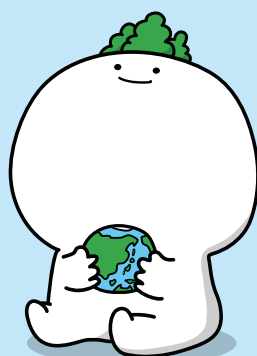


3rd
edition

GUIDELINES FOR PRIVATE SECTOR ENGAGEMENT IN BIODIVERSITY



Nature Positive character
DAIDARAPOSIE



Ministry of the Environment
JAPAN

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Introduction

1. Background

The environment the Earth and the biodiversity have been created over a long history of diverse life, including human being. Our lives are supported by the ecosystems based on biodiversity, such as food and water supplies and climate stability. However, due to the impact of human activities over the past 100 years, the rate of species extinction has skyrocketed extraordinary in the history of the Earth, and the biodiversity of the Earth is in a critical condition.

Businesses depend and have a significant impact on ecosystems through their business activities. Furthermore, by connecting with consumers through their products and services, they play an important role in the conservation of biodiversity.

Therefore, for example, the Basic Environment Law states that business operators "have the responsibility to take necessary measures for the proper conservation of the natural environment"¹, and the Basic Act on Biodiversity states, "In conducting business activities, businesses shall endeavor to reduce the impact of their business activities on biodiversity and to make sustainable use of biodiversity by taking into account the impact of their business activities on biodiversity, and by cooperating with other businesses and other relevant parties."²

In the international community, for example, the Conference of the Parties to the Convention on Biological Diversity³ (CBD COP) has continued to adopt resolutions related to private sector participation from its 8th to 15th sessions. As a result, COP15, held in December 2022, decided on the Kunming-Montreal Biodiversity Framework as a global biodiversity framework by 2030 for the post-Aichi targets. The framework has higher quantitative targets than the Aichi Targets, and targets related to social and economic activities have been enhanced and strengthened. In addition, the "G7 Nature Compact 2030" agreed on a global goal called "Nature Positive". This goal is to "halt and reverse biodiversity loss by 2030 in order to put nature on a recovery track.

Thus, all companies around the world will be required to work toward achieving these targets by 2030.

In addition to these international initiatives, public- and private-sector-led initiatives such as SBTs for Nature (Science Based Targets for Nature) and TNFD (Task Force on Nature-related Financial Disclosures) are also being developed.

In addition, based on the "Nature Consensus" agreed upon by the G7 in 2021, Japan has set a "30by30"⁴ target. Expectations for biodiversity conservation in the private sector are increasing, and the creation of frameworks and incentives to promote efforts to achieve this goal are under consideration.

2. Objectives

These Guidelines have been prepared to assist companies in their efforts to conserve biodiversity and sustainably use of natural capital and sustainable management (hereinafter referred to as "biodiversity conservation").

¹ Source: Basic Environment Law (Law No. 91 of 1993, last revised in 2021, Law No. 36)

Article 8, original text: "Business operators, in conducting their business activities, shall, in accordance with the basic principles, be responsible for taking necessary measures to prevent pollution, including the disposal of smoke, sewage, and waste generated thereby, and to properly preserve the natural environment.

² Source: Basic Act on Biodiversity (Act No. 58 of 2008)

Article 6 original text "Business operators shall, in conducting their business activities in accordance with the Basic Principles, endeavor to reduce the impact of their business activities on biodiversity and to use biodiversity in a sustainable manner by understanding the impact of their business activities on biodiversity, and by conducting business activities in consideration of biodiversity in cooperation with other business operators and other relevant persons. In addition, they shall endeavor to reduce the impact of their business activities on biodiversity and to promote sustainable use of biodiversity by conducting their business activities in consideration of biodiversity in cooperation with other businesses and other relevant parties.

³ The Conference of the Parties to the Convention on Biological Diversity

⁴ 30by30 (Thirty by Thirty) is a goal that seeks to effectively conserve at least 30% of land and sea as healthy ecosystems by 2030 with the goal of "stopping and reversing biodiversity loss by 2030 to put nature on a recovery track.

Many businesses are now analyzing and evaluating the dependence, impact, risks and opportunities of biodiversity by industry, and are beginning to address these issues as part of their business. However, among the various domestic and international trends mentioned above, many businesses are unsure of how much resources to allocate to such analyses and what methodologies are most effective.

Therefore, these Guidelines provide basic guidance for businesses to address biodiversity conservation flexibly and effectively as a management issue, taking current domestic and international trends into account.

In terms of law, these Guidelines are measures taken by the government based on Article 19 of the Basic Act on Biodiversity (promotion of business activities that take consideration of biodiversity).

3. Subject of the guidelines

These guidelines are primarily for businesses⁵. Businesses in this context are not limited to so-called business companies, but also include financial institutions.

Although the relationship between business activities and biodiversity/natural capital varies depending on the business, it is expected that the relationship between business activities and biodiversity is similar in the same industry. Therefore, it is expected that business associations, which unify companies, will play an important role in creating action plans considering the characteristics of the industry, and capacity building of their members based on these guidelines.

These guidelines cover not only official frameworks and targets such as international goals and national strategies, but also domestic and international standards such as ISO 14001 (Environmental Management System) and voluntary frameworks such as TNFD and SBTs for Nature. The common parts are described in an integrated manner as much as possible.

In addition, it is not limited to the relationship with the company's own business activities, but also includes the upstream and downstream of supply chains, such as raw material procurement, consumption, and use.

These Guidelines are not based on legal regulations, but rather provide basic guidelines for businesses to effectively integrate biodiversity and natural capital into their business management, while considering their responsibilities under the Basic Act on Biodiversity and other relevant laws. On the other hand, in recent years, in addition to voluntary frameworks such as TNFD and SBTs for Nature, various frameworks and regulations such as the European Due Diligence Directive and Taxonomy Regulation are being developed. Although these guidelines refer to such related initiatives and regulations as much as possible, it is necessary for each business to follow up them individually.

Please refer to website of the Ministry of the Environment for more information on biodiversity and business management, including these guidelines, as it will be updated accordingly.

4. Structure of the guidelines

These guidelines consist of the following four parts.

Part 1: Business Activities and Biodiversity

Since some companies may not necessarily recognize the relationship between business and biodiversity/natural capital, Part 1 shows their relationship with business activities (dependence, impact, risks, opportunities, etc.). It aims to help executives to aware that biodiversity and natural capital have a significant impact on business management.

Part 2: Processes for Consideration of Biodiversity.

Part 2 explains the basic process of integrating biodiversity and natural capital into business activities (management) based on domestic and international trends. It is intended to help not only ESG/CSR professionals but also those in charge of business planning to know the process of integrating biodiversity into their business strategies.

Part 3: Impact Assessment, Strategy and Goal Setting and Information Disclosure.

Part 3 describes the concept and methods of "impact assessment" of the relationship between business activities and biodiversity, and "strategy and target setting" based on the results of impact assessment, which

⁵ In these guidelines, "business operator" is used as a concept that includes large corporations, small and medium-sized enterprises, various types of corporate businesses such as partnerships, and sole proprietorships.

are considered to be important for the basic process explained in Part 2, as well as "information disclosure," which has recently been attracting attention from the perspective of ESG investment and financing. It aims to provide quantification methods to representatives in these areas.

Part 4: Q&A

This part contains frequently asked questions and answers regarding consideration of biodiversity. It consists of three chapters: "Chapter 1: Q&A for Practitioners," "Chapter 2: Q&A for Practitioners (SMEs)," and "Chapter 3: Q&A for Financial Institutions."

The following documents are also available.

(1) Executive Summary

To take effective actions as a business, awareness and decision-making at the executive level are necessary. These guidelines have an Executive Summary, which can be downloaded from website of the Ministry of the Environment.

5. Revision of these Guidelines

These guidelines are based on the "Guidelines for Private Sector Engagement in Biodiversity (for Businesses) (2nd Edition)" (2017), which was revised and published by the Nature Conservation Bureau of the Ministry of the Environment of Japan considering the domestic and international trends of biodiversity.

The "Committee on the Revision of the Guidelines for Private Sector Engagement in Biodiversity" examined the revision of the Guidelines and responding to the latest domestic and international trends. It also includes details on "target setting," which has become a challenge for companies to consider taking actions for biodiversity, and "information disclosure" linked to financial information, which has become a prominent trend in recent years.

■ List of Committee Members (in alphabetical order, as of August 2022)

Megumi Sakuramoto	Executive ESG Analyst, Asset Management One Co., Ltd.
Minoru Matsubara	Executive Officer, Resona Asset Management Co., Ltd.
Naoki Adachi	CEO, Response Ability, Inc.
Naoki Kachi	Professor, Tokyo Metropolitan University
Norihiro Itsubo	Professor, Tokyo City University
Takao Aiba	Chairperson of the Planning Subcommittee, Keidanren Committee on Nature Conservation
Yasushi Hibi	President, Conservation International Japan
Yumie Kabashima	Manager, AEON Co.

■ Date and agenda of the Committee on the Revision of Guidelines for Private Sector Engagement in Biodiversity (3rd Edition).

	Date	Agenda
1st review	August 24, 2021	Direction of the revision
2nd review	October 15, 2021	Discussion of the outline
3rd review	December 13, 2021	Discussion of Part 3-4
4th review	February 4, 2022	Discussion of the draft
5th review	August 5, 2022	Discussion of the draft
6th review	January 27, 2023	Discussion of the final draft
Public Comment	February 10-28, 2023	Public comment
Publication	March 31, 2023	Publication of guidelines in Japanese (3rd edition)

Part 1: Business Activities and Biodiversity

In "Chapter 1: What is Biodiversity and Its Current Status," the guidelines explain basic concepts related to biodiversity and its status in Japan and other countries.

Chapter 2, "New National and International Goals and Strategies," introduces national and international goals and frameworks for the future, including those currently under consideration, such as the TNFD Framework.

Furthermore, "Chapter 3: Relationship between Business Activities and Biodiversity," shows the general concept of why biodiversity-sensitive business is necessary and how your company's business activities relate to biodiversity.

Chapter 1: What is biodiversity and its current status?

1. What is biodiversity?

1. Biodiversity

It refers to the varieties among all living things on earth, from animals such as humans to microorganisms such as plants and fungi.

Convention on Biological Diversity defines diversity at three levels.

Ecosystem diversity: Various types of ecosystems such as tidal flats, coral reefs, forests, wetlands, and rivers are formed in each region.

Species diversity: A variety of animals, plants, fungi, and bacteria live and grow in the area.

Genetic diversity: variations at the genetic level within species or population.

Biodiversity fosters ecosystems, increases natural resilience, and decreases risks to the ecosystem services (see below) that we depend on.

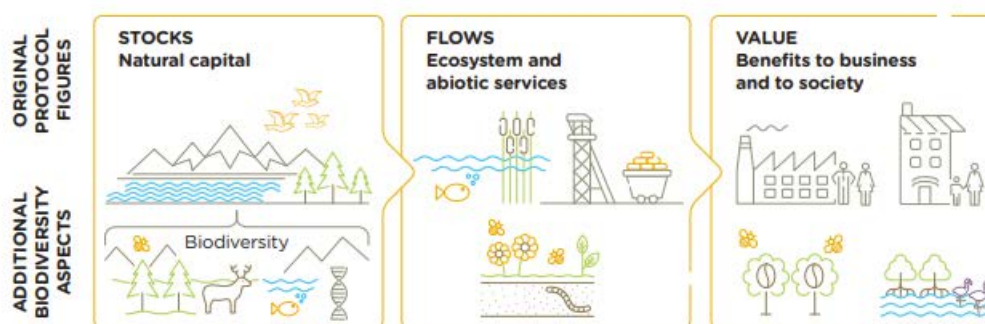
The richer the biodiversity, the more resilient the planet. It is like a diversified business portfolio that mitigates risks and uncertainty and increases resilience in business operations.

Conserving biodiversity is directly linked to reducing business risks in areas such as raw material procurement. In addition, it is an opportunity to create new business since it has not been adequately addressed.





2. Ecosystem services

It refers to the flow of benefits from ecosystems to humans (e.g., timber, fiber, pollination, water regulation, climate regulation, recreation, mental health benefits, etc.).

■ Relationship between biodiversity and natural capital stocks flows, and values⁶



■ Classification of ecosystem services

 Provisioning Services	 Regulating Services	 Supporting Services	 Cultural Services
<ul style="list-style-type: none"> • Foods • Fresh water • Raw material • Genetic resources • Medicine 	<ul style="list-style-type: none"> • Air regulation • Climate regulation • Disaster mitigation • Water regulation • Water purification • Erosion control • Soil fertility • Pollination • Pest control 	<ul style="list-style-type: none"> • Habitat environment • Biodiversity 	<ul style="list-style-type: none"> • Natural landscape • Recreation • Sense of Place • Spiritual • Science and education

⁶ Source: Some additions to Integrating Biodiversity Into Natural Capital Assessments (2020, Capital Coalition)

3. Natural capital

It refers to the stock of natural resources, including forests, soil, water, air, biological resources, and mineral resources.

■ The difference between biodiversity and natural capital

Natural capital, as described above, represents the stock of all resources in nature, both living and nonliving. Biodiversity, on the other hand, represents the varieties among the various levels of nature, such as ecosystems, and species and genes that make up natural capital.

Biodiversity provides resilience against natural disasters such as floods and droughts. It also supports fundamental processes of carbon and water cycles and soil formation and keeps natural capital healthy and stable.

■ Natural capital as the foundation of the economy and society⁷

Natural capital is the foundation of the economy and society. It has been pointed out that natural capital has a strong relationship with climate change. Therefore, conservation of biodiversity and natural capital are essential not only for sustainable business activities but also for combatting climate change.



⁷ Figure provided by MS&AD InterRisk Research Institute, Inc. Source: Stockholm Resilience Center, Stockholm University, produced by Azote.

2. International and national status of biodiversity

(1) International Situation

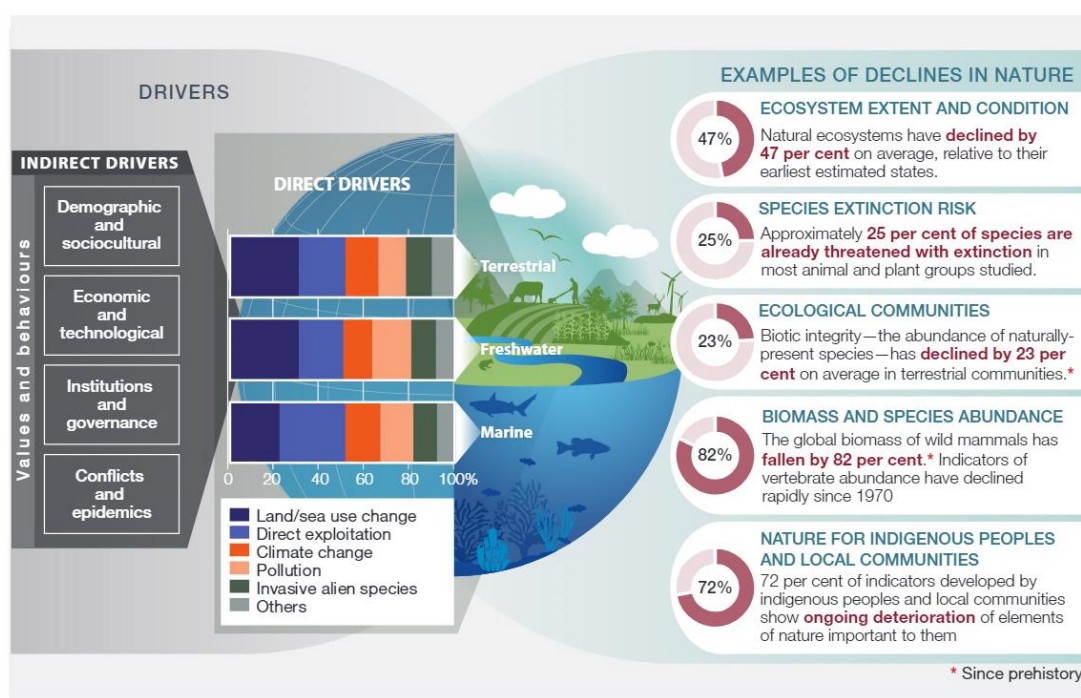
The world's forest area has decreased by 178 million hectares in the 30 years from 1990 to 2020.⁸ In addition, as of March 2023, more than 42,100 species are threatened with extinction. That is approximately 27% of the 150,388 animal, plant, and other species assessed by the International Union for Conservation of Nature (IUCN).⁹

Furthermore, according to the IPBES Global Assessment Report, nature and its important contributions to people (biodiversity and ecosystem functions and services) are deteriorating globally. Natural degradation includes the deterioration of "ecosystem extent and condition" and increased "risk of species extinction" (see figure below). The direct and indirect factors causing these natural changes have accelerated over the past 50 years, and then affect biodiversity on a global scale.

What are direct and indirect factors?

- ✓ Direct factors: factors that directly cause changes in nature (land/sea use change, direct harvesting, climate change, pollution, invasive alien species)
- ✓ Indirect factors: root causes of the above direct factors, such as population (e.g., demographics), sociocultural (e.g., consumption patterns), economic (e.g., trade), technology, institutions, governance, conflict and epidemics

■ Examples of global natural degradation, the direct factors and root causes


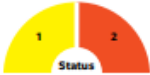


⁸ Source: World Forest Resource Assessment (FRA) 2020 Main Report, 2020, Food and Agriculture Organization of the United Nations (FAO).

⁹ Source: [THE IUCN RED LIST OF THREATENED SPECIES WEBSITE](https://www.iucnredlist.org/)

The Global Biodiversity Outlook 5 (GBO5), released by the Secretariat of the Convention on Biological Diversity in September 2020, concluded that while considerable progress has been made on most of the Aichi Targets, none of the 20 individual targets have been fully achieved including business-related targets. This is because the national targets set by each country generally fall far short of the Aichi Targets in terms of scope and ambition. Less than a quarter (23%) of the national targets are aligned with the Aichi Targets, and only about a tenth (10%) are aligned with the Aichi Targets and likely to be achieved. The information in the country reports indicates gaps in both the level of ambition of countries' commitments to the Aichi Targets and the actions to reach these commitments.

■ Assessment of progress towards the Aichi Biodiversity Targets (target 4)¹⁰

AICHI BIODIVERSITY TARGET	ASSESSMENT OF PROGRESS	SUMMARY OF PROGRESS
 <p>By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption (1) and have kept the impacts of use of natural resources well within safe ecological limits (2).</p>		<p>While an increasing number of governments and businesses are developing plans for more sustainable production and consumption, these are not being implemented on a scale that eliminates the negative impact of unsustainable human activities on biodiversity. While natural resources are being used more efficiently, the aggregated demand for resources continues to increase, and therefore the impacts of their use remain well above safe ecological limits. The target has not been achieved (high confidence).</p>

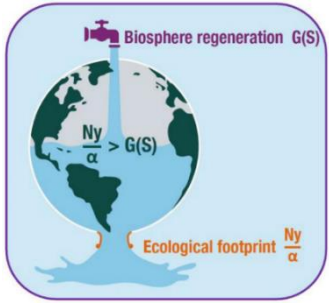
■ Dasgupta Review

In February 2021, Professor Persa Dasgupta of Cambridge University published a final report entitled Neutral and Global Review of the Economics of Biodiversity (Dasgupta Review) at the request of the HM(UK) Treasury.

Dasgupta Review¹¹

This review points out that while our economy, livelihoods, and well-being all depend on nature, human demand greatly exceeds nature's ability to supply the goods and services that we depend on (human demand is approximately 1.6 times higher than the supply capacity of nature [in 2020]).

He then notes that in addition to behavior change, a comprehensive economic indicator including natural capital, as opposed to GDP is required to establish a sustainable relationship with nature.



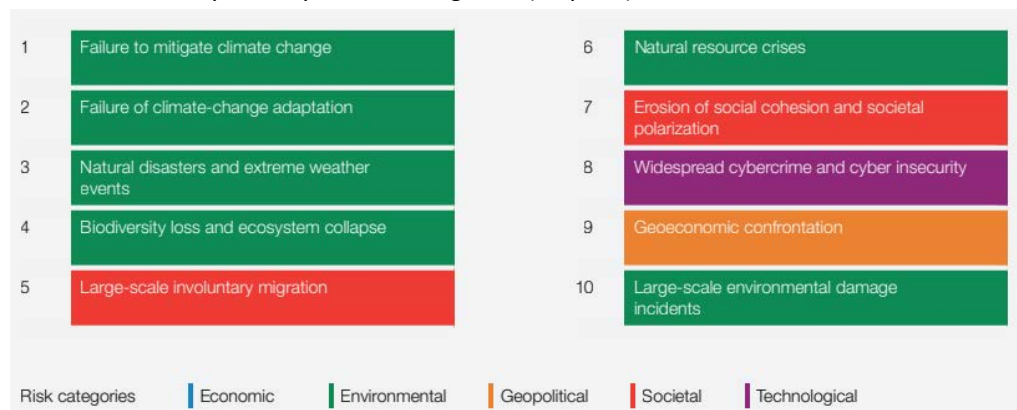
¹⁰ Source: GLOBAL BIODIVERSITY OVERVIEW, 5th EDITION (2020, SECRETARIAT OF THE CONVENTION ON BIOLOGICAL DIVERSITY)

¹¹ Source: THE ECONOMICS OF BIODIVERSITY: THE DASGUPTA REVIEW (2021, DASGUPTA, P, LONDON: HM TREASURY)

■ Biodiversity loss as global risks

Biodiversity loss is regarded as one of the most serious crises and a threat to the foundation of our lives. According to "Global Risks Report 2023" by the World Economic Forum, in chapter 2 (Global Risks 2033), climate change, biodiversity, and other environmental issues ranked high, with biodiversity loss and ecosystem collapse in fourth place and the natural resource crises in sixth.

■ Global risks ranked by severity over the long term (10 years)¹²



■ Definition of Nature Positive

Nature Positive is the concept of "halting and reversing biodiversity loss by 2030" referred to in "G7 2030 Nature Compact" published in May 2021.

G7 2030 Nature Compact

A. "We, the G7 Leaders, commit to the global mission to halt and reverse biodiversity loss by 2030"

C. "Global system-wide change is required: our world must not only become net zero, but also nature positive, for the benefit of both people and the planet, with a focus on promoting sustainable and inclusive development."

PILLAR TWO / Investing in nature and driving a nature positive economy

"We will work to dramatically increase investment in nature from all sources, and to ensure nature is accounted for, and mainstreamed, in economic and financial decision-making"

The National Biodiversity Strategy 2023-2030, approved by the Cabinet in March 2023, defines "Nature Positive" as "halting and reversing biodiversity loss to put nature on a recovery track". The concept has become more important as it was referred to in the Kunming-Montreal Biodiversity Framework.

■ About "Nature Positive Economy"

Although there is no clear definition of nature positive economy, its importance has already been agreed upon in the "G7 2030 Nature Compact" mentioned earlier. It is to regard the economy as "a way of management related to the act of producing, distributing, and consuming things necessary for humans," and the nature positive economy is regarded as the economy in which these acts (management) contribute to or do not hinder "halting and reversing the loss of biodiversity, for instance.

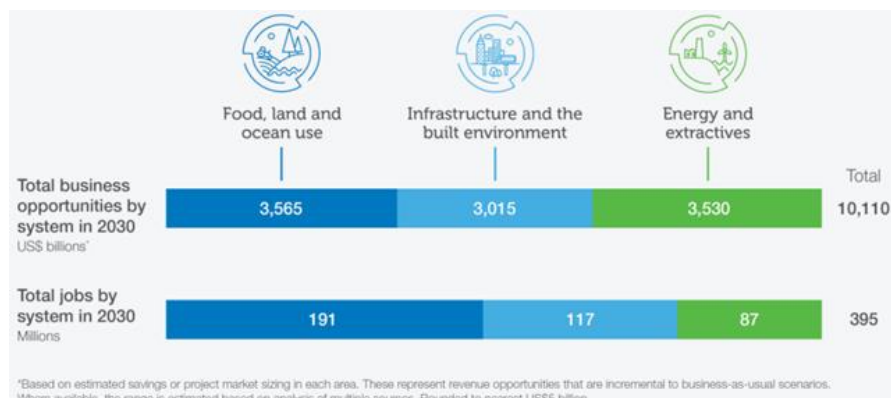
These guidelines provide basic concepts on the management of the company for nature positive, which is an important part of the nature positive economy.

■ Economic Impact

According to "The Future of Nature and Business" by the World Economic Forum, while more than half of the global GDP (about \$44 trillion) is potentially threatened by natural losses, investment in and transition to a nature positive economy could provide annual business opportunities worth \$10 trillion that could create 395 million jobs by 2030.

¹² Source: [THE GLOBAL RISKS REPORT 2023 18TH EDITION \(2023, WORLD ECONOMIC FORUM\)](#)

According to a World Economic Forum report, more than half of the global GDP (\$44 trillion) is potentially threatened by the loss of nature. The threats emerging from the three systems (food, land, and ocean use; infrastructure and the built environment; and energy and extractives) endanger around 80% of the threatened or near-threatened species. Fundamental reforms are required to stop them.



■ Trends on Standardization (ISO TC331)

In addition to the renewal of the ISO 14001 environmental management system, the establishment of a new international technical committee dedicated to biodiversity was proposed by the French Standards Association in February 2020. Then TC (Technical Committee)331 (secretariat: France) was established in August 2020. The 1st and 2nd plenary meetings of ISO/TC331 were held on 28 June-2 July 2021 and 4-8 April 2022 accordingly. Japan attended as a Participating Member and established a National Committee on TC331 to consider national actions.

(2) National status

In the "Japan Biodiversity Outlook 3 (JBO3)" published by the Ministry of the Environment in March 2021, the "four crises" of biodiversity in Japan continue to have a significant impact on biodiversity loss and ecosystem services are degrading. The report states that previous efforts mitigated biodiversity loss, but it is not yet in recovery.

*) Four crises of biodiversity in Japan

The crises of biodiversity in Japan are categorized into the following four types of crises in the National Biodiversity Strategy.

First crisis: Crisis due to development and other human activities

Second crisis: Crisis due to reduced effort for nature

Third crisis: Crisis caused by species introduced by humans (exotic species, etc.)

Fourth crisis: Crisis due to global environmental change

In addition, results of the review of the National Biodiversity Strategy 2012-2020 published by the Ministry of the Environment showed that 5 of 13 national targets for achieving the Aichi Targets were achieved, but the remaining targets were not achieved and further efforts were needed.

¹³ Source: THE FUTURE OF NATURE AND BUSINESS (2020, WORLD ECONOMIC FORUM)

■ Results of the review of the National Biodiversity Strategy 2012-2020¹⁴

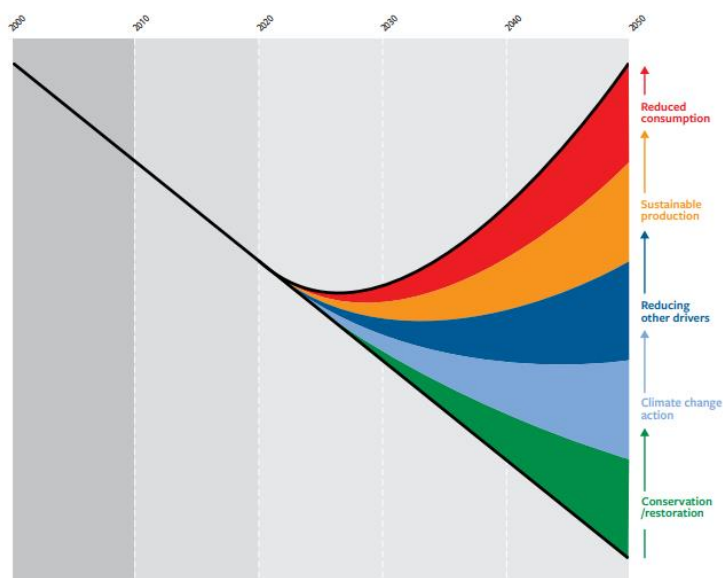
Results of the review of the National Biodiversity Strategy			
Achieved	B-4	Identification of invasive alien species based on the results of examination of the enforcement status of the Alien Species Act, preparation of the route information, setting control priorities, systematic promotion of control, etc.	5
	C-1	Appropriate maintenance and management of 17% of land routes and 10% of sea routes	
	D-3	Conclusion of the Nagoya Protocol and implementation of domestic measures	
	E-1	Promoting actions based on the National Biodiversity Strategy	
	E-2	Respecting traditional knowledge, strengthening the science, strengthening the link between science and policy, and effectively mobilizing the necessary resources (finance, human resources, technology) to achieve the Aichi Targets.	
Progressed but not achieved	A-1	Achieving "mainstreaming biodiversity in society"	8
	B-1	Significant reduction in the rate of loss, degradation and fragmentation of natural habitats	
	B-2	Sustainable implementation of agriculture, forestry and fisheries ensuring biodiversity conservation	
	B-3	Improvement of nitrogen and phosphorus pollution, conservation and improvement of aquatic organisms, maintenance of water quality and habitat environment	
	B-5	Promoting actions to minimize human pressure	
	C-2	Preventing the extinction of endangered species and maintaining the genetic diversity of crops and livestock	
	D-1	Enhancement of benefits from biodiversity and ecosystem services through ecosystem conservation and restoration	
	D-2	Contribution to climate change mitigation and adaptation by restoring more than 15% of degraded ecosystems	

3. Role of Business

■ Portfolio of actions to reduce loss and restore biodiversity.

As shown in the figure below, biodiversity loss is expected to continue under a "business as usual" scenario. On the other hand, it is estimated that the loss can be halted and reversed if various action areas (conservation, restoration, climate change mitigation, reduction of consumption, sustainable production, and other measures (e.g., addressing pollution and exotic species)) are combined. Businesses can contribute to nature's positive economy by promoting the above-mentioned efforts. The concrete actions would be determined after analyzing and evaluating how their business activities affect biodiversity and what kind of natural capital they depend on. Details are described in Part 2 and Part 3.

■ A portfolio of actions to reduce loss and restore biodiversity.¹⁵



¹⁴ SOURCE: RESULTS OF INSPECTION OF THE IMPLEMENTATION STATUS OF THE NATIONAL BIODIVERSITY STRATEGY 2012-2020 (2021, MINISTRY OF THE ENVIRONMENT)

¹⁵ SOURCE: GLOBAL BIODIVERSITY OVERVIEW, 5TH EDITION (2020, SECRETARIAT OF THE CONVENTION ON BIOLOGICAL DIVERSITY)

Chapter 2: New National and International Goals and Strategies

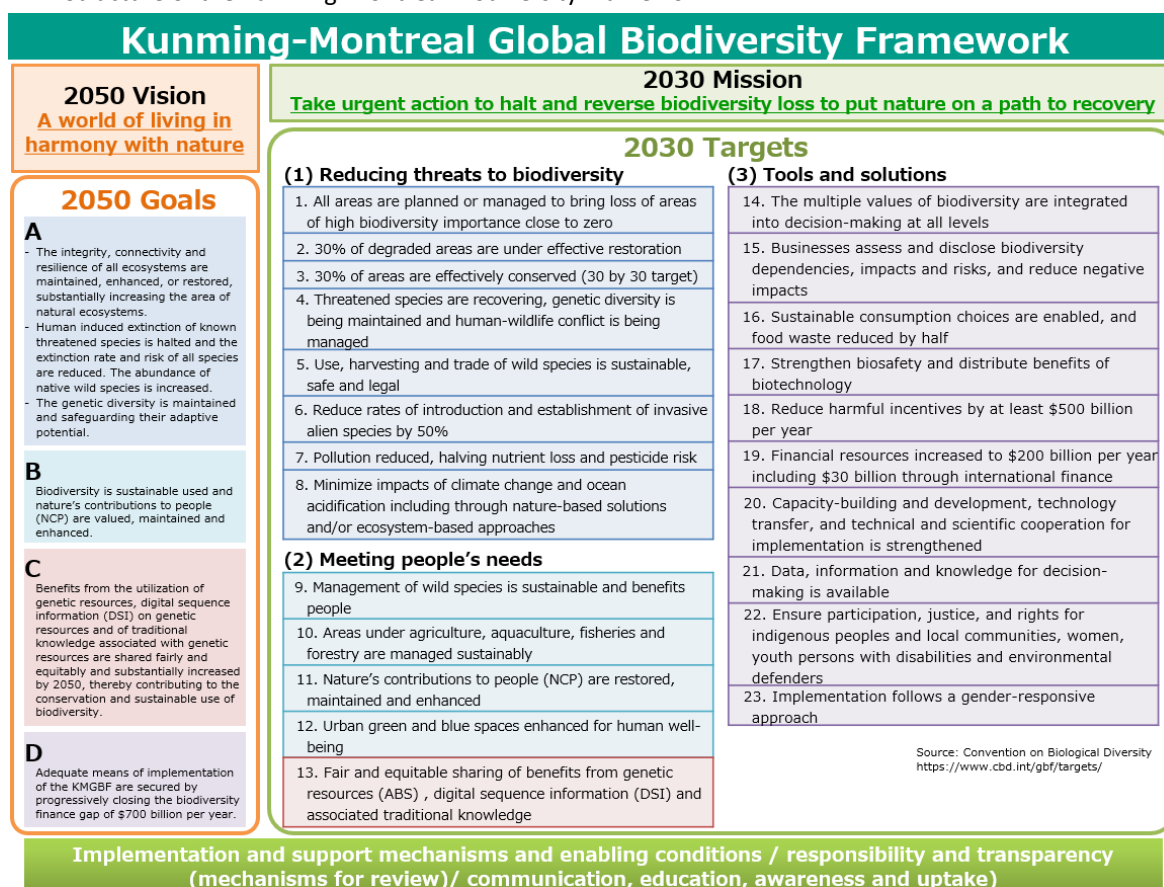
1. International targets and strategies (Kunming-Montreal Biodiversity Framework)

The Kunming-Montreal Biodiversity Framework, adopted at CBD-COP15 (15th Conference of the Parties to the Convention on Biological Diversity) held in Montreal, Canada in December 2022, has a 2050 vision of "a world of living in harmony with nature" and a 2030 mission to "take urgent action to halt and reverse biodiversity loss to put nature on a path to recovery". To achieve these visions and missions, the 2050 Global Goals and 2030 Global Targets were established.

The Kunming-Montreal Biodiversity Framework has increased the number of quantitative targets compared to the Aichi Targets and strengthened social and economic targets. In addition, the "Review Mechanism," a mechanism for monitoring and evaluating the progress of the new framework, was adopted at the same time to make it more effective than the previous framework.

In terms of business, the following goal and targets are set up: "Biodiversity is sustainably used and managed and nature's contributions to people, including ecosystem functions and services, are valued, maintained and enhanced" in Goal B, "Ensure and enable that by 2030 at least 30 per cent of terrestrial and inland water areas, and of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures" in Target 3, , "Take legal, administrative or policy measures to encourage and enable business, and in particular to ensure that large and transnational companies and financial institution" in Target 15, , "reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50 per cent by 2030" in Target 6, and "Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably,...contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security" in Target 10.

■ Structure of the Kunming-Montreal Biodiversity Framework¹⁶



Further details are available in the CBD's document on the Kunming-Montreal biodiversity framework (CBD/COP/15/L25 Kunming-Montreal global biodiversity framework). Indicators of these goals and targets

¹⁶ Source: Ministry of the Environment website

are described in the Monitoring framework for the Kunming-Montreal Biodiversity Framework.
(CBD/COP/15/L26 Monitoring framework for the Kunming-Montreal global biodiversity framework)

In the new National Biodiversity Strategy, indicators and targets are developed to achieve goals (see below).

2. National goals and strategies (National Biodiversity Strategy 2023-2030)

(1) Outline of the National Biodiversity Strategy 2023-2030

[Objectives]

To protect and utilize biodiversity and natural capital (the foundation of global sustainability and human security) in line with "Kunming-Montreal Biodiversity Framework

[Structure] It has five basic strategies to achieve nature positive by 2030 in which each strategy sets 3 target states and several target actions. Indicators to measure the achievement of each target are established, and relevant programs and projects are linked. It enables to organize of the entire strategy and managing its progress effectively.

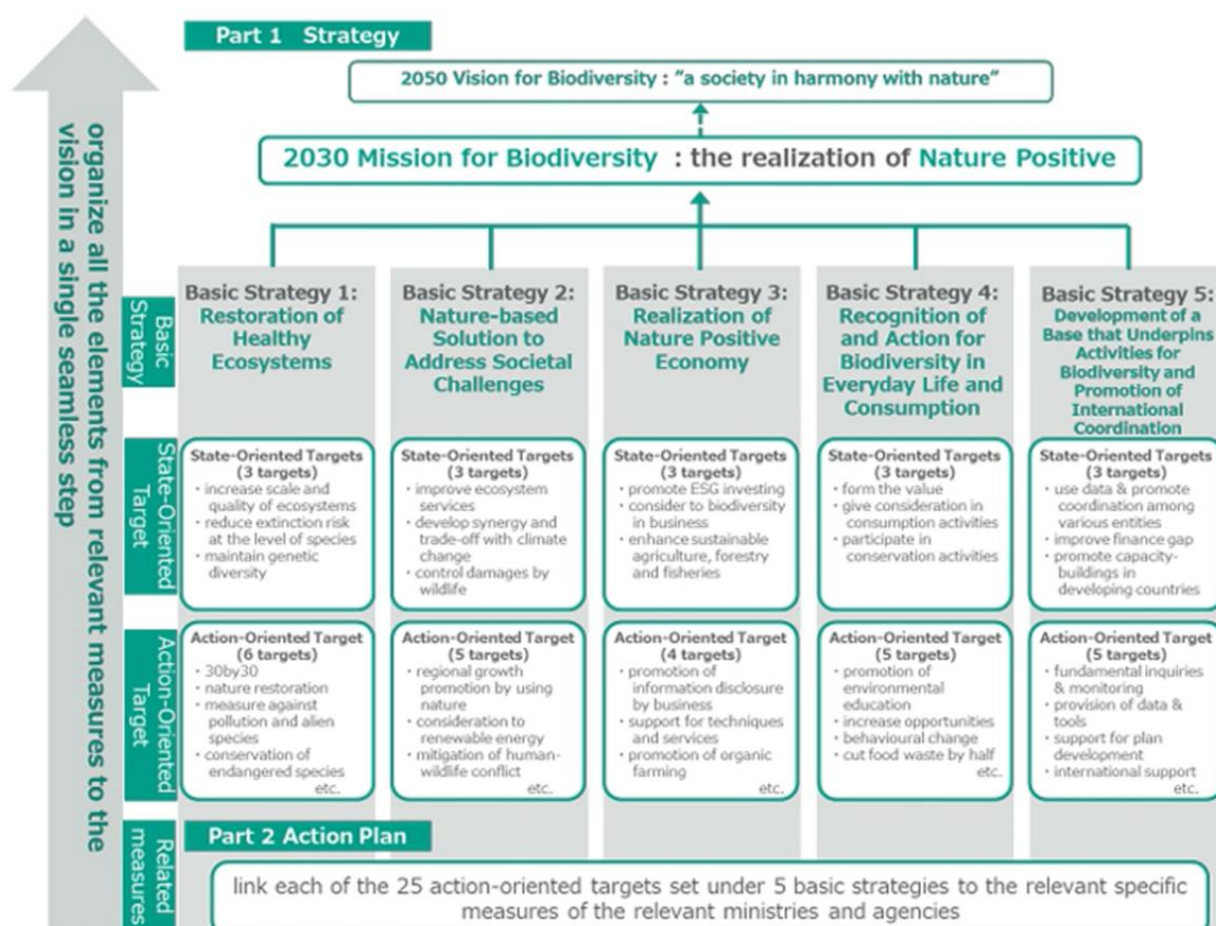
[Notes]

-It emphasizes an integrated response to the "two crises" of biodiversity loss and the climate crisis and a fundamental transformation of society after the COVID-19 pandemic.

-It highlights ensuring a healthy ecosystem and maintaining and restoring nature through actions to achieve targets such as 30by30.

-It promotes socio-economic activities that protect and utilize natural capital (activities that include nature-sensitive actions and/or evaluation of ecosystems, serving as a driving force for nature positive).

■ Structure of the National Biodiversity Strategy 2023-2030¹⁷



¹⁷ NATIONAL BIODIVERSITY STRATEGY 2023-2030" (2023, MINISTRY OF THE ENVIRONMENT)

3. Other frameworks

In addition to the national and international goals and strategies by the public sector mentioned above, a variety of initiatives and frameworks are being developed by the public and private sectors. The following is an overview of some examples of these frameworks. internationally recognized frameworks include TNFD(Taskforce on Nature-related Financial Disclosures), SBTs(Science-Based Targets) for Nature, and due diligence, which are also described in Part 2 and Part 3.

(1) Japan Conference for 2030 Global Biodiversity Framework (J-GBF)

The Japan Council for the 2030 Biodiversity Framework (J-GBF) was established in November 2021 to promote the participation and cooperation of all sectors in Japan, including the national and local governments, businesses, citizens, NGOs, and youth, to achieve international and national targets such as 30by30, to promote efforts for the conservation and sustainable use of biodiversity (Secretariat: Ministry of the Environment). Under the J-GBF, the "Business Forum" and "Regional Cooperation Forum" have been established to share information among member organizations and at international conferences.

(2) Keidanren Committee on Nature Conservation/ Keidanren Nature Conservation Fund

The Keidanren Committee on Nature Conservation was established in 1992 as a part of Keidanren, together with the Keidanren Nature Conservation Fund. It has been engaged in activities in collaboration with various stakeholders, including support for nature conservation projects of national and international NGOs through the Fund, awareness raising sharing information to companies, and advocacy to facilitate actions on biodiversity through business. In 2018, Keidanren published the " Declaration of Biodiversity by Keidanren and Action Policy (Revised Edition)" with the aim of further mainstreaming biodiversity under the Aichi Targets. In 2020, Keidanren invited companies to endorse the Declaration and the Action Guidelines, then compile them into the "Keidanren Initiative for Biodiversity Conservation" together with examples of corporate technologies, products, and services that contribute to biodiversity conservation, and disseminate them internationally.

(3) Japan Business Initiative for Conservation and Sustainable Use of Biodiversity (JBIB)

Established in 2008, this initiative is comprised of companies that are highly committed to biodiversity conservation and its sustainable use. The objectives of JBIB include accelerating research, actions, dialogue, collaboration sharing information related to biodiversity. In addition to providing training for members, it also develops standards and guidelines for sustainable land use, water management, raw material procurement, etc., among members, and publishes these standards and guidelines.

(4)30by30 Alliance

It was established to promote all-Japan efforts to achieve 30by30. Companies, local governments, and organizations voluntarily participate (Secretariat: Ministry of the Environment). The conditions for participation are either "aiming for registration of their property or land in the international Other Effective area-based Conservation Measures (OECM) database" or "supporting the management of protected areas and areas that have been (or are expected to be) registered in the international OECM database".

(5) International frameworks

Framework Name	summary	remarks
CDP (Carbon Disclosure Project)	International NGO in the environmental field. They send questionnaires to companies, compile the results, and analyze and evaluate their environmental efforts on a common indicator. It works to achieve a sustainable economy by disclosing the responses of companies.	The CDP Climate Change Questionnaire includes questions on biodiversity
CDSB Framework Application guidance for biodiversity-related disclosures	A part of the CDSB Framework Application Guidance, developed by the Climate Disclosure Standards Board (CDSB). It aims to extend the TCFD recommendations and its core elements to nature.	-
Corporate Sustainability Reporting Directive (CSRD)	Sustainability disclosure rules in the EU for large-scale companies about their business activities	-
International Sustainability Standards Board (ISSB)	The IFRS Foundation, the founding body of International Financial Reporting Standