Environmental Conservation Activities

Environmental Management

At Takenaka Corporation, we are promoting environmental activities, employee awareness and environmental education in our business based on our Environmental Policy. Our environmental management system has been ISO 14001 certified since 1998.

Items	2018	2019	2020	2021	2022	Remarks
All business locations for which environmental risk assessments have been conducted (%) (Takenaka Corporation)	100%	100%	100%	100%	100%	
Business locations with ISO14001 certification (%) (Takenaka Corporation)	100%	100%	100%	100%	100%	Certification rate for construction business divisions in Japan
Employees receiving environmental education (%) (Takenaka Corporation)	100%	100%	100%	100%	100%	Environmental education conducted during Environment Month, e-learning for new employees and other programs
Group companies with ISO14001 certification (in Japan; excluding Takenaka Corporation) (No.)	3	3	3	3	3	Takenaka Civil Engineering, Asahi Facilities, Asahi Kosan
Global subsidiaries with ISO14001 certification (International Division and global subsidiaries)	4	4	4	4	4	Singapore Office, Thai Takenaka, Takenaka Indonesia, Takenaka Europe (Czech and Slovakia Branches)

ISO 14001 certification and environmental education

Takenaka Group Environment Month

Every June is designated as the Takenaka Group Environment Month, and we are implementing activities based on plans for the entire

group as well as for each global subsidiary. In particular, we are strengthening the raising of awareness.

Major activities during Environment Month in 2022

Implementation Items	Summary
Sending a message from top management to all group employees	Sending a message from the president to encourage employees to raise their awareness on the occasion of Environment Month
Meetings on the environment at all workplaces (Takenaka Corporation)	Under the main theme, "Think about what you can do to reduce CO2 emissions," learning through teaching materials and exchange of opinions was carried out at all workplaces with contents that included understanding of environmental laws, such as the Plastic Resource Circulation Act and our environmental management system.
Presenting Environmental and Social Contribution Awards	Awards in the name of the president of Takenaka Corporation are presented to group employees for achievements that contribute to the environment and society through work or personal activities.
Lectures on the environment	Holding a lecture by an expert under the theme, "Biodiversity Calamity and the Novel Coronavirus" (Tokyo + online streaming)
Independent activities of group companies and each subsidiary	 Exhibition held at the Koto City Environmental Fair (Tokyo), "Getting to know wood through <i>kumiko</i> workshops." Green Infrastructure Tour (Tokyo + Online) Waste sorting workshops at construction sites, and tours of intermediate treatment plants Other energy-saving and waste reduction activities at workplaces, offices, etc.
Disseminating information internally	 Environmental feature article published in the company newsletter. Internal online panel discussion under the theme of technological development for carbon neutrality Other information disseminated through the intranet.

Providing Environmentally friendly Buildings

The Takenaka Group contributes to customers and society through environmentally and socially conscious architecture, and urban creation. Achievements in creating environmentally friendly projects (Takenaka Corporation)

		2018	2019	2020	2021	2022	
CASBEE S and A ranked projects	3						Based on self-assessment, projects designed
(No.)	(Cases)	54	66	44	60	65	by us are the subject.
							*CASBEE: Comprehensive Assessment
CASPEE S and A ranked projects (%)	(0/2)	95.7	80.2	01 7	03.8	09.5	System for Built Environment Efficiency. Rated
) (70)	00.7	09.2	91.7	93.0	90.5	on a five-point scale of S, A, B+, B-, and C.
ZER Projects (No.)	(Cacac)	6	0	12	15	22	ZEB Oriented, ZEB Ready, Nearly ZEB, Net
	(Cases)	0	0	13	15	23	ZEB (Planned values)
Projects with environmental	$(C_{\alpha\alpha\alpha\alpha})$	0	0	20	26	20	LEED, CASBEE, BELS, WELL,
certification (No.)	(Cases)	0	9	20		20	DBJ Green Building
Biodiversity improvement projects	(Cases)	-	-	10	12	14	Indicator settings from 2020

