps. In the current circumstances that various sustainability issues such as climate change and geopolitical risks are



How are your diversity initiatives? I am currently researching the correlation between companies advancing in climate change countermeasures, TCFD disclosures, and other initiatives, and those that are working to close the gender gap. Reports from overseas suggest a correlation exists. There is also data indicating that when female participation in management increases and diversity is enhanced, innovation in climate change countermeasures and technology is more likely.

TANIYAMA: As we believe that a major point for promoting active participation and advancement of women in the workplace lies in changing men’s attitudes, we ensure that male employees take childcare leave following giving birth by their spouses.

YOSHITAKA: The term “women’s participation and advancement” is often misunderstood as telling women to “work more.” While it is natural for women to work, the current situation is that it is difficult for them to fully realize their potential unless men share responsibilities as you pointed out. It is said that it is crucial to close the gender gap. It may appear irrelevant at first glance, but in construction industry, which has a strong “male society” image, I believe that diversity initiatives could potentially lead to solutions for environmental issues.

complicatedly tangled up, the Ministry of Economy, Trade and Industry has initiated a program to select and recognize companies, as the “Sustainability Transformation Brands (SX Brands),” that effectively integrate sustainability issues and societal needs into their business strategies and can enhance their corporate value. I serve on the evaluation committee for this program, and I fully believe that the Taisei Group has the potential not only to elevate its sustainability management and recognized under this program, but also to solve this country’s environmental and social issues and to lead sustainability thereof. I have high expectations that the Taisei Group will accelerate its initiatives for the future.

TANIYAMA: Thank you for your valuable advice and your time today.

To Expect Development by Solving Environmental and Social Issues



External Member of the Board
Atsuko NISHIMURA
Elected since 2017

As we are in a period where evaluations of business efforts towards environmental and social issues directly impact corporate value and sustainable development, the Taisei Group has an important role to play and responsibility to lead these initiatives. Pioneering efforts in this field are crucial as they offer various growth opportunities.

The Taisei Group has clarified its emphasis on sustainability management through policy formulation, organizational centralization, and feeding issues back into our Medium-Term Business Plan, and intends to enhance our specific goals and initiatives.

On the other hand, environmental and social issues are broadly correlated, making it difficult to easily assess the effectiveness of our initiatives. Trends in information disclosure and evaluation criteria are also changing. I wish the Company to continuously update its approach, paying close attention to the assessment of the effectiveness of its actions, issue analysis, and appropriateness of information disclosure, and thereby to further develop as a business corporation that pioneers a sustainable future by enhancing the competitiveness and advantages of its technologies and services.

To Address Challenges with a Broad Perspective and Holistic Solutions

In recent years, as the focus on achieving the Sustainable Development Goals (SDGs) has grown, companies are increasingly expected to tackle sustainability challenges. Taisei Corporation, since its foundation, has always addressed social issues, thereby providing value and expanding its business. Thus, one could say that initiatives related to sustainability have been integral to its operations from the beginning. This fine balance between enhancing corporate value while broadly meeting customers' needs and societal demands seems to account for the company's longevity—sustaining it for over 150 years.

While the spotlight often falls on decarbonization when discussing sustainability themes, numerous other challenges like human rights, poverty, and food crises are becoming apparent, too. What I look forward to as the future Taisei Group is its role as a leading company that tackles these issues through holistic solutions and a broader perspective.

As the chairperson of the Sustainability Committee, I will continue to lend my support to these endeavors.



External Member of the Board
Fumiya KOKUBU
Elected since 2019

To Evaluate Sustainability Measures from the Perspective of Worksites



External Member of the Board
Norio OTSUKA
Elected since 2019

When it comes to sustainability, while climate change and human rights have attracted attention previously, issues have now become broader, such as biodiversity, and more urgent issues to be resolved. It can be said, therefore, that the larger the scale of the business, the greater the burden on companies to take measures against them.

I feel that Taisei Corporation's sustainability measures are earnest and sincere, as it has taken effective measures with keen awareness of worksites, even though it has many construction sites under a multi-layered contracting system with subcontractors. It is commendable that the Company has set realistic numerical targets for environmental and social issues towards the realization of SX (Sustainability Transformation), and is working to achieve them straightforwardly.

In order to further enhance sustainability measures in the future, I believe it is important to continue steady efforts while acquiring sufficient understanding from worksites that it is also significant to work on those new issues at worksites, rather than regarding them as problems unique to the head office.

Newly Elected
External Member of
the Board

To Contribute to the Enhancement of Corporate Value with Awareness of Sustainability

As a former President in a manufacturing company in the fields of alcoholic beverages, food, and soft drinks, I have aimed to provide enriching experiences for worldwide consumers, and have also been to work with a wide range of stakeholders to contribute to the development of a sustainable society. The Taisei Group shares these values, emphasizing connections with local communities and dialogue with them, and working towards the development of a resilient society where people can live affluent and cultural lives. I intend to leverage my past experiences in this new role.

As I take on the position of an External Member of the Board for Taisei Corporation, celebrating its 150th anniversary, I see it as my duty to enhance the effectiveness of the Board. This involves building a relationship of trust with the management, conveying candid opinions and perspectives, and properly overseeing both the proactive and defensive aspects of management.

Looking ahead to the future of the Taisei Group, and with the awareness of sustainability based on global trends, I will support the acceleration and realization of growth strategy and contribute to the achievement of "TAISEI VISION 2030" and the enhancement of the corporate value of the Taisei Group.



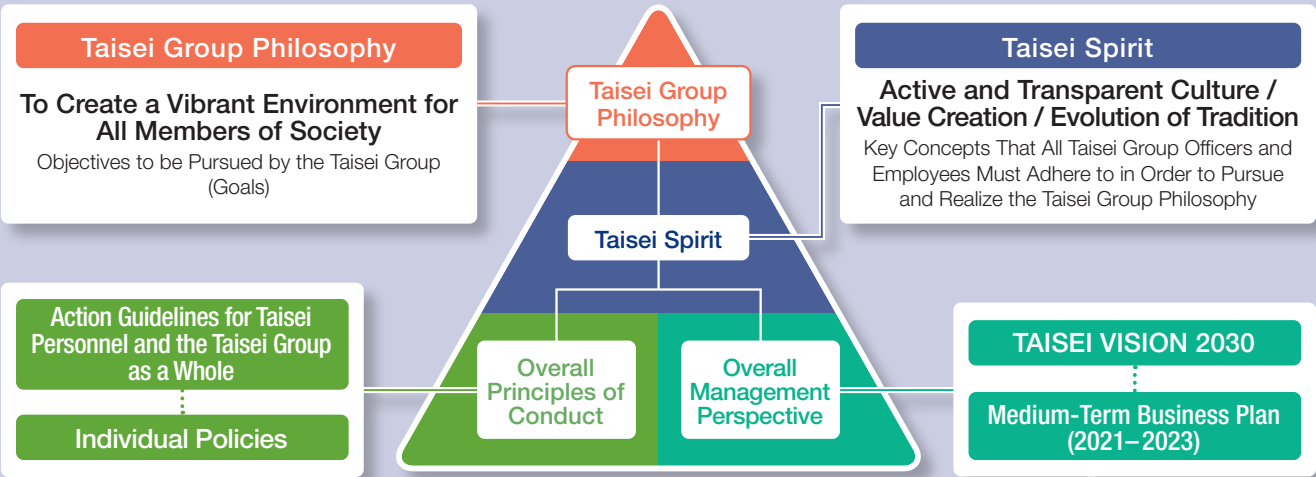
External Member of the Board
Tsutomu KAMIJO
Elected since 2023

Sustainability Management

Structure of Value and Policies and Taisei Group's Fundamental Sustainability Policy

The Taisei Group operates under the Group Philosophy of “to create a vibrant environment for all members of society,” as well as three tenets of the “Taisei Spirit”: “Active and Transparent Culture,” “Value Creation,” and “Evolution of Tradition” in pursuit of the Group Philosophy. The Taisei Group’s Fundamental Sustainability Policy is to realize “sustainability transformation (SX)” by addressing sustainability challenges through businesses centered on the construction industry. The goal is to contribute to the development of a resilient society where people can live affluent and cultured lives. Through our business activities, by producing quality social capital and addressing the challenges faced by our clients and society, we aim to foster a cycle of increasing both corporate and social value. Our aspiration is to achieve sustainable growth alongside society.

