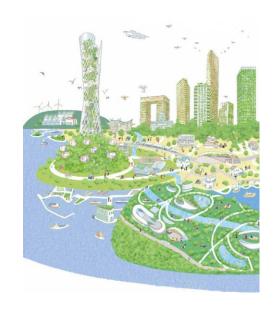
January 30, 2025

Report on the results of Takenaka Corporation's nature disclosure project

Takenaka Corporation
Takenaka Research & Development Institute/Corporate
Strategic Planning Division
Takashi Miwa





Company overview

Company name: TAKENAKA CORPORATION

Main businesses: Contracting, design, and supervision of architectural and civil engineering works, development business, and engineering and management services

President: Masato Sasaki

Capital: ¥ 50 billion (as of March 31, 2024)

Revenue (consolidated): ¥ 161.24 million (FY2023)

No. of Employees: 13,507 (FY2023)

Business established: 1610

Official company founded: 1899



Takenaka Tobei Masataka founded his business specializing in erecting shrines and temples



History of Takenaka Corporation's nature conservation efforts

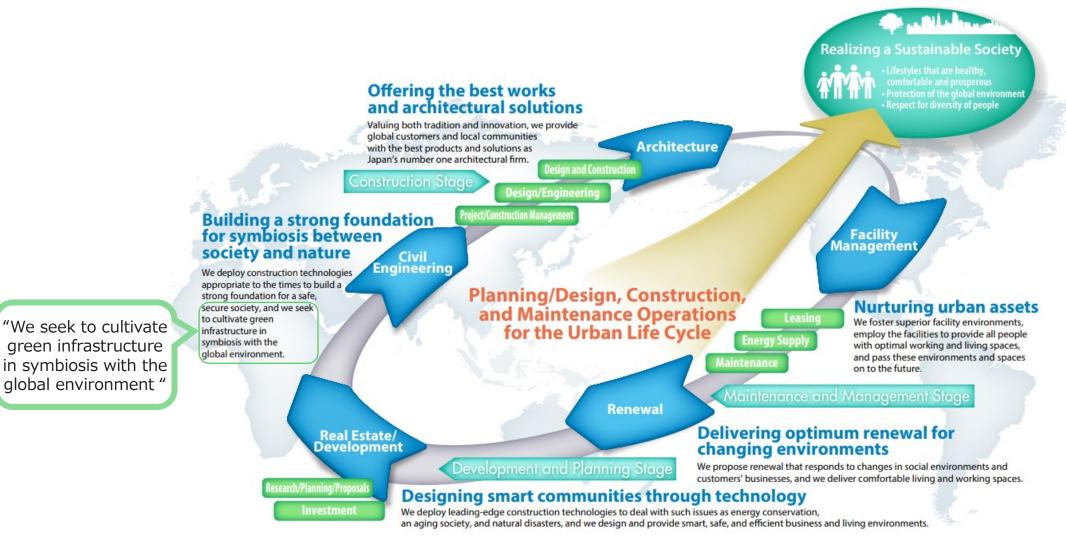
Green in Design: The Origin of a half-century commitment to building a strong foundation for living in harmony with nature





Urban development as the cornerstone of growth strategy (2014)

As a specialized field that supports integrated urban creation engineering, we focus on problem-solving that leverages nature





Background of initiatives

Takenaka Corporation released its TNFD Report in May 2024



News Release

2024年6月3日 株式会社竹中工務店

TNFD 情報開示フレームワークに基づいた TNFD レポートを策定

竹中工務店(社長:佐々木正人)は、自然関連財務情報開示タスクフォース(TNFD: Taskforce on Nature-related Financial Disclosure) が 2023 年 9 月に公表した「TNFD 最終提言 v1.0」を採用し、同年 12 月に「TNFD Adopter (※)」に登録しました。

このたび、本年6月1日に TNFD 情報開示フレームワークに基づき、当社グループにお ける活動を開示するための TNFD レポートを策定しました。

開示内容については以下をご覧ください。

※「TNFD Adopter」とは、TNFD 提言に沿った情報開示を行う意思を TNFD のウェブサイト上で登録 した企業・組織を指し、採用者は 2024 年度分または 2025 年度分のいずれかにおいて、TNFD 提言に準 拠した開示を行うことが求められます。



当社は、持続可能なまちづくりを推進する当社では、環境との調和をもとに、1971年、 設計図面用紙に「設計に緑を」のマークを標語に掲げ、環境への取り組みを開始しました。 2009 年に環境方針を制定し、2020 年からは、生物多様性を重要課題(マテリアリティ) の一つとして特定しています。

生物多様性の保全・回復を目指す活動としては、千葉県印西市の竹中技術研究所内に、お 客様や社会の課題を多目的に解決するグリーンインフラと生物多様性保全・回復の研究開 発フィールド「調の森 SHI-RA-BE®」を設けて、課題解決に取り組んでいます。調べの森 のこと 2023 年 10 月には、当社グループとしては初めて、環境省の「自然共生サイト★」 に認定されました。

また、兵庫県川西市清和台の丘陵地においては、2017年より「清和台の森づくり」の取 り組みを進めています。これは、敷地面積約8haの当社研修所内での森林・緑地の再生を 通じて、森・人・技術を育て、持続可能な社会の実現に向けた社会課題解決につなげるもの で、2024 年 2 月に環境省の「自然共生サイト★」に、当社グループとしては、「調の森 SHI-RA-BE®」に続いて2例目の認定を受けました。

TNFD Report

May 2024



* TAKENAKA

However, we did not conduct scenario analysis in our risks and opportunities assessment.

Assess (assesing risks and opportunities)

In the Assess phase (assessment of risks and then extract major risks and opportunities from a

In order to examine the possibility of future risks occurring, and with goal of understanding future markets and policy trends related to construction projects and wood procurement, we also referred to grated nature and climate scenario "FPS + Nature" stors in the Climate Change Scenario

(IPR)," Nature-based Solutions (NbS), and policy trends

om related divisions including group companies (total of 22 divisions, 40 members), and we have held mately 70 rounds of discussions. These proce on a solid understanding of the relationship between

Category	Dependencies /impacts	Overview of risks	Possible countermeasures	
Transition risk (Reputational)	Impact (Land use change)	Insufficient consideration for biodiversity during construction at the time of development may result in reduced habitat of rare animals and plants (including birds of prey), which could lead to loss of corporate value and loss of business opportunities.		
Transition risks (Reputational)	click classification of the classification of the classification of the species such as britis of prey, and classification of the species such as britis of prey, and classification of the classifica			
Transition risk (Reputational, policy)			 Prior understanding of potential impacts on land us change, pollution, invasive alien species, resource use, etc. during construction, an considering and implementing measures tailored to each location 	
Physical risk (Acute and chronic) /Transition risk	Impact (Resource use)	In a global area of water-scarcity, if water supply and demand become tight and it becomes difficult to draw water, construction operations may be hindered, potentially leading to increased construction costs.	based on local characteristics	
Physical risk (Acute and chronic) /Transition risk	Impact (Resource use)	In construction work that may affect groundwater in springwater conservation areas, a look of consideration for springwater conservation may potentially cause a decrease or depletion of springwater, leading to potential damage to corporate value and loss of business opportunities.		
Physical risk (Chronic)	Impact (Resource use) Dependence (Regulating and maintenance services)	Forest underuse and low reforestation rates in Japan may lead to degradation of ecosystem services in forests and a decline in wood supply capacity, and this could potentially lead to a decrease in wood supply and a rise in wood prices.	Establishing a stable wood procurement system in cooperation with timber- producing areas and	
Transition Risk (Reputational)	Impact (Resource use)	Deferentation, disynation of tree animal and joint habitats, and human rights violations in tribbin- producing areas could all lead to potential loss of corporate value and loss of business opportunities. Emerging policy changes for deforestation prevention, for a superior of the control of the control of the control of the control of the control of the control of the control of the control of the control of the result in difficulties in procuring certified materials and legislation.	promoting Japanese wood procurement. Building sustainable and competitive value chains by fostering relationships with	
Transition risks (Markets and policy)	Impact (Resource use)		suppliers. Reviewing the value chain to reduce the cost of verifying legality in order to avoid the use of illegally sourced wood.	