•Material Flow (Takenaka Corporation)

			2018	2019	2020	2021	2022
Amount of							
construction	Total floor area (*	1,000 m2)	2,973	2,832	2,011	2,366	2,783
activity							
Input	Construction activities						
amount							
	Amount of ready-mixed concrete input (7	1,000 m3)	1,423	1,206	1,328	1,507	1,282
	Steel frames and rebars (7	1,000 tons)	358	427	433	447	363
	Electric power (0	GWh)	39	44	47	39	26

<u>.</u>						_	_
	Diesel	(1,000 m3)	32	26	27	24	30
	Water supply	(1,000 m3)	758	768	687	714	519
	Office activities						
	Copy paper	(Millions)	57	54	44	43	37
	Water supply	(1,000 m3)	93	96	97	92	69
	Electric power	(GWh)	17	17	17	17	17
	Gas	(1,000 m3)	142	171	200	174	197
Emissions	Construction activities						
	Construction by-products, total amount generated (excluding sludge and industrial waste subject to special control)	(1,000 tons)	929	865	1,150	1,622	1,182
	Construction sludge	(1,000 tons)	356	319	287	404	237
	Displacement	(1,000 m3)	891	903	990	631	420
	CO2	(1,000 tons)	104	88	92	79	90
	Office activities						
	Wastepaper	(t)	535	457	409	418	409
	Drainage	(1,000 m3)	93	96	97	92	69
	CO2	(1,000 tons)	9	8	8	8	8
Amount of regeneration	Construction activities						
	Amount of concrete recycled	(1,000 tons)	578	623	807	1,328	903
	(Recycling rate)						
	Asphalt and concrete	(1,000 tons)	61	47	56	45	50
	(Recycling rate)						
	Wood chips	(1,000 tons)	32	31	32	30	31

	(Recycling rate)	(1.000 topo)	202	074	222	402	006
	(Recycling rate)	(1,000 tons)	302	271	223	403	230
	Office activities						
	Paper	(t)	477	431	387	393	391
	(Recycling rate)						
Total energy consumption	Total from construction and office activities	(1,000 GJ)	1,456	1,225	1,277	1,114	1,319
CO2 emissions	Total from construction and office activities	(1,000 tons)	113	97	100	87	98
Waste recycling rate	Construction waste recycling rate (volume ratio)	(%)	91.6	92.0	93.5	94.5	94.3

* Some data has been retroactively corrected.

* The scope of tabulation for the office energy and water supply/drainage was expanded and recalculated retroactively through 2019.

•Green Procurement

Takenaka Corporation has established its own green purchasing items for construction materials based on the Green Purchasing Law. We have designated items that are particularly effective in environmental conservation and versatile as "priority green items," and we have established annual targets for their adoption.

Green Procurement Achievements (Takenaka Corporation)

	2020	2021	2022	
Important green procurement items adopted (No.)				Subject design and construction projects include
Design stage (items/projects)	15.4	13.1	13.8	new construction and extension/renovation work
				of 2,000m2 or more, and renovation work of Y1
Construction stage (items/projects)	13.5	14.6	12.0	billion or more.
				*Indicators changed from 2020.

The long-term CO2 reduction targets and progress toward achieving them

The Takenaka Group has established a groupwide (consolidated) CO2 reduction target for achieving carbon neutrality by 2050.

We have already committed to obtaining SBT certification for the mid-term target of 2030, which we are aiming to obtain by the end of FY2023.

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Takenaka Group long-term CO2 reduction targets (established in December 2022) Scopes 1+2: 46.2% reduction by 2030 and 100% reduction by 2050 Scope 3: 27.5% reduction by 2030 and 100% reduction by 2050 (Base year: 2019)

2019 2030 2050 2020 2021 2022 (Base year) targets targets 105,493 Scope1 100,807 96,808 107,413 42,954 36,612 Scope2 48,471 47,421 Total Scopes 1 + 2 149,278 152,915 139,761 144,024 80,311

Takenaka Group CO2 emissions (consolidated) (Unit: t-CO2)

(Percenta	age change from base year)		(+2.4%)	(-6.4%)	(-3.5%)	(-46.2%)	(-100%)
	Category 1	1,155,443	1,143,937	1,333,963	1,069,963		
	Category 2	182,496	55,713	57,097	130,453		
	Category 3	8,307	6,531	6,643	6,101		
	Category 4	13,300	13,187	16,452	14,273		
	Category 5	63,276	54,195	22,867	16,846		
	Category 6	5,314	2,050	1,464	2,222		
	Category 7	3,706	3,897	3,801	3,826		
Scope 3	Category 8	-	-	-	-		
	Category 9	-	-	-	-		
	Category 10	-	-	-	-		
	Category 11	5,181,000	3,927,000	1,885,000	3,343,442		
	Category 12	73	66	78	73		
	Category 13	16,855	15,660	14,004	13,421		
	Category 14	-	-	-	-		
	Category 15	6,699	6,838	5,955	6,173		
Total Sco	ppe 3	6,636,470	5,229,074	3,347,323	4,606,792	4,811,440	0
(Percenta	age change from base year)		(-21.2%)	(-49.6%)	(-30.6%)	(-27.5%)	(-100%)

CO2 Reduction Activity Achievements (Takenaka Corporation)

	2019	2020	2021	2022	2030 Targets	Remarks
Adoption of green power						
at workplaces						
Usage (kWh)	0	433,721	1,425,479	7,530,072		
Application of low-carbon						The reduction contribution amount was
concrete "ECM concrete"						defined as the difference in C02
Applicable quantity (m3)	19,477	21,244	49,021	87,375	120,000	emissions derived from the materials
CO2 reduction						compared to the concrete mixed with the
contribution (t)	3,506	3,824	8,824	15,728	21,600	same amount of ordinary Portland
						cement.
Application of low-carbon						The reduction contribution amount was
cement "ECM cement" (for						defined as the difference in CO2
soil improvement)						emissions from wood use compared to the
Applicable quantity(t)	9,800	4,226	7,291	8,618	21,600	same amount of ordinary Portland
CO2 reduction	1 862	803	1 385	1 637	2 660	cement
contribution (t)	1,002	000	1,000	1,007	2,000	
Application of lightweight						The reduction contribution amount was
duct Evoldan						defined as the difference in CO2
Applicable quantity (m2)	17,734	9,868	16,675	7,775	-	emissions from the manufacturing stage
CO2 reduction	04	50	00	11		of the main constituent materials
contribution (t)	94	52	00	41		compared to conventional products.
Contributing to customers'						· Applies to building designed and
CO2 reduction through						Applies to building designed and
environmentally friendly						constructed by our company with design
construction						in the relevant year.

CASBEE S Rank						· Calculations based on the amount of
Projects (No.)	11	8	12	21	13	Calculations based on the amount of
High percentage of	1/ 0%	16 7%	18.8%	31.8%	20% or more	reduction from standard energy.
pieces	14.370	10.770	10.070	51.070	2070 01 11010	Amount of reduction contribution is for
CASBEE S Rank + A						
Rank						the entire service life.
Projects (No.)	66	44	60	65	60	
High percentage of	80.2%	01 7%	03.8%	08.5%	90% or more	
pieces	09.270	31.770	90.070	90.070	3070 01 11010	
Contribution to reduction	1 650 200	1 317 202	587 656	87/ 8/0	_	
(t-CO2)	1,009,299	1,317,292	507,050	074,049	-	

LCCO2 (Carbon Footprint) of buildings provided

We perform LCCO2 calculations based on the Comprehensive Assessment System for Built Environment Efficiency (CASBEE) for all buildings we design.