Our Structure of Values and Policies



Individual Policies and Standards on Sustainability



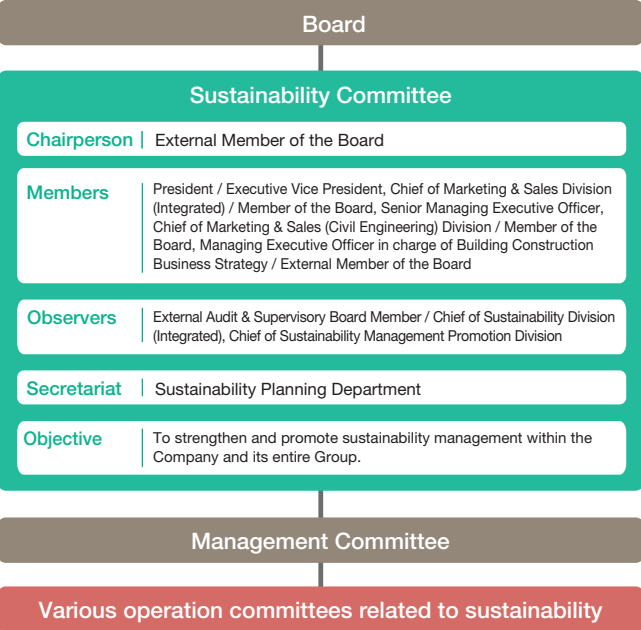
[Web](#) Our Structure of Values and Policies
 [Web](#) Individual Policies

Sustainability Management Promotion System

The Sustainability Committee has been set up as a committee within the Board to bolster sustainability management throughout the Group. This committee deliberates on significant policies and specific measures concerning sustainability challenges, enhancing the effectiveness of our initiatives. Moreover, under the umbrella of the Management Committee, we have instituted various committees, such as the Sustainability Promotion Committee and the Personnel Committee, to discuss crucial matters related to sustainability, ensuring discussions are both timely and comprehensive.

To centralize responses to sustainability challenges, in April 2022, the Group founded the Sustainability Division (Integrated). Additionally, the chief of this division was appointed as the Company’s Chief Sustainability Officer (CSO), amplifying our efforts to tackle these challenges.

Sustainability Management Promotion System Chart (As of July 1, 2023)



[Page](#) **P.86** [Chart of Corporate Governance System](#)
 Governance Section

Overview of the Sustainability-Related Committees

For significant matters such as sustainability, corporate ethics, and technology strategies, specific committees develop policies and strategies and drive their respective initiatives. Below is an outline of the various committees associated with sustainability.

Category	Terms of Reference	Chairperson	Meeting Frequency (FY2022)
Committee within the Board ● Sustainability Committee	Strengthens and advances sustainability management within the Company and its entire Group.	External Member of Board	Twice a year
Management Committee	Preliminary deliberation of items for the Board and decision-making on tasks delegated by the Board.	President	Once a week
Special Committees ● Compliance Committee	Upon receiving updates about compliance promotion, highlights issues in the compliance system, and suggests measures to fortify the system, including preventive actions against potential violations of laws and regulations.	External Expert (Lawyer)	Once a year
Business Committees ● Technical Committee	Encourages innovative technical development, establishes and contemplate various measures, and monitors their execution.	President	Eight times a year
● Central Safety Committee	Discusses and advances matters concerning the Company's safety management, prevention of environmental accidents, and guidance about safety, health, and environmental management for specialized contractors.	Executive Vice President	Five times a year
● Sustainability Promotion Committee	Discusses important environmental and social issues, shares information on sustainability management initiatives, and makes recommendations to the Management Committee	President	Four times a year*
● Risk Management Committee	Selection and deliberation of significant risks throughout the Company, and verification of the status of risk management for both company-wide critical risks and those risks that should be overseen as a headquarters.	Chief of Business Administration Division (CRO)	Once a year
● Central Labor Affairs Committee	Deliberates on the Company's basic policies and advances various initiatives on labor issues, concerning professional contractors.	President	Twice a year
● Digital Transformation (DX) Promotion Committee	Establishes, contemplates and monitors the progress of DX advancement measures.	Chief of Corporate Planning Office (CDO)	Five times a year
● Personnel Committee	Discusses various personnel strategies, and follows up and monitors their execution.	Executive Vice President	Twelve times a year

* Frequency of meetings of the former Environment Committee (now the Sustainability Promotion Committee)

Materiality and the Medium-Term Business Plan

The Group has identified three transformative axes (IX, SX, DX) as shifts in the medium- to long-term external environment and structure. Among them, SX emphasizes “Moving to solve environment and social issues through our business.” In line with this understanding, in our Medium-Term Business Plan (2021-2023), we have laid out priority initiatives connected to sustainability issues we identified as materiality. These efforts are now being integrated into our overall business strategy.

[Page](#) **P.33** [Materiality and Medium-Term Business Plan Initiatives](#)
 Taisei Group's Growth Strategy

Materiality 1

Realization of a Sustainable and Environmentally Friendly Society

Policies and Basic Approach

Related SDGs

6

clean water and sanitation

7

affordable and clean energy

9

industry, innovation and infrastructure

11

sustainable cities and communities

12

responsible consumption and production

13

climate action

14

life below water

15

life on land

17

partnerships for the goals

The Taisei Group is committed to building quality social capital through its construction-centered corporate activities, harmoniously with nature. This aligns with its Group philosophy of “to create a vibrant environment for all members of society” and its Taisei Group’s Fundamental Sustainability Policy.

As a corporate group with its core in the construction industry, we fully recognize both the impact our business activities have on the environment and the impact the environment has on our business activities. With this understanding, we aim to realize a sustainable and environmentally friendly society.

Responsibilities and Contributions through Business

We believe that it’s the Group’s responsibility to adhere to environment-related laws and regulations and to meet the Group’s long-term environmental targets. Simultaneously, we aim to precisely identify risks and opportunities related to climate change and other environmental challenges. By advancing the development and promotion of environmental technologies and services, we are committed to contributing to the realization of “Decarbonized Society,” “Recycling-Oriented Society,” and “Nature Co-Existing Society” through our business endeavors.

Environmental Management

The Group defines environmental management as the corporate activities aimed at realizing the Group’s philosophy concerning the environment. We have set the Environmental Policy as the foundational stance of environmental management, and we have established the TAISEI Green Target 2050 as the Group’s long-term environmental targets, along with the Environmental Action Plan for meeting the annual environmental targets. We also advance our environmental management through the PDCA cycle of our Environmental Management System (EMS) that aligns with the international standard ISO 14001. In recent times, environmental challenges, such as global climate change, depletion of natural resources, and loss of biodiversity, have intensified. These challenges demand comprehensive, long-term measures, as well as collective efforts across the entire supply chain. Responding to these societal expectations, in 2023, we revised our Environmental Policy, the TAISEI Green Target 2050, and the Declaration of Biodiversity Preservation by Taisei Group to fortify our commitment and actions.

Web Q Environmental Management



Realization of a Sustainable and Environmentally Friendly Society

For Realization of a Decarbonized Society

Responsibilities

As construction is the core business of the Taisei Group, the Group has a keen awareness of the effect of its business activities on the transition to a decarbonized society and the impact of the transition to a decarbonized society on business activities. We consider it to be our responsibility to reduce CO₂ emissions from business and related activities to Zero by 2050.

Contribution through Our Business

The Taisei Group identifies the risks and opportunities in anticipation of the achievement of a decarbonized society. We strive to develop and disseminate technologies and services relating to energy-savings, decarbonization of construction materials, renewable energy and so on, and to promote possession of renewable energy power sources, so as to contribute to “Decarbonized Society.”

Risks and Opportunities

Information regarding risks and opportunities related to climate change can be found in the Information Disclosure Based on TCFD section of our company website.

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Information Disclosure Based on the TCFD Recommendation Sustainability Section

Policy / Commitment

- Action Guidelines for Taisei: Promoting environmental conservation and creation
- Environmental Policy
- TAISEI Green Target 2050: Realization of a decarbonized society
- Promise of Eco-First
- Taisei Group Sustainable Procurement Guidelines
- Green Procurement Guidelines
- Green Procurement Standard Guidelines
- Medium-Term Business Plan (2021–2023): To target the front-runner status in the environmental sector, accelerating our initiatives towards carbon neutrality

Initiatives

- TCFD
- SBT
- GX League
- United Nations Global Compact “Environment”
- Challenge Zero (Japan Business Federation)
- Voluntary Environmental Action Plan for the Construction Industry (Japan Federation of Construction Industry)

Performance

Efforts Towards Reduction:

- **CO₂ Emissions through Business Activities:**
Scope 1: We promote energy-efficient operations for heavy machinery, the adoption of hybrid construction equipment, and the introduction of alternative fuels. Additionally, we are exploring the utilization of new energy sources like hydrogen and ammonia.
Scope 2: To accommodate the Group’s electricity consumption, we are advancing the acquisition of renewable energy sources.
- **CO₂ Emissions Associated with Business Activities:**
Scope 3 - Upstream: Collaborating with companies from diverse sectors like steel, cement, and chemicals, we are progressing in the development of construction materials that emit less CO₂.
Scope 3 - Downstream: We are advancing the development and popularization of Zero Energy Building (ZEB) technology.
- **Contributing to the Reduction of CO₂ Emissions:**
We highlight our contributions to CO₂ reduction achieved through the transformation of existing buildings into ZEB—a contribution not assessed within scopes 1, 2, and 3—and we are working to expand the adoption of eco-friendly ZEB renewals.

KPIs

Scope 1 + 2: CO₂ emission reduction rate per sales

Group target

-15% (Compared to FY2019)

Scope 1 + 2: Reduction rate of total CO₂ emission

Group target

-6% (Compared to FY2019)

At construction stage: Reduction rate of CO₂ emission per sales

Non-consolidated target

-41% (Compared to FY1990)

At construction stage: Reduction rate of total CO₂ emission

Non-consolidated target


-46% (Compared to FY1990)

At building operation stage: Reduction rate of design-build estimated CO₂ emissions

Non-consolidated target

-43% (Compared to FY1990)

TAISEI Green Target 2050 Roadmap to a Sustainable and Environmentally Friendly Society

FY2023			FY2030		FY2050	
	Decarbonized Society	CN (Carbon Neutrality)	Scope 1+2: Total emissions -40%		Scope 1+2: Zero CO2 emissions	
			Scope 3: Total emissions -20%		Scope 3: Zero CO2 emissions of the supply chain	
Scope 1	Construction machinery, vehicles, etc.	● Hybrid construction machinery, energy-efficient construction machinery,	introduction of GTL, introduction of innovative construction machinery (electric, hydrogen etc.)			
	New energy (hydrogen/ammonia)		● Introduction		● Use	
Scope 2	Possession of renewable energy power sources (RE)	● Possession of power sources	● Possession of RE to cover Group power consumption needs		● Contribute to the realization of zero emissions through increased possession and supply of RE	
	Zero Carbon footprint Buildings (T-ZCB)	● Development and demonstration of T-ZCB	● Promotion of development and promotion of dissemination of T-ZCB		● Increased dissemination of T-ZCB	
Scope 3	Construction materials that contribute to decarbonization	● Promotion of development and dissemination of environmentally friendly concrete ● Promotion of development and dissemination of T-Green® Multi Solar	● Increased dissemination and commercial application of construction materials that contribute to decarbonization		● Permeation throughout society of construction materials that contribute to decarbonization	
	Net Zero Energy Building (ZEB)	● Promotion of development and dissemination of ZEB for new building	● 100% ZEB rate for TAISEI design buildings		● Tremendous advance in ZEB performance	
Avoided emissions	Green Renewal ZEB	● Promotion development and dissemination of Green Renewal ZEB	● Increase in orders along with increased market size		● Increased dissemination of Green Renewal ZEB	
	CCUS*	● Development of CCUS technologies	● Development and dissemination of CCUS		● Commercialization of CCUS	
	Regional cooperation	● Development of other cooperative activities for decarbonization and use of local resources				

* CCUS (Carbon Dioxide Capture, Utilization, and Storage): A technology for capturing CO₂ emissions from sources such as thermal power plants and cement factories, and then utilizing or storing them.

Decarbonization Technologies for Each Phase of Construction

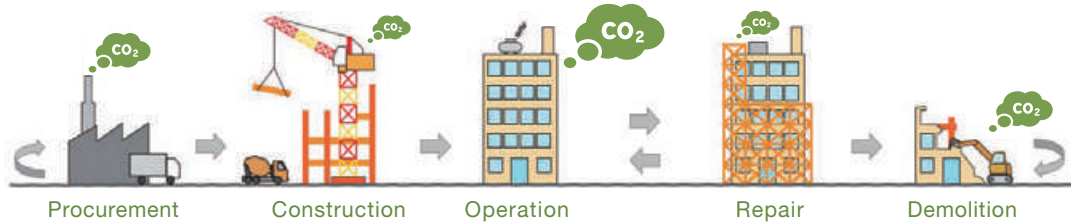
The Group is working towards decarbonization in various phases of construction.

T-ZCB (Zero Carbon Building) Aiming for Zero CO₂ Emissions in the Building Life Cycle

To promote the construction of Zero Carbon Buildings that achieve net-zero CO₂ emissions during the life cycle of the structure, Taisei first visualized the CO₂ emissions throughout the building’s life cycle and the effectiveness of CO₂ reduction technologies at the initial planning stage, and then constructed a T-ZCB (Zero Carbon Building) as a system that systematically evaluates the decarbonization of the structure.

Web Q T-ZCB (Zero Carbon Building)

CO₂ emissions throughout the life cycle of the building



I. Zero Carbon Design: Reducing CO₂ in the Procurement Phase

● T-eConcrete® environmentally friendly concrete that dramatically reduces CO₂ emissions

● Use of Wood Materials That Fix CO₂

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T-eConcrete® Sustainability Section

II. Zero Carbon Construction: Reducing CO₂ in the Construction Phase

● TSA : TAISEI Sustainable Action®, Environmental Impact Reduction Activities

● System to Measure and Aggregate Worksite CO₂ Emission Data

We are promoting the development and operation of the System to Measure and Aggregate Worksite CO₂ Emission Data, which efficiently collects, consolidates, and visualizes Scope 1 and 2 at worksites utilizing cameras and AI image recognition functions installed at construction sites, external system information such as electricity consumption, electronic manifests, and in-house system information such as fuel purchases.

III. Zero Carbon Construction: Reducing CO₂ in the Operation Phase

● Total Management of ZEB

We realize ZEB by utilizing architectural technology to minimize the load on buildings and diminish the overall energy demand. This is further enhanced through our efficient facility planning that incorporates Taisei Construction’s distinctive energy-saving and energy-generating eco-friendly techniques.



Realization of a decarbonized society

ZEB of Taisei Group



New Construction ZEB

Experience with New Construction ZEBs across Diverse Buildings

At Taisei Group, leveraging our vast experience in converting not just office buildings but a wide array of structures into ZEBs, we propose and deliver the most optimal ZEB solutions tailored to the surrounding environment of the building and the specific needs of our clients.



Kanden Fudosan Yaesu Building



LIFE Toyosu



Acquisition of ZEB for new construction and renewal of Sodegaura City Office Building



Green Renewal ZEB

Three Facilities Owned by the Group Have Completed Their Green Renewal® for ZEB Conversion

The Taisei Group calls for promoting the use of ZEB in existing buildings Renewal ZEB, and is implementing initiatives to improve the health of people, buildings, and the planet under six key words: energy conservation, energy creation, decarbonization, wellness, smart, and peace of mind.

Kansai Branch



(ZEB Ready)
BEI=0.93⇒0.37



Practicing Advanced + General-Purpose ZEB Technology to Meet Diverse Client Needs

ZEB technology for facades

Exterior power generation, line cell, solar suppression and greening



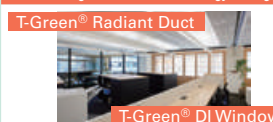
Biophilic Design

Connection with nature, wellness, and ABW



Radiant air conditioning and brightness control

Achieving both comfort and energy-saving



Yokohama Branch



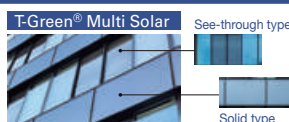
(ZEB Ready)
BEI=0.70⇒0.39



Practicing General-Purpose ZEB Technology in Medium Stock Offices

ZEB facade

Exterior wall/window power generation/insulation strengthening/general equipment ZEB



Wellness

Wooden interior and biophilic design



New Normal

Infectious disease control measures in offices and training institutes, etc.



Taisei U-LEC Co., Ltd., Kawagoe Plant



(ZEB (Office Building)) BEI=0.47⇒-0.09



Carbon Neutral Factory with Mega Solar

Rooftop solar power

Effectively utilizing the large factory rooftop



Low CO2 material

Carbon-Recycled Concrete CLT



Convert to ZEB

Realization of 100% ZEB in office building



* BELS (Building Energy-Saving Performance Labeling System)
A third-party certification system dedicated to the energy-saving performance of buildings led by the Ministry of Land, Infrastructure, Transport and Tourism. The BEI (Energy Efficiency Performance Index) value is calculated in accordance with the calculation method specified by the national government, and the number of stars is determined in five levels according to the value, and buildings with even better energy efficiency among the highest rank of five stars are certified as ZEB.

Web Q ZEB

Within the Technology & Solutions section, ZEB introduces the ZEB roadmap and case studies on newly constructed ZEBs.

Web Q Green Renewal ZEB

Under Green Renewal ZEB in the Technology & Solutions section, you will find further detailed information and videos not covered above.

ZEB, which stands for Net Zero Energy Building, aims to achieve a comfortable indoor environment while balancing the annual primary energy consumption consumed by buildings to zero. The Taisei Group has obtained certification for office buildings, public research facilities, renovations, and other facilities, and is working to promote and expand ZEB in a variety of facilities by proposing solutions to customers that lead to environmental considerations and the improvement of real estate values.