Building a resilient management structure by leveraging scenario analysis

- We explore risks and opportunities associated with nature across various scenarios to construct a management structure that is resilient in the face of any potential future developments.
- By creating various scenarios and analyzing their magnitude, likelihood, and any potential oversights, we gain a deeper understanding of the risks and opportunities associated with nature for the Takenaka Group, thereby shaping our strategic management approaches.

Raising awareness within the company

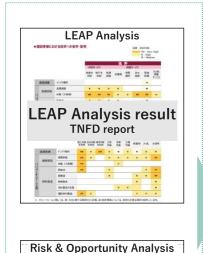
 We aim to raise awareness of nature-related risks and opportunities within our group's businesses through workshops that facilitate discussions among members from diverse job roles, departments, and group companies.



Flow of project actions

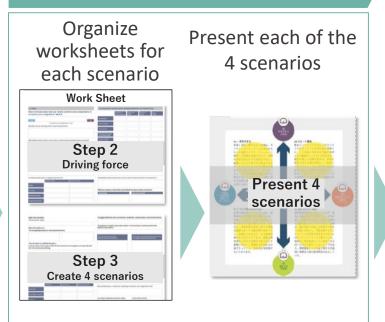
We created scenarios, and discussed about risks, opportunities, and measures, through cross-departmental workshops.





Risk & Opportunity
Analysis result
TNFD report





Assess business impact



Documentation and information disclosure

Cross-departmental workshops



Examine measures for risks/opportunities



区分	依存/ 影響		#2		#3			
		機会の概要		44				
機会	影響 (土地利用 変化)	都市部におけるグリーンインフラ技術への需要の 高まりによる案件の受注機会増加	ф	ж	ф	ф	プリーンインフェ関する新たり技術研究の促集 問題指導支援関係が建築主への建立式動の形式力強化	
	依存 (生態系 サービス) 影響 (資源利 用)	オ連木製建築の市場拡大による都市木造を中 心とした中間器木造建築や木質化業件の受決 報合理16	ф	п	Ф	ф	 部本木油セキムとした中央整木油建築や木製企業件に対する 施の便業強化 	
	依存 (生態系 サービス) 影響 (資源利 用)	建物の長寿命化で資源效率の良い技術を用い た事件の受注機会電池	大	×	×	ф	 知恵する技術研究の促進 	
	影響 (土地利用 変化)	建設事業の実施地域の部辺模場と調和した線 地再生や線地振出、エロラカルネテナワータの機 化工関する業件の受注機会増加	ф	ф	ф	ф	 生物多様性の定量評価-モニタルク技術や製造する新たる技術 製免の促進 	
	影響 (土地利用 食化)	ネイチャーボシティブ連成に向けた定量評価・モニ グリンプ技術の確立により、生物を修住に関する 認証取得支援やオフセット支援案件の受注機会 増加	Ф	Ф	Ф	佐	 生物多様性に関する認証均得を延差費の建築主へが提案とき の対応が進化。 業に異素が見込める位置技術への配が込み。 	
	依存 (文化的 サービス)	白然の周辺環境と共生する文化的価値を有す る建設物の保全・施工を表したステークの1/ダーと の協働とグランド価値向上	ф	ф	Ф	ф	 生物多様性向上PDを導いたステークルルダーとのからなる取留物 糖竹信をおよったした情報建築の保全と文化的価値の社外発信 	