	2019	2020	2021	2022	2030 Targets	Remarks
LCCO2 of buildings provided to customers						Buildings completed in the relevant year are the subject. Ratio is based on sales. Buildings for which LCCO2 is calculated are designed by our company.
CO2 total during operation (t-CO2)	5,181,000	3,927,000	1,885,000	3,343,442	3,108,770	
Buildings for which CO2 during operation were calculated (%)	68%	58.5%	65.1%	68.3%		

Status of initiatives to reduce environmental impact

•Initiatives for a decarbonized society

Working to reduce CO2 emissions, we have established CO2 reduction targets for the entire Takenaka Group to achieve carbon neutrality by 2050.

- Together with our partner companies, we are working to reduce the use of diesel oil by providing fuel-efficient operating training for heavy machinery and vehicles used in construction work.
- February 1, 2023, we introduced a "CO2 emissions monitoring system" for work sites, and this is being used to manage targets for reducing CO2 emissions from construction.
- By operating TAK-station, a waiting yard for construction vehicles, including those delivering materials, parking on the streets is avoided, and we are working to reduce CO2 emissions from idling.
- We are working to reduce CO2 emissions from transport by reducing the amount of waste and emissions, and by improving collection and delivery routes.
- We have further improved Ecoffice, an energy-saving temporary house for construction site offices. Jointly developed with other companies, it is 20 percent more energy efficient compared to conventional products, and it is also designed with high fire resistance.
- Electricity used in construction starting after February 1, 2023 shall in principle be green electricity derived from renewable energy, and we are expanding its introduction.
- We have installed solar power generation at our major offices.
- At our Higashi Kanto Branch Office, which was renovated to become ZEB in 2016, we have reduced energy consumption and achieved net-zero energy by implementing performance improvements. This was done by updating equipment and exteriors, including technology we developed, such as radiant heating and cooling through direct use of geothermal and solar heat, and ultra-compact desiccant air conditioning.
- •Initiatives for a resource circulation society
- We have prepared a Construction By-products Management Operations Manual, which provides details on treatment, controlling generation, recycling, etc. of construction by-products, and we are managing plans by incorporating them into a "general construction

plan," created by each work site.

- Using various methods, such as information sessions at work sites, we thoroughly educate our employees and workers at partner companies about proper disposal of construction waste, thorough separation to prevent waste generation and other measures.
- In order to improve the recycling rate of construction by-products, we are thoroughly separating waste at work sites. Especially in regard to waste plastics, we are promoting material recycling by sorting and subdividing according to material type.
- By using BIM (Building Information Modeling) to precut pipes and other materials at factories, we are eliminating the generation of offcuts at construction sites, which reduces waste.
- We have developed a technology called Morutoru, which enables recycling and reuse of tiles that peel off from exterior walls and other places. It is used for preserving and regenerating historical buildings, and it contributes to the effective use of resources and waste reduction.
- In May 2022, we established DT Precon Co., Ltd. together with Daikyo Construction Co., Ltd., and we are promoting the use of precast concrete components. In addition to shortening the construction period and saving labor at the construction site, this also leads to a significant reduction in the amount of plywood formwork that is used.

•Consideration for water resources

- In an effort to reduce the amount of our water usage, we have installed rainwater tanks at work sites, and we use them for sprinkling to prevent dust and for cleaning.
- During large-scale underground construction, groundwater levels are lowered, but we are working to conserve this ground water through our advanced technology. We have a recharge construction method that returns large volumes of pumped water to the groundwater layer without discharging it into the sewage system.
- We possess a variety of technologies related to water purification and water usage that help our customers and our company reduce water consumption.
- We have developed Rainscape, which controls stormwater runoff into the sewer system and underground infiltration during heavy rains, and we have applied it to our own sites and design projects.