New Construction ZEB

ZEF, a Unique Index for Zero Energy in Production Facilities

Taisei Corporation has incorporated the evaluation of air conditioning, ventilation, lighting, water heating, elevators, and other elements in the production area of factories, which were previously excluded from the ZEB assessment. As a result, we defined the ZEF (short for "Net Zero Energy Factory") as a factory that appropriately evaluates the energy consumed within, aiming to make the annual primary energy balance required by the production factory zero through energy conservation and energy creation. The OKI Honjo Factory Building H1 achieved the highest rank in the five-tiered Building Energy Efficiency Labeling System (BELS*), and simultaneously became the first large-scale production facility in Japan to receive ZEB certification.



OKI Honjo Plant, Building H1

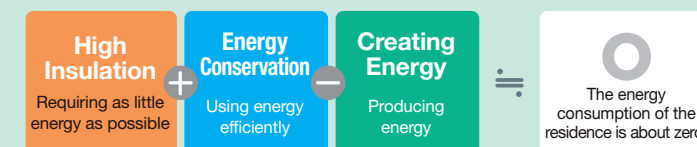


New Construction ZEB

ZEH

SMART Palcon ZEH: Building Environment- and Budget-Friendly Homes

TAISEI HOUSING CORPORATION, which specializes in concrete housing, is actively promoting ZEH (short for Zero Energy House). They offer homes constructed using the durable and disaster-resistant precast concrete method known as Palcon. With the addition of the ZEH specifications, these residences are both environmentally friendly and budget-friendly.



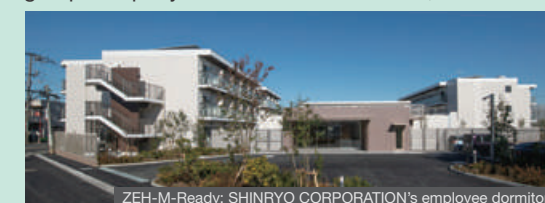
New Construction ZEB

ZEH-M

Promotion of ZEH-M in Apartment Buildings

TAISEI U-LEC Co., LTD., which is engaged in apartment building construction, is registered as a ZEH developer (C-registered building contractor) with the Sustainable Open Innovation Initiative and is advancing the construction of ZEH-M (short for ZEH-Mansion).

Taisei-Yuraku Real Estate Co., Ltd. is committed to promoting ZEH in condominiums. The ZEH-M Oriented condominium project is an instance where Taisei-Yuraku Real Estate Co., Ltd. placed the order, and it was constructed in collaboration with a group company of the TAISEI U-LEC Co., LTD.



ZEH-M-Ready: SHINRYO CORPORATION's employee dormitory



ZEH-M Oriented: Terrace Kamishakujii West

Web Q ZEF

Details about the ZEF initiative can be found in the Technology & Solutions section.

Web Q SMART Palcon ZEH

For more on the ZEH initiatives, please visit the TAISEI HOUSING CORPORATION website.

Web Q ZEH-M

For further details on ZEH-M, please visit the TAISEI U-LEC Co., LTD. website

Realization of a Sustainable and Environmentally Friendly Society

For Realization of a Recycling-Oriented Society

Responsibilities

As construction is the core business of the Taisei Group, the Group has a keen awareness of the effect of its business activities on the transition to a recycling-oriented society and the impact of the transition to a recycling-oriented society on business activities. We consider it to be our responsibility to increase the green procurement rate and reduce the final disposal rate of construction byproducts, in order to achieve a circular economy.

Contribution through Our Business

The TAISEI Group identifies the risks and opportunities in anticipation of the achievement of a recycling-oriented society. We strive to develop and disseminate technologies and services relating to soil and groundwater contamination countermeasures, appropriate management of wastes and final disposal sites and so on, and to promote recycling of industrial byproducts, in order to contribute to a recycling-oriented society.

Risks and Opportunities

The transition to a circular economy is becoming a critical global challenge. Companies are now expected to adopt sustainable procurement practices throughout their supply chains. These practices include conserving resources, utilizing renewable materials, and addressing the environmental pollution caused by plastics.

If the shift to a circular society is delayed and the mass-waste economy persists, our corporate group anticipates potential risks. These include increasing prices of materials due to resource scarcity and rising waste disposal costs. Furthermore, if our efforts are inadequate, we face the potential risks of diminished our reputation among our stakeholders and decreased opportunities for securing orders.

Conversely, as society moves towards circularity, our corporate group anticipates more opportunities to secure orders, particularly in projects like the construction of waste disposal sites and soil and groundwater purification, all contributing to the circular economy's realization. Additionally, our ongoing initiatives to develop and socially implement systems, products, and technologies that efficiently utilize resources and construction materials will bolster the Group's competitive advantage. We believe that for the Group, the transition to a recycling-oriented society offers a significant opportunity to enhance our corporate value and elevate our reputation among our stakeholders.

Policy / Commitment	Initiatives
<ul style="list-style-type: none"> ● Action Guidelines for Taisei: Promoting environmental conservation and creation ● Environmental Policy ● TAISEI Green Target 2050: Realization of a recycling-oriented society ● Promise of Eco-First ● Taisei Group Sustainable Procurement Guidelines ● Green Procurement Guidelines ● Green Procurement Standard Guidelines ● Construction byproduct processing manual 	<ul style="list-style-type: none"> ● United Nations Global Compact "Environment" ● Plastic Smart (Ministry of the Environment) ● Water project (Ministry of the Environment) ● Japan Partnership for Circular Economy: J4CE (Ministry of the Environment, Ministry of Economy, Trade and Industry, Japan Business Federation)

Performance

●Efforts to Make Effective Use of Resources

Promotion of recycling of building materials through a patrol collection system

- In addition to using the National Permit System*, Taisei has developed a construction byproduct patrol and collection system in which the same vehicle patrols to multiple worksites, sharing the same rules for transporting scrap materials among building materials manufacturers, in order to improve transportation efficiency.
 - In Tokyo, we are helping to promote a circular economy in the construction industry by recycling construction materials, including plastic waste, and other valuable materials.
- * National Permit System: A system in which building materials manufacturers, etc. are certified by the Minister of the Environment to collect waste materials from their products (product scraps, etc.) over a wide area and recycle or properly dispose of them as product raw materials, etc.

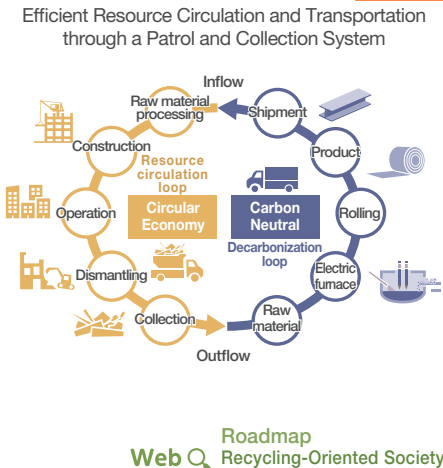
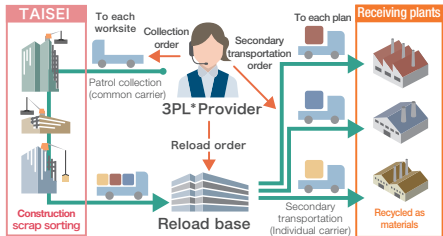
Promote recycling of steel materials through T-Near Zero Steel

- In collaboration with Tokyo Steel Corporation, we will utilize T-Near Zero Steel, a steel product made from scrap steel. By promoting the recycling of steel materials, we will contribute to the reduction of new natural resources.
- The use of green power in the electricity used in the manufacturing process using electric furnace steel also contributes to the reduction of CO₂ emissions.

Column

“Stationery×SDGs” at the Worksites

As part of its SDGs efforts at its worksites, Taisei Corporation collects unwanted office supplies, such as tube files, and distributes and reuses them to departments of choice. This initiative also helps to expand the opportunities for employees with disabilities. In FY2022, approximately 12,600 tube files were reused.



Realization of a Sustainable and Environmentally Friendly Society

For Realization of a Nature Co-Existing Society

Responsibilities

As construction is the core business of the Taisei Group, the Group has a keen awareness of the effect of its business activities on the transition to a nature co-existing society and the impact of the transition to a nature co-existing society on business activities. We observe the Declaration of Biodiversity Preservation by Taisei Group and consider it to be our responsibility to minimize the adverse impact of construction business on the natural environment and biodiversity.

Contribution through Our Business

The Taisei Group identifies the risks and opportunities in anticipation of the achievement of a nature co-existing society. We strive to develop and disseminate technologies and services relating to conserving and restoring natural environments and enhancing biodiversity, and to promote activities that, co-exist with nature and maximize the positive impact on the natural environment and biodiversity, in order to contribute to the realization of a nature co-existing society.

Risks and Opportunities

To protect and harness the natural capital and biodiversity, which serve as the bedrock for the planet's sustainability and the crux of human security, achieving a Nature Positive stance has emerged as a pressing global challenge. Companies are now expected to undertake initiatives contributing to this goal.