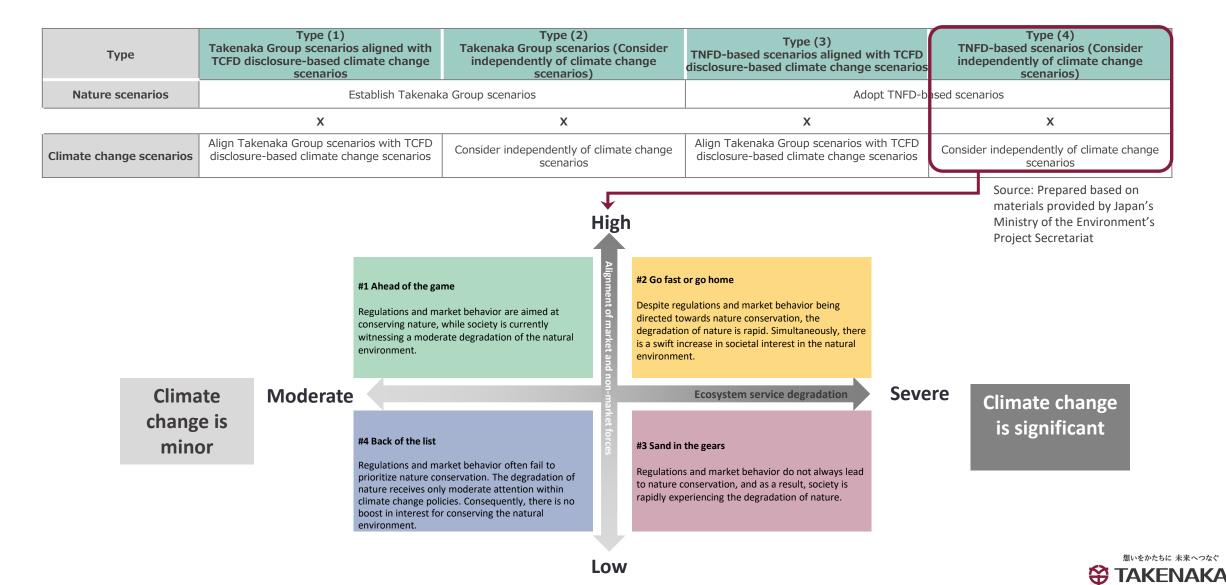
Reflect results in TNFD report

Source: Prepared based on materials provided by Japan's Ministry of the Environment's Model Project Secretariat

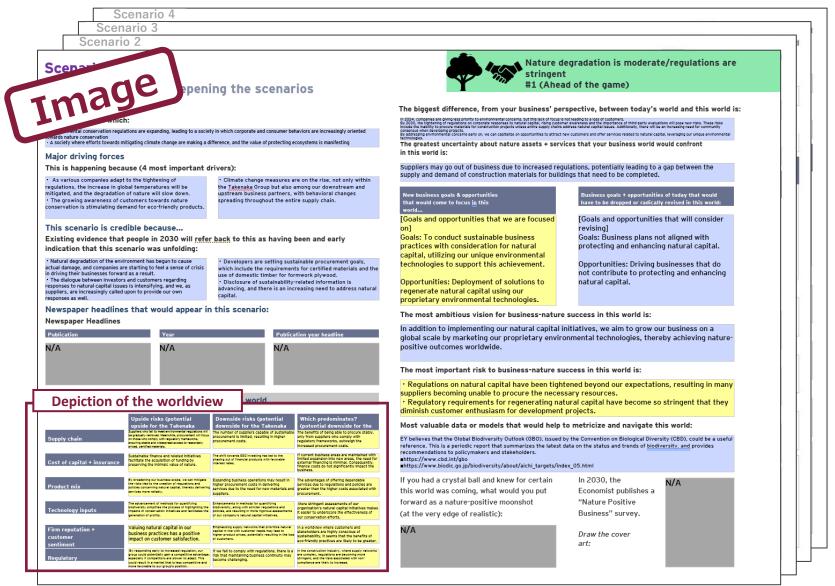


Approach to developing scenarios

We chose to analyze "TNFD-based scenarios (Consider independently of climate change scenarios) (Type 4)", focusing on the impact of climate change on the degradation of ecosystem services, as represented on the X-axis.