•Biodiversity Conservation Initiatives

- During architectural planning for areas teeming with nature, we thoroughly investigate the surrounding vegetation and ecosystem beforehand. Then we endeavor to protect rare creatures and give consideration to biodiversity through means such as ensuring passages for small animals, planting that matches local vegetation, and so on.
- If any endangered species or other rare animals or plants are found at a construction site, these will be moved and protected during the construction, and we strive to protect the ecosystem during the construction period.
- We use tools such as Land Use Score Report to evaluate corporate land use from the perspective of biodiversity.
- The Seiwadai Forest Creation project, which utilizes our training facility in Kawanishi City, Hyogo Prefecture, provides hands-on training to raise employees' awareness of biodiversity through conservation activities for *satoyama* ecosystems.
- At SHI-RA-BE Forest, which is a biodiversity technology demonstration field built on the premises of the Takenaka Research & Development Institute, we are carrying out various activities that include communication with the local community. In 2021, SHI-RA-BE Forest acquired Gold certification from the outdoor environment certification system, SITES (the Sustainable Sites Initiative).

•Response to pollution (local pollution, hazardous chemical substances, etc.)

- We specify regulatory values and responses for local pollution in an Environment Manual, and we regularly measure noise values based on "environmental conservation checklists" and other materials.
- Responses to possible emergencies, such as water pollution accidents, are included in the "general construction plan" that is prepared for each work site.
- In the demolition of high-rise buildings, we have developed and are applying the Takenaka Hat Down Method, whereby a "mobile demolition factory " (hat) gradually descends to the ground while dismantling goes on inside the hat covering the upper part of the building. This is a construction method that simultaneously shortens the construction period, and achieves lows low noise and dust.
- Using LED lighting and lights that automatically turn off for works sites has led to reduced CO2 and light pollution in the surrounding area.
- The handling of petroleum products and organic solvents stored at workplaces, as well as asbestos removal and other hazardous work, are stipulated and included in the "general construction plan" that is prepared at each work site. In particular, we are providing thorough training for employees on the handling of asbestos during demolition work, and we are confirming correct disposal through a manifest

for outsourcing disposal of waste, including asbestos, as specially controlled industrial waste.

• We have developed the TRASID System for safe demolition of incineration facilities involving the removal of dioxins, and we have obtained technical certification for the system from the Building Center of Japan.

•Promotion of product governance and life cycle assessment (environmental impact of the use and demolition of buildings provided to customers, material recycling after demolition, etc.)

- We are creating buildings with low net energy consumption, such as ZEB (Zero Energy Buildings). This is achieved by improving the thermal insulation performance of building envelopes, reducing the cooling load by shading solar radiation, saving energy through environmentally friendly design, such as the use of natural lighting and ventilation, and by using renewable energy, such as solar power generation.
- We are developing and utilizing technologies for buildings that include energy savings, utilization of renewable energy, and energy management for these purposes.
- We have developed proprietary technologies such as fire-resistant laminated wood, Moen-Wood, and seismic reinforcement with wood materials, T-FoRest series, and we are promoting mid- and high-rise wooden structures, expansion of wooden architecture, and utilization of domestic timber.

مراكب بمانسكمي مماحي مشمو ممرم برما ما		مسيئه ملاما مسم ماسي مسطلا لا	سيعر مرجا المصيم مرجم ماسين امصرم	-11-
nievements in contrinition	a to the environmen	i infolian afchitecture	and liman creation pro	necte
		t through aronicoluro	and urban orcation pro	

Major environment-related external awards received (2022)

Award Name	Award-winning Works and	Sponsor
	Technologies	
22nd JIA Environmental Architecture Awards in 2021, Excellent	WITH HARAJUKU	The Japan Institute of
Environmental Architecture Selection		Architects
Wood Design Award 2022, Grand Prize (Minister of Land,	HULIC &New GINZA	Japan Wood Design
Infrastructure, Transport and Tourism Award)		Association
Wood Design Award 2022, Encouragement Award (Jury Chairman's	Canadian Academy	Japan Wood Design
Award)		Association