Should the shift towards a society co-existing harmoniously with nature falter, and if the depletion of natural capital persists, our corporate group could potentially face risks. These include increasing prices of materials due to resource scarcities and elevated expenses from heightened levies imposed for environmental conservation efforts. Furthermore, if our initiatives are deemed inadequate, we face the potential risks of diminished our reputation among our stakeholders and decreased opportunities for securing orders.

Conversely, as society gravitates towards the nature co-existing society, we anticipate more opportunities to secure orders in areas like conserving and cultivating abundant natural environments and establishing green infrastructure, aligning with Nature Positive goals. Moreover, the Group's ongoing development and social implementation of technologies and services will bolster the Group's competitive advantage.

We believe that, for our corporate group, this shift towards a society intertwined harmoniously with nature represents an opportunity to enhance our corporate value and elevate our reputation among our stakeholders.

Policy / Commitment	Initiatives
<ul style="list-style-type: none"> ● Action Guidelines for Taisei: Promoting environmental conservation and creation ● Environmental Policy ● TAISEI Green Target 2050: Realization of a nature co-existing society ● Promise of Eco-First ● Declaration of Biodiversity Preservation by Taisei Group ● Guidelines for Conservation of Biodiversity ● Taisei Group Sustainable Procurement Guidelines ● Green Procurement Guidelines ● Green Procurement Standard Guidelines 	<ul style="list-style-type: none"> ● United Nations Global Compact "Environment" ● Initiative based on the Declaration of Biodiversity by Keidanren (Japan Business Federation, Keidanren Committee on Nature Conservation) ● Japan Business Initiative for Biodiversity (JBIB) ● 30 by 30 Alliance for Biodiversity (Ministry of the Environment) ● TNFD Forum

Performance

●Technology to Conserve High-Quality Natural Environments

Creating a forest inspired by natural woods from seedlings

During the development of the Fujisan Nanryo Industrial Park, we undertook a "10-Year Forest Creation" initiative, utilizing trees suitable for the local environment and emulating natural woods. Using the "natural planting" method that fosters forest growth by allowing trees to compete with each other, seedlings are planted during tree planting festivals. Ten years after the initial planting, it has been verified that the new forest boasts richer biodiversity than the existing surrounding forests.



Tree planting festival conducted



Five years post-planting



Ten years post-planting

●Various Technologies to Support Green and Waterside Development

Biodiversity Concierge Series

An interactive app designed to assist with plans that consider biodiversity. It is structured around three unique concierges with distinct focuses: "Ikimono (live creatures)," "Mori (forest)," and "Mizube (watersides)."



Roadmap
 Web Q Nature Co-Existing Society

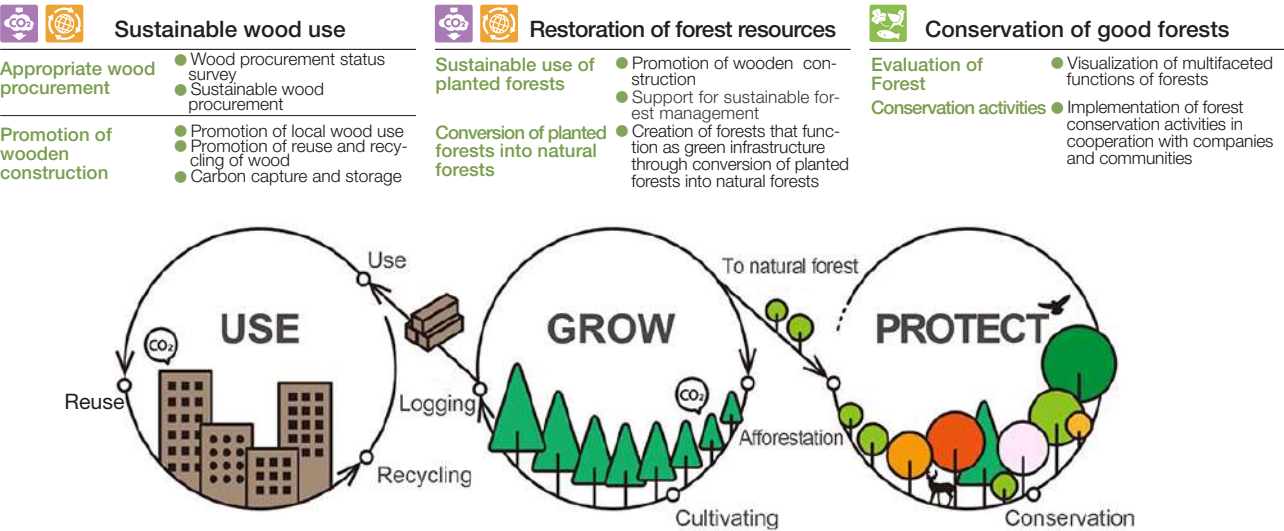
Plant Mat

A mat embedded with ground cover, consisting of the forest floor and grassland vegetation appropriate for the projected site's environment. Simply by laying them down, it facilitates the creation of native-species grasslands and forest floors, promising healthy growth.



Realization of a Sustainable and Environmentally Friendly Society

For Resolving Issues Related to the Forest Resources and the Forest Environment



*For information on our responsibilities, contributions through our businesses, and various initiatives, please visit our company website, “Forest Environment and Forest Resources.”

Web Forest Resources / Forest Environment

Realization of a Sustainable and Environmentally Friendly Society

For Resolving Issues Related to the Water Resources and the Water Environment



*For information on our responsibilities, contributions through our business activities, and various initiatives, please visit our website, “Water Resources / Water Environment.”

Web Water Resources / Water Environment

Information Disclosure Based on the TCFD Recommendations

The Taisei Group recognizes the impact of climate change on its business as a significant management challenge. In July 2020, we endorsed for the TCFD recommendations, and since May 2021, we have been disclosing information in line with the TCFD guidelines. For more information, please visit our website, “Information Disclosure Based on the TCFD Recommendations.”

Web Information Disclosure Based on the TCFD Recommendations

Governance

We have established both the Sustainability Committee and the Sustainability Promotion Committee to discuss and consider matters related to climate change.

Page **P.64** Sustainability Management Promotion System Sustainability Section

Strategies

There are thought to be two types of risks and opportunities associated with climate change. One is the result of “transitions” that include market changes and the tightening of regulations to minimize temperature rise. The other is the result of “physical” changes such as acute abnormal weather occurring due to temperature rise. To devise business strategies that can deal flexibly with climate change, multiple scenarios are used to identify risks and opportunities and evaluate the impact on business, and then business strategies are formulated and reflected in the Medium-Term Business Plan and the like.

Risks and Opportunities

Type	Risks/Opportunities		Descriptions	Impact level
Transitions	Market shrinkage and increase in construction cost due to the introduction of carbon pricing and tightened CO ₂ emission regulations	Risks	● Decrease in private construction investment and equipment investment due to the introduction of carbon pricing and the reinforcement of CO ₂ emission regulations ● Increase in construction costs due to a hike in the prices of building materials and electricity	Medium
		Opportunities	● Increase in costs due to the application of carbon pricing to the CO ₂ that is generated by our business activities	Low
	Increase in demand for renewal	Opportunity	● Increase in demand for renewal to improve energy efficiency of existing facilities	Medium
	Increase in demand related to energy-saving and renewable energy	Opportunities	● Increase in demand related to ZEB and smart cities ● Expansion of demand for renewable energy-related works such as offshore wind power	Medium
Physical	Increase in average temperature during summer	Risks	● Decline in productivity due to an increase in damage to the health (heat stroke, etc.) of skilled construction workers and the avoidance of extremely hot hours ● Accelerated worker shortage due to the decline in the number of new workers in the construction industry because of the degraded working environment	Medium
	Rise in severity and frequency of natural disasters	Risks	● Work suspension, process delay, and increase in labor and temporary work costs due to damage to construction worksites, etc.	Medium
		Opportunities	● Increase in procurement costs and process delays due to damage to suppliers	High
	Rise in sea level	Opportunities	● Increase in demand to improve the resilience of equipment and infrastructure against intensified disasters ● Increase in new construction and relocation works due to growing demand for relocation from disaster hazard areas	High
		Opportunity	● Increase in the capital investment for improved resilience in areas with a flood risk and demand for relocation from areas with a flood risk	High

Countermeasures for Climate Change

Response to the market shrinkage and construction cost increase due to the introduction of carbon pricing and the tightening of laws and regulations	● Possession of renewable energy power sources for the purpose of covering the Group's electricity consumption ● Examination and introduction of fuel improvement measures (biodiesel fuel/fuel additives) at construction worksites ● Enhancement of green procurement such as development and utilization of carbon-recycle concrete
Response to the increase in demand related to renewal, energy-saving and renewable energy	● Establishment of an organization dedicated to renewal, and expansion of the organization that handles work related to wind power generation ● Development and commercialization of next-generation high-performance ZEB and the development of energy support services ● Technological development that contributes to the industries that are expected to grow through a virtuous cycle of the economy and the environment
Response to the reduced productivity of construction worksites due to abnormal weather	● Reduction of health damage through the nationwide promotion of wellness worksites and the improvement of working environment during extremely hot hours ● Consolidate some of the operations of worksites into specialized organizations such as Digital Product Center ● Reform the production process at worksites by developing and deploying unmanned construction technology, robot construction technology, etc.
Response to abnormal weather, increase in the severity and frequency of disasters and sea level rises	● Advancement of infrastructure development technology for national resilience and the improvement of the proposing skills ● Development of real-time flood risk prediction/simulation for heavy rain, etc. ● Securing a business continuity system by building a BCP system with clients and suppliers and conducting regular training

Risk Management/Indicators and Targets

For more information on governance, as well as risk management/ indicators and targets, please visit our website.

Web Risk Management / Indicators and Targets

Materiality 2

Ensuring Quality and Improving Technology

Policies and Basic Approach

Related
SDGs



In its Quality Policy, Taisei Construction defines its critical mission as the efficient and ongoing delivery of high-quality construction products and associated services to its clients and the broader society. Each division—Building Construction, Civil Engineering, Design, Engineering, and Nuclear Facility—operates under distinct policies, pushing forward their production activities effectively. Each division and group company has achieved ISO 9001 certification. They implement quality management, and both the Civil Engineering Division and Building Construction Division have formulated manuals and operational procedures. We collaborate closely with all relevant departments to uphold stringent quality control, aim to eliminate any defects attributed to quality, carry out customer satisfaction surveys post-project completion, and prioritize fostering stronger relationships with our clients.

Quality Policies of Relevant Divisions

Building Construction Division
Following the revision of ISO 9001 in its 2015 edition, we have aligned the Construction Operation Standards as the benchmark for our quality control manual. We champion quality control by executing workflows in accordance with this standard. Our divisional quality policies are centered on consistently offering construction products and services of high caliber that cater to the expectations of clients and society. We commit to ensuring customer satisfaction and trust and place emphasis on nurturing enhanced relationships with our clientele.

Civil Engineering Division
Aiming to deliver superior civil engineering structures tailored to client needs, we harness our expertise and organizational strength as a general contractor. With the genuine and swift collaboration of everyone involved in a project, we strive to achieve a standard of quality and service that resonates with client satisfaction. We also endeavor to enhance customer satisfaction by perpetually refining the efficiency of our quality management system, targeting its more proficient application.

Engineering Division
Aiming for customer satisfaction, and in line with the Company's Quality Policy, the department has established its quality policy as: "Delivering TAISEI QUALITY through innovative services for the growing engineering business domain." We are actively engaging in the following specific quality activities:
(1) Precisely identify and address client requirements
(2) Develop human capital capable of delivering innovative services
(3) Adhere to all laws and regulations
(4) Implement and continuously maintain a suitable quality management system

Risks and Opportunities

If our commitment to quality assurance falls short, risks such as harming the health and safety of our clients due to quality deficiencies and malfunctions may arise. This can also result in devaluation of assets, and there is the associated risk of cost escalations and reduced productivity due to the need for rework or modifications. Furthermore, with the demographic shifts of a declining birthrate and aging population, there is an impending risk of a decreasing pool of skilled technicians and a diminished labor force, leading to potential lapses in quality control.

Conversely, adopting new technologies like automation and robot utilization, and leveraging digital technology to enhance quality control and productivity can bolster the Group's competitive advantage. This not only enhances our corporate value but also elevates our reputation among our stakeholders.

Design Division
Both the Design Division and its eight branch departments have collectively achieved ISO 9001 certification. This ensures a consistently high standard of design quality across all our departments nationwide. In 2016, we founded the Taisei Construction's First-Class Architect Supervision Office, granting it independent authority to oversee construction projects. With the swift advancements in ICT and the evolving nature of work, it is essential to reassess our systems to manage emerging risks tied to these changes. Back in 2002, our Design Division was a pioneer in the construction sector by securing the Information Security Management System Certification (previously BS 7799, now ISO 27001). We are holistically advancing our quality standards through ISO-driven initiatives spanning quality, environment, and information security.

Nuclear Facilities Division
Under the umbrella of the Company's Quality Policy, this division is committed to elevating the safety, reliability, and environmental preservation of nuclear-related facilities. This commitment extends to designing, surveying, researching and developing, conducting demonstration tests, and offering technical support to nuclear facilities. As required, we adhere to the Rules of Quality Assurance for Safety of Nuclear Power Plants JEAC 4111 (by the Japan Electric Association), the Guidelines for Quality Improvement of Analysis Services Pertaining to Licensing at Nuclear Facilities (by the Japan Nuclear Safety Institute), and the Quality Assurance Requirements for Nuclear Facilities NQA-1 (by The American Society for Mechanical Engineers or ASME). We ensure alignment with the unique quality assurance expectations of our clients, which include major electric power corporations.

Web Q
ISO14001/ISO9001/ISO45001

Towards an Effective System

Having reflected upon our failure to satisfy steel erection accuracy requirements highlighted last year, we are steadfast in our dedication to bolstering mechanisms that prevent a reoccurrence. This includes bolstering mechanisms to reliably operate the quality control process. All our executives and employees are recommitting to the ethos of "TAISEI QUALITY—Quality is Our Pride" and reinforcing the fundamental principles.

As part of our action plan, we have inaugurated a new Quality Control Division. Distinct from the Building Construction Division and directly overseen by the president, its mandate is to rigorously uphold the quality control processes related to building projects. This division, with its specialized focus on quality control supervision and monitoring, takes the lead in forestalling construction-related quality issues. They also ensure adherence to customer specifications and contracts. If and when quality issues arise during or post-construction, the division steps in, offering expert oversight and guidance.

Specifically, the head office's Quality Patrol, along with interim and final inspections, evaluates the implementation status of the quality control processes from an impartial third-party perspective, adhering to the Construction Operation Standards. When on-site construction does not align with these standards or when issues arise, the site supervisor is given clear directives and deadlines for rectifications. If these issues remain unaddressed, the branch receives orders to halt the construction and ensure necessary corrections.

Additionally, periodic reviews are conducted on the tasks of branch technical departments. These checks and balances, combined with continual support and guidance, ensure the sustained effectiveness of our quality control processes and offer invaluable assistance to dedicated quality control personnel at both worksites and branches.



Policy / Commitment

- Action Guidelines for Taisei: Pursuing customer satisfaction, ensuring and improving safety and quality
- Quality Policy
- Medium-Term Business Plan (2021–2023): To innovate the production systems and reform the workstyles through DX

Initiatives

- ISO9001

Performance

Customer Satisfaction: Building Construction Division
In the Building Construction Division, each branch conducts a questionnaire survey on customer satisfaction. The survey questions are on a five-point scale, and include those on workmanship, usability, and worksite office management during construction. The satisfaction rate in FY2022 was 85.9%. For low-scoring items, we analyze their causes, establish countermeasures, and reflect them in post-construction review meetings. In this way, we aim for further improvement and the establishment of good relationships with customers.

Customer Satisfaction: Civil Engineering Division
Calculated based on the owner's construction evaluation scores as a metric, the satisfaction rate for FY2022 was 95.8%. We also conduct interviews, and each branch shares these results in construction review meetings, aiming for improvements. Both the head office and branches are united in their commitment to continually enhance customer satisfaction.

Productivity Enhancement
One of the KPIs used to gauge the outcomes of technological advancement is per capita productivity, calculated as net sales divided by the number of employees. By making these outcomes transparent and fostering a heightened awareness of "productivity" among every employee, our entire group collaboratively reviews business processes to strive for enhanced productivity. For FY2022, the productivity figure stood at ¥67 million.

2023 KPI

Customer satisfaction rate	
Non-consolidated target	100%
Productivity (Net sales/number of employees)	
Taisei Group target	¥83 million

Page

P34

Customer satisfaction rate
Productivity (Net sales/number of employees)
Materiality and KPIs

Materiality 3

Technical Development for Realizing a Sustainable Society

Related
SDGs

Policies and Basic Approach

The Taisei Group, in its Technology Development Policy, grounds its core strategy on realizing technological advancements based on the priority challenges, business strategies, and the medium- to long-term vision set out in its Medium-Term Business Plan. Under the Medium-Term Business Plan (2021-2023), a primary focus is to “promote the technical development to solve environmental and social issues through open innovation.” To this end, the Group is actively pursuing the development and application of next-generation, high-performance ZEB, exploiting carbon-recycled concrete, and spearheading technologies expected to invigorate industries benefitting from a harmonious cycle between the economy and the environment.

Risks and Opportunities

If we do not sufficiently engage in technological development for the realization of a sustainable society, there is a risk of not being able to provide our clients with high-quality, high-performance construction products and associated services that meet their needs.

Conversely, pursuing innovation through the development and societal integration of technologies—whether to establish new businesses and markets, address diverse sustainability challenges, or enhance quality, productivity, and safety—bolsters the Group's competitive advantage. It also contributes to enhancing our corporate value but also elevating our reputation among our stakeholders.

Policy / Commitment

- Action Guidelines for Taisei: Striving to create value, fulfilling social responsibilities
- Policy on Intellectual Property
- Policy on Technological Development
- Medium-Term Business Plan (2021–2023): To promote the technological development to solve environmental and social issues through open innovation

Initiatives

- The Japan Intellectual Property Association

Performance

- Based on our strategy for intellectual property, our proactive efforts in rights establishment and utilization have resulted in a patent assessment rate of 87.7%. This figure is notably high when compared to the average rate of 74.7% for all industry sectors over the past three years, as reported in the 2022 edition of the Annual Report of Patent Administration.
- Thanks to our client's appreciation and understanding of our initiatives in renewable energy and other decarbonization measures, we secured orders for 10 net Zero Energy Buildings (ZEBs) in FY2022.

2023 KPI

- Number of patent applications filed

Non-consolidated target	280 cases
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- Number of orders received for net Zero Energy Buildings (ZEBs)


Non-consolidated target	8 projects
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Page P.69 Taisei Group's ZEB Sustainability Section

Technology Topics

Autonomous Construction Machine


T-iROBO® Bulldozer



Since 2013, the Company has been advancing the development of the T-iROBO series, which encompasses construction machinery that can be remotely operated or function autonomously. We have successfully developed and implemented a bulldozer with autonomous control that can detect piles of dirt and sand and autonomously determine its earth-moving route.

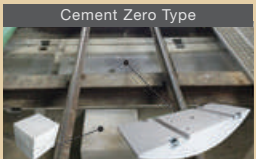
T-eConcrete® Series—Pioneering the Use of Environmentally Friendly Concrete That Substantially Cuts CO₂ Emissions

Carbon Recycling




Gate fence of SMC Corporation's Shimotsuma Plant 2

Cement Zero Type



Pedestrian floor block, Invert block
Construction of a new tunnel in the Inzai area of Chiba Prefecture (Part 2)
Owner: TEPCO Power Grid, Incorporated

Carbon Recycling



Root consolidation block
Right bank levee of Arakawa River
Ministry of Land, Infrastructure, Transport and Tourism, Kanto Regional Development Bureau

Aiming to achieve carbon neutrality by 2050, we are pushing forward with the introduction of various types of T-eConcrete®. This includes the T-eConcrete®/Carbon-Recycle which boasts a net-negative CO₂ emission balance.

CO₂ Absorption (Sequestration) by T-eConcrete®/Carbon-Recycle

Regular concrete	Carbon-recycled concrete
-171kg/m ³	274kg/m ³
Amount of CO ₂ absorbed	CO ₂ emissions at the time of production

CO₂ Intensity = Emissions - Absorption = 55 - 171 = -116 kg/m³
CO₂ reduction rate = CO₂ intensity of regular concrete - CO₂ intensity of carbon-recycled concrete = 274 - (-116) = 390 kg/m³

Materiality 4

Promotion of Supply Chain Management

Related
SDGs

Policies and Basic Approach

For the Taisei Group, specialized contractors, suppliers, and other business partners play a pivotal role as essential business collaborators in addressing environmental, human rights, and other societal challenges. In our “Action Guidelines for Taisei Personnel and the Taisei Group as a Whole,” which emphasizes promoting partnerships with business associates, we are committed to forging fair and mutually trusting relationships. Aligned with our Declaration of Partnership Building announced in 2020, we aim to amplify value and champion mutual growth and harmony throughout the entire supply chain.

To be specific, we are advancing our sustainability initiatives based on the Taisei Group Sustainable Procurement Guidelines. By enhancing the reach and understanding of these guidelines—which outline collaborative efforts between the Group and business partners to solve societal sustainability issues through our business—we endeavor to further our sustainability goals.

Risks and Opportunities

Efforts towards addressing sustainability challenges must be advanced not only within the Group but also throughout the entire supply chain. If these endeavors fall short, there is a risk of adverse impacts on our stakeholders due to potential environmental degradation and human rights breaches within the supply chain. This could subsequently lead to diminished corporate value and our reputation among our stakeholders.

Conversely, initiatives aimed at resolving sustainability issues across the full supply chain help to achieve mutual growth and harmony with our business partners, further bolstering the Group's productivity and competitive advantage.

Policy / Commitment

- Action Guidelines for Taisei: Promoting partnerships with subcontractors and suppliers, ensuring fair trade
- Procurement Policy ● Human Rights Policy
- Taisei Group Sustainable Procurement Guidelines
- Green Procurement Guidelines
- Medium-Term Business Plan (2021–2023): To promote the supply chain management aimed at solving environmental and social issues

Initiatives

- United Nations Global Compact, “Human Rights,” “Labor,” “Environment,” and “Anti-Corruption”
- Supply Chain Sub-Committee (GCNJ)
- HRDD Sub-Committee (GCNJ)
- JBIB (Japan Business Initiative for Biodiversity)
- EcoVadis

Performance

- The core cooperative company association, Soyukai, has established several councils with the Company both nationwide and at various branches. Regularly, these councils exchange opinions and conduct training sessions. During these discussions, we deliberate on initiatives aimed at fostering the next generation of leaders and improving the treatment of employees within our partner companies. The outcomes of these discussions are then integrated into our broader policies and measures. As a subsidiary body of the Branch Soyukai, we have established the Youth Management Study Group that conducts study sessions and networking events with the objective of enhancing the qualifications of managers and Soyukai leadership. Moreover, we offer training on societal challenges, encompassing sustainability training through safety conventions and e-learning modules based on the Taisei Group Sustainable Procurement Guidelines.
- When initiating transactions with new business partners, we make them aware of various policies and guidelines. Additionally, we evaluate the implementation status of these guidelines using a self-assessment method, conducting interviews and exchanging feedback for necessary improvements. In the fourth quarter of FY2022, we carried out self-assessments with 50 new business partners.

- Number of branches offering training to business partners about sustainability activities: 12 domestic branches in January 2023.
- Number of participants and companies engaged in e-learning on sustainable procurement: January to February 2023: 2,579 participants from 1,142 companies
January to February 2022: 7,391 participants from 3,200 companies.

2023 KPI

- Supplier's conformity rates with the Taisei Group Sustainable Procurement Standards

Taisei Group target	100%
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Supplier's conformity rates with the Taisei Group Sustainable Procurement Standards

Materiality and KPIs



Visits and interviews with subcontractors and suppliers

Materiality 5

Thorough Management of Occupational Health and Safety

Policies and Basic Approach

Related SDGs

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The Taisei Group, in its “Action Guidelines for Taisei Personnel and the Taisei Group as a Whole,” emphasizes maintaining a safe and health working environment, and strive to prevent occupational accidents. Especially in construction activities, the Group commits to adhering to laws, regulations, internal standards, and safety plans. We prioritize ensuring the safety of construction personnel and give utmost importance to ensuring community safety, which includes preventing accidents that may affect third parties. This commitment is deeply ingrained, ensuring strict adherence by all the Group’s executives and employees.

Additionally, within the Group’s Medium-Term Business Plan (2021-2023), we underscore the aim to “achieve zero fatal accidents and zero serious accidents.” Our Safety and Health Policy designates the Occupational Health and Safety Management System (TAISEI OHSMS), executed in a systematic and organized manner, as the cornerstone of our safety and health management approach. Group executives, employees, and professional contractors collaboratively work towards these aims. We are also pioneering the adoption and enhancement of safety management and monitoring systems leveraging ICT and AI technologies. In collaboration with professional contractors, we are establishing a safety and health management system that clearly defines “responsibility and authority.” Our ultimate goal is to create a work environment where individuals feel secure and to be recognized as a company that earns the trust and empathy of the wider community.

Risks and Opportunities

The construction industry faces challenges, such as the aging of skilled workers, an influx of foreign labor, escalating natural disasters, and persistent severe heat. These challenges necessitate a higher level of commitment to occupational health and safety management. Inadequate attention to this critical aspect might lead to industrial mishaps, regulatory infringements, diminishing corporate value, and our reputation among our stakeholders.

Conversely, elevating our occupational health and safety standards, inclusive of our partners, aids in securing commendable partners and attracting top-tier talent. Innovative measures, like the automation of hazardous tasks and leveraging digital technologies, not only enhance safety standards but also fortify our Group’s productivity and competitive advantage.

Policy / Commitment

- Action Guidelines for Taisei: Securing a pleasant working environment, promoting partnerships with subcontractors and suppliers
- Safety and Health Policy
- Medium-Term Business Plan (2021–2023): To achieve zero fatal accidents and zero serious accidents

Performance

- Between January and December 2022, Taisei Construction experienced 35 lost-time injuries (compared to 46 in 2021), with an accident frequency rate of 0.31 (0.44 in 2021), and recorded 0 fatal injuries. Even though the total hours worked increased by about 10% compared to the previous year, the number of lost-time injuries decreased, and the accident frequency rate improved.
- An analysis of accidents in 2022 revealed that the most common cause of lost-time injuries was related to machinery, followed by falls. We are determined to prevent similar incidents by rigorously identifying the fundamental causes of each accident and implementing the appropriate corrective measures and preventive actions. To mitigate risks, we undertake risk assessments based on the Occupational Health and Safety Management System (TAISEI OHSMS). Furthermore, we rigorously carry out various worksite patrols and safety and health education for employees, workers, and all individuals associated with the worksites. In 2022, a total of 1,298 employees involved in on-site operations participated in various safety training sessions.
- We prioritize employee training to avert accidents and injuries, enhance safety and health consciousness, and foster a deeper comprehension of safety-related laws and regulations. Training is customized based on an employee's tenure and role, ensuring that they receive education tailored to their specific requirements and responsibilities. Moreover, we disseminate Accident and Injury Reports monthly via our intranet, facilitating the sharing of insights derived from accident analyses, incident case studies, and their corresponding preventive strategies.

Initiatives

- United Nations Global Compact, “Human Rights” and “Labor”
- ISO45001

2023 KPI

- Number of fatal accidents

Taisei Group target0 cases

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Accident Frequency Rate

Financial and Non-Financial Highlights

(2022)

Type of Education	No. of persons
Offsite training for head office in-house employees	458 persons
Basic, intermediate and supervisory management courses	599 persons
Administrator, supervisor and former manager training	160 persons
Supervisor training	46 persons
New employee introductory training (at time of hire)	35 persons
Total	1,298 persons

Materiality 6

Cultivation of Technical Staff and Securing of Human Resources

Policies and Basic Approach

Related SDGs

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The Taisei Group, in its Human Resource Development Policy (Diversity & Inclusion Policy), defines diversity management as the management that creates innovations and values by effectively using diverse human capital and providing opportunities to maximize their abilities.

To realize this vision, we actively recruit individuals with varied skills and ensure an environment where their full potential can be maximized. Furthermore, we have established a framework to bolster career development, skills enhancement, and skills transition, enabling diverse talents to thrive in accordance with their life stages, abilities, and ambitions. As we focus on nurturing the next generation of engineers, this approach is crucial.

In adherence to our Declaration of Partnership Building with business associates, our goal is to augment value and foster a mutualistic relationship throughout the entire supply chain. In collaboration with organizations like Soyukai and the Safety, Health, and Environment Cooperation Association, we are dedicated to both securing and nurturing skilled construction workers.

Risks and Opportunities

Should we fall short in our efforts to educate engineers and secure adequate staffing, there is an inherent risk that we may fail to establish an efficient production framework capable of delivering the high-quality, superior-performing construction outputs and related services catering to our client’s needs.

Conversely, steadfast dedication to the training of engineers and staffing ensures the acquisition of top-tier talent and esteemed business partners. Moreover, by championing the development of innovative construction techniques and technologies as a remedy for workforce shortages, we significantly bolster the Group’s productivity and competitive advantage.

Policy / Commitment

- Action Guidelines for Taisei: Promoting partnerships with subcontractors and suppliers, securing a pleasant working environment
- Human Resource Development Policy (Diversity & Inclusion Policy)
- Declaration of Partnership Building
- Medium-Term Business Plan (2021–2023): To enhance support for Soyukai member companies

Performance

- In May 2021, in line with the new targets set by Nikkenren, we established the “CCUS Dissemination and Promotion Roadmap for FY2021 to FY2023.” We have been progressing well towards our annual targets. For this fiscal year, which is the last of the period, we are aiming for a 100% rate across three indicators: business operator registration, skilled worker registration, and accumulation of employment history. As of a survey conducted in March 2023, the rates stand at 95% for business operator registration, 88% for skilled worker registration, and 87% for accumulation of employment history.

- The Soyukai is comprised of core contractors for Taisei Construction. These member companies are vital partners, striving for mutual growth and prosperity alongside the Company. Regular discussions are held to address various challenges, and they are dedicated to offering solutions and support.
 - In terms of securing the next generation of skilled workers, we have arrangements such as accommodating interns from member companies at Taisei Construction worksites and accepting member successors for temporary assignments at Taisei Corporation.
 - For human capital development, a diverse range of training sessions—from skills courses for new recruits to managerial workshops—are conducted to foster and retain talent among our member company employees. Furthermore, to nurture future leadership of each company, we have instituted the “Youth Management Study Group.” This sub-organization promotes engagement between company executives and members, organizing regular study sessions and interactions to energize the Group.
 - At Taisei Corporation, an accreditation initiative has been launched to enhance the conditions for member construction technicians. In the Civil Engineering Division, aiming to bolster facets like quality, safety, and technology, we have introduced a reward system to acknowledge exemplary civil engineers contributing to on-site projects at Taisei Corporation. In the Building Construction Division, with the goal of elevating the construction management competencies of site supervisors, the “First-Class Foreman System” has been operational since 1995, and the “Special-Class Foreman System” since 2015, emphasizing skill transmission and personnel training.

System name		Amount paid (Daily)	Cumulative number of awardees (Certifications)		System inception date
Civil Engineering	Excellent Civil Engineer Compensation System (BMT System*)	¥2,000	1,274 (annually)	Construction technicians meeting certain criteria, including certifications; Nationwide	Jan. 2013
	First-Class Foreman System (with some revisions)	¥2,000	833 (annually)		Apr. 1995
Building Construction	Special-Class Foreman System	¥4,000	100 (annually)		Sept. 2015

*As of March 2023

Materiality 7

Realization of an Attractive Working Environment That Is Good to Work in

Related
SDGs

Policies and Basic Approach

The Taisei Group has established principles in its “Action Guidelines for Taisei Personnel and the Taisei Group as a Whole,” aimed at securing a pleasant working environment and respect for diversity. The Group is actively promoting these principles. We have also laid out the Human Resources Development Policy (Diversity & Inclusion Policy) and are pushing forward with various initiatives to foster an environment that respects diversity and ensures every executive and employee can maintain high levels of engagement and perform optimally. Based on this policy, as well as the TAISEI VISION 2030 and the Medium-Term Business Plan, we set self-directed goals for the utilization of human capital. The Board regularly monitors the execution of these goals and ensures timely and accurate disclosure to our stakeholders.

Risks and Opportunities

If efforts to harness the skills and capabilities of diverse personnel—including women, elderly employees, and non-Japanese employees—are inadequate, we risk not being able to secure top talent. Consequently, endeavors to uplift corporate value, such as through innovation, might stagnate, and our reputation among our stakeholders could diminish.

Conversely, by actively promoting Diversity & Inclusion initiatives to realize an attractive working environment that is good to work in, we aim to attract and retain stellar human capital, boost the engagement levels of our executives and employees, and invigorate the organization as a whole.

Performance & 2023 KPI



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Number of female managers /
Rate of taking childcare leave by males
Materiality and KPIs



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Management of Human Capital
Taisei Group's Growth Strategy

Materiality 8

Thorough Compliance / Restructuring of the Group Governance System

Related
SDGs

Policies and Basic Approach

The Taisei Group has outlined in its “Action Guidelines for Taisei Personnel and the Taisei Group as a Whole” the importance of complying with laws and regulations (i.e., laws, regulations, ordinances, administrative guidance, customs, and other social rules, as well as internal rules and regulations such as company rules). The Group emphasizes acting with societal integrity. In executing its business activities, there is a continual focus on ensuring that actions and words serve the best interests of clients, the company, shareholders, business partners, and the broader society.

As part of our fundamental approach to corporate governance, we prioritize the speed, accuracy, fairness, and transparency of managerial decision-making. This ensures the sustainable growth of the Company and helps in securing the trust of the community. To maximize the synergies throughout the Group, we have rebuilt the Group governance framework. This includes the initiation of a Group Personnel Exchange System and the rebuilding of the Group meeting structures.

Risks and Opportunities

Establishing solid compliance is foundational to our management. Insufficient efforts in this area can lead to risks such as a diminished societal reputation, constraints in our business operations, a decline in the perceived corporate value, and potentially lower our reputation among our stakeholders.

If we do not adequately strengthen the Group governance, there is a risk that, while aiming for individual company optimization, the Group may not make decisions that are in the collective best interest.

Conversely, by building and enhancing the Group governance, we ensure transparent, swift decision-making and appropriate risk-taking throughout the entire Group. This approach amplifies the Group's strength by maximizing synergies.

Performance & 2023 KPI



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Number of major information security accidents /
Attendance rate at compliance training including
anti-corruption
Materiality and KPIs



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Corporate Governance
Governance Section



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Compliance
Governance Section