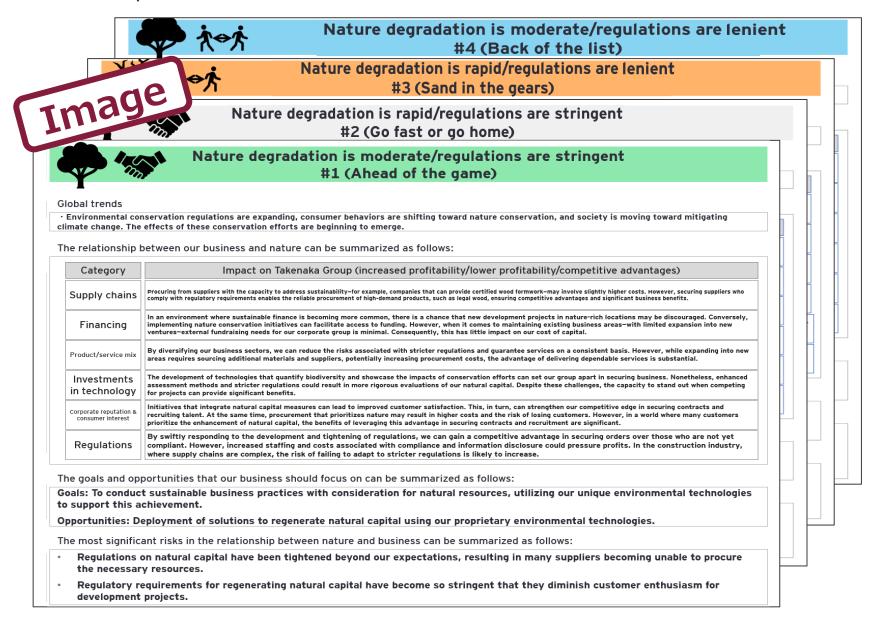
By defining specific variables, we enabled participants to understand and engage with a particular worldview.





Depicting the worldview of each scenario as a narrative

We depicted the relationship between our business and nature for each scenario as a narrative.

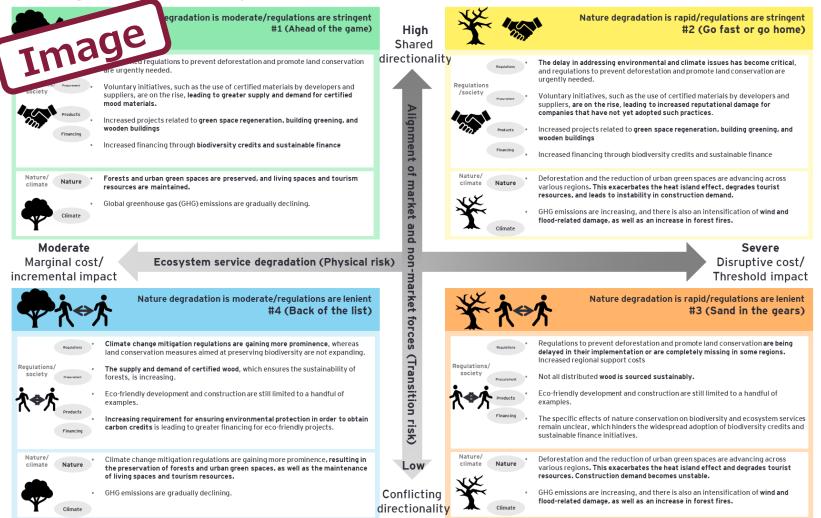




Depiction of each scenario

We consolidated the descriptions of the four scenarios into one sheet for easier cross-departmental understanding.

By organizing the four scenarios in advance, participants could focus on identifying risks and opportunities during the workshops.





Glimpse inside scenario analysis workshops



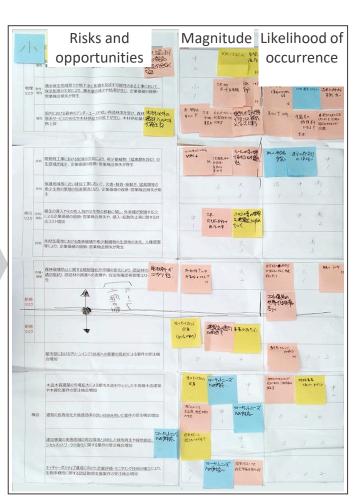
- ✓ 21 participants from the corporate departments of four group companies and 15 operational departments attended.
- ✓ Participants discussed nature-related risks and opportunities faced by our group's businesses

Written notes prepared at workshops

During our analysis of risks and opportunities, we managed to assess their possible magnitude and likelihood of occurring.

Category		Risks and opportunities*	Scena	rio 1
Im rnysical risk	age	In regions of the world experiencing water stress, water supply and demand can become tight, making water withdrawal difficult. This situation poses a risk of disruptions to construction operations and an increase in construction costs.	Enter the degree of impact (Significant/moderate/not very significant) Enter the reasons fo (Refer to the 4 scenarios prepared by the M	r such conclusions
	Chronic	Forest underuse and low reforestation rates in Japan may lead to the degradation of ecosystem services in orests and a decline in wood supply capacity. This could potentially lead to a decrease in wood supply and a rise in wood prices.	Enter the degree of impact (Significant/moderate/not very significant) (Enter the reasons fo (Refer to the 4 scenarios prepared by the M	r such conclusions
Transition risk	Reputational	Insufficient consideration of biodiversity during construction can reduce habitats for rare animals and plants, including birds of prey, potentially leading to diminished corporate value and lost business opportunities.	Enter the degree of impact (Significant/moderate/not very significant) (Enter the reasons fo (Refer to the 4 scenarios prepared by the M	r such conclusions
	Markets/ regulations	Emerging policy changes for deforestation prevention and market changes have led to increased demand for certified wood materials. This could potentially result in difficulties in procuring certified materials and increased management costs, such as verification of legality.	Enter the degree of impact (Significant/moderate/not very significant) (Enter the reasons for (Refer to the 4 scenarios prepared by the Moderate)	r such conclusions
Enter types of risks and opportunities	Category	Enter risks and opportunities	Enter the degree of impact (Significant/moderate/not very significant) (Enter the reasons fo (Refer to the 4 scenarios prepared by the M	r such conclusions
Enter types of risks and opportunities	Entercategory	Enter risks and opportunities	Enter the degree of impact (Significant/moderate/not very significant) (Enter the reasons fo (Refer to the 4 scenarios prepared by the M	r such conclusions

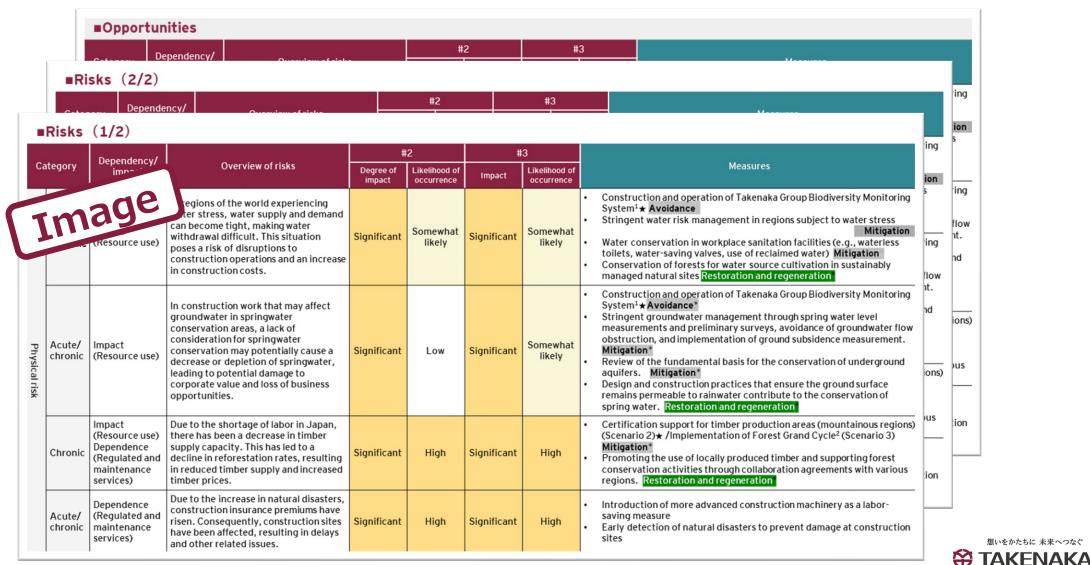
Worksheet for identifying the magnitude and likelihood of nature-related risks and opportunities for each scenario



Group assessment findings ← → ★ IAKENAKA

Risks, opportunities and measures

We summarized the results of the workshop, and focused on examining the measures for the 'Go Fast or Go Home' (#2) and 'Sand in the Gears' (#3) scenarios, which have a significant impact on the business in terms of risks and opportunities.



Key risks, opportunities and measures

In response to significant risks and opportunities, we are actively encouraging the research, development, and execution of eco-friendly infrastructure initiatives, alongside the progression of construction projects utilizing wood and timber.

R&D on green infrastructure (Nature-based Solutions (NbS) and its implementation in society

We aim to enhance the Takenaka Group's solution capabilities by promoting research and development of green infrastructure and Nature-based Solutions (NbS). These solutions leverage the diverse functions of nature for multiple purposes. Through their implementation, we contribute to building a nature-positive society and a society in harmony with nature.



Takenaka Research & Development Institute SHI-RA-BE Forest

Promotion of wooden structures and buildings and Forest Grand Cycle initiative

Promoting the construction of wooden buildings that utilize sustainable materials contributes not only to decarbonization but also encourages the circular use of forests. This helps maintain them in a healthy state and improves biodiversity and ecosystem services. We are working to improve our ability to respond to risks and opportunities by engaging with stakeholders involved in the value chain.



Takenaka Scholarship Foundation Student Dormitory



- Group-wide measures

Employees		 Takenaka Group Biodiversity Promotion Program¹ Training programs utilizing in-house E-learning Strengthen the business structure for nature-positive projects 	
Technology		 Establish quantitative assessment and monitoring technologies to achieve nature positive Invest in technologies that reduce environmental impact; examples include water-saving and recycled water use, cultivation of water sources and conservation of springwater, regeneration of green spaces, prevention and reduction of noise (including forecasting), prevention of light pollution, and identification of invasive species. 	
Information	Establish information networks	 Develop a menu of initiatives that can be utilized at construction sites Design and implement an in-house non-financial information database² Accumulate information on nature-related risk assessments at suppliers ★ Implement an internal system to enhance the retrospective verification and management of wood procurement, ensuring it is legal and sustainable Introduce systems for early detection of natural disasters and for prevention of accidents occurred by natural disasters 	
	Strengthen communication	 Develop and build a platform for information exchange that facilitates the evaluation of prospective investment technologies from the viewpoint of the consumer. Enhance information sharing with stakeholders 	
Networks	Suppliers	 Promote dialogue in timber production areas Initiate dialogue and collaboration to stabilize the supply and demand of timber★ Initiate engagement with suppliers through CSR surveys and other measures★ 	
	Local	Enhance dialogue with local stakeholders	
	Research institutions/other industries	 Promote a network dedicated to investment technology exploration among research institutions, universities, startups, and other organizations. Collaborate with insurance and construction industry players 	

1. A comprehensive program that includes Takenaka Group's unique nature-positive human resources development initiative



★: Planned measures for future initiatives

- 2. Initiative aimed at enhancing sustainability information disclosure by collecting non-financial data
- By reviewing the four scenarios, along with their associated risks and opportunities, we recognize the need to fortify these elements as a foundation for operation.
- We are integrating these initiatives into our business strategies, management plans, and overarching organizational policies.



We achieved to greatly expand and refine the assessment component, which is key to the LEAP approach.









Assessment pages (Scheduled update in 2025)

— Summary/achievements

Achievements of initiatives:

We successfully employed scenario analysis, an essential component of the LEAP approach and one we had previously struggled to implement independently.

Until now, scenario analysis has posed a challenge for our company for the following reasons.

Reason 1: No straightforward and efficient tool existed to facilitate the creation of a consensus on worldviews.

Reason 2: Because of the inability to share a common worldview, the identification of risks and opportunities depended on individual expertise and values.

Resolution processes:

The coaching on the operation and utilization of the TNFD Scenario Toolkit worksheets allowed us to present and communicate a global perspective that would have been challenging to achieve independently. As a result, we succeeded in establishing a common baseline for a diverse group of participants and were able to identify risks and opportunities under conditions defined by common parameters.

Ripple effects:

The involvement of a diverse group of personnel in identifying risks and opportunities, and the measures taken in response, have improved management strategies and policies, thereby enhancing the resilience of management in a business landscape characterized by uncertainty.

Through this process, we reinforced the importance of participating in TNFD disclosures across the organization, creating a valuable chance to boost the momentum for information disclosure.



Thank you for your time and attention!

想いをかたちに 未来へつなぐ

TAKENAKA