2022 Wood Utilization Excellent Facilities Contest, Minister of the	HULIC &New GINZA 8	Japan Council for
Environment Award		Advancement of Timber
		Utilization
25th Wood Utilization Contest Excellence Award (Minister of Land,	"HULIC & New GINZA 8" (Hulic Ginza	Nippon Mokuzai Seisounen
Infrastructure, Transport and Tourism Awards)	8-chome Commercial Building)	Dantai Rengoukai (MSR)
25th Wood Utilization Contest Excellence Award (Forestry Agency	FLATS WOODS Sengoku	Nippon Mokuzai Seisounen
Director-General Awards)		Dantai Rengoukai (MSR)
20th Environmental and Equipment Design Award	Variable environmental control louvers	Association of Building
Category I: M&E Equipment/System Design, Distinguished Design		Engineering and Equipment
Award		
20th Environmental and Equipment Design Award	<u>Miyashita Park</u>	Association of Building
Category III: Urban/Landscape Design, Distinguished Design Award		Engineering and Equipment
20th Environmental and Equipment Design Award	EQ House	Association of Building
Category II: Integrated M&E Design, Distinguished Design Award		Engineering and Equipment
20th Environmental and Equipment Design Award	DC power supply system DCPS+I.	Association of Building
Category I: M&E Equipment/System Design, Design Award	SEM®	Engineering and Equipment
20th Environmental and Equipment Design Award	<u>Toyota Boshoku Global Headquarters</u>	Association of Building
Category II: Integrated M&E Design, Design Award		Engineering and Equipment
60th SHASE Awards, Technology Award in the Construction	Environmental and Facility Planning	Society of Heating, Air-
Equipment Category	and Implementation for Yokohama	Conditioning and Sanitary
	<u>City Hall</u>	Engineers of Japan
60th SHASE Awards, Technology Award in the Construction	Local production for local	Society of Heating, Air-
Equipment Category	consumption smart energy network at	Conditioning and Sanitary
	minato AQULS to realize a low-carbon	Engineers of Japan
	city block through mutual cocreation	

	between suppliers and consumers.	
10th SHASE Awards, Special Award for Renewal	Environmental and Facility Planning	Society of Heating, Air-
	and Implementation during renewal of	Conditioning and Sanitary
	the Takenaka Research &	Engineers of Japan
	Development Institute	
36th SHASE Promotion Awards, Technology Promotion Award	ZEB through optimal operation of	Society of Heating, Air-
	light, wind, water, and heat sources at	Conditioning and Sanitary
	<u>the Aichi Sky Expo</u>	Engineers of Japan
36th SHASE Promotion Awards, Technology Promotion Award	Environmental and facility planning for	Society of Heating, Air-
	<u>the Yomiuri TV new building</u>	Conditioning and Sanitary
		Engineers of Japan
36th SHASE Promotion Awards, Technology Promotion Award	Air-conditioning equipment for SINKO	Society of Heating, Air-
	AIR DESIGN STUDIO	Conditioning and Sanitary
		Engineers of Japan
10th Carbon Neutral Awards, Chubu Branch, Carbon Neutral Award	Conversion of Aichi Sky Expo to ZEB	Japanese Building
	through optimal operation of light,	Mechanical and Electrical
	wind, water, and heat sources	Engineers Association
10th Carbon Neutral Awards, Kinki Branch, Carbon Neutral Award	Initiatives to reduce environmental	Japanese Building
	impact at the Kurihara Industrial	Mechanical and Electrical
	Building	Engineers Association
2022 Demand Side Management Award, Comprehensive Systems	Energy savings and load leveling	Heat Pump & Thermal
Category, Director-General's Award, Agency for Natural Resources	through optimal operation of light,	Storage Technology Center
and Energy, Ministry of Economy, Trade and Industry	wind, water, and heat sources at the	of Japan
	<u>Aichi Sky Expo</u>	

2022 Demand Side Management Award for Comprehensive Systems	~A sustainable research facility that	Heat Pump & Thermal
Category, Heat Pump & Thermal Storage Technology Center of	both reduces environmental impact	Storage Technology Center
Japan Awards	and improves intellectual productivity~	of Japan
	Takasago Thermal Science Innovation	
	Center	
2022 Demand Side Management Award for Comprehensive Systems	Power leveling by a multisource	Heat Pump & Thermal
Category, Heat Pump & Thermal Storage Technology Center of	thermal storage system at a large-	Storage Technology Center
Japan Awards	scale complex facility	of Japan

• Impact on our business related to climate change (information disclosure in line with TCFD recommendations)

In 2020, Takenaka Corporation began analyzing the business impact of climate change (risks and opportunities) and considering how to reflect them in our strategy. Then in January 2021, we endorsed the recommendations of TCFD and have been proceeding with the disclosure of related information.

•Governance

The CSR Promotion Central Committee, which is chaired by the vice president responsible for CSR, and the Global Environment Expert Committee under it (secretariats for both are the CSR Department of the Corporate Strategic Planning Division) deliberate on matters related to climate change. The results of these deliberations are reported to the president, and important decisions are made by the board of directors.

Strategy

The CSR Promotion Central Committee, which is chaired by the vice president responsible for CSR, and the Global Environment Expert Committee under it (secretariats for both are the CSR Department of the Corporate Strategic Planning Division) deliberate on matters related to climate change. The results of committee deliberations are reported to the president, and important decisions are made by the board of directors.

	Major Risks and Opportunities Identified	Impact	Response to Risks and Opportunities
Risks Risks Risks Risks Ri du cc Ri du cc (M	Risk of increased costs due to stricter regulations in the Building Energy Conservation Act (Regulatory risk)	П	 Developing energy-saving technologies to reduce cost increases and procuring environmental items Building financing schemes to acquire ESG investment for customers Building consensus on appropriate cost burdens for customers through simulation technology that utilizes BIM
	Risk of declining productivity due to heat stroke among construction site workers (Chronic physical risk)	Ш	 Preventing heat stroke by taking measures beforehand that will predict it, and developing prevention devices.
	Risk of increased expenses for warrantee work due to abnormal weather disasters during construction (Acute physical risk)	Ш	 Making construction sites more resilient and building consensus on appropriate cost burdens through careful explanations to customers
	Risk of decline in competitiveness due to increased need for decarbonization during construction (Market risk)	Ш	 Formulation of CO2 reduction menus during construction Development of a system for measuring and calculating CO2 emissions
Opportunities	Expanding order opportunities for ZEBs and energy management systems	Ш	 Development of technologies necessary for the advancement of ZEB and energy management systems
	Creating order opportunities through expansion of mid- and high-rise wooden structures and buildings	П	 Investment in technological development necessary to expand the use of mid- and high-rise wooden structures and buildings.

Impact on business related to climate change (Takenaka Corporation)

Expanding opportunities through technological development that anticipates the environmental performance needs of buildings	ш	• Development of ZEB design tools, technologies related to wooden building, ECM concrete (low-carbon concrete), etc.
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* The level of impact is defined according to the amount of expected financial impact.

Responding to risks and opportunities, we have established a budget dedicated to addressing climate change, including CO2 reduction and other measures, in the course of our technological development.

•Risk Management

With regard to important issues related to the environment and climate change, the CSR Promotion Central Committee, the Global Environment Expert Committee, and the companywide working groups under them (the secretariat is the CSR Promotion Department of the Corporate Planning Office) regularly monitor the status of initiatives and make necessary course corrections. Particularly important policy and other changes are decided by the board of directors.

• Indicators and Targets

In December 2019, we established a long-term CO2 reduction target, and in March 2021, we raised the target to achieve a 100% reduction in CO2 emissions by 2050. Then in December 2022, the target was expanded to cover the entire Takenaka Group (consolidated), and in January 2023, we committed to obtaining SBT certification of our interim target for 2030.

Takenaka Group Long-Term CO2 Reduction Targets (established in December 2022) Scope 1+2: 46.2% reduction by 2030 and 100% reduction by 2050 Scope 3: 27.5% reduction by 2030 and 100% reduction by 2050 (Base year: 2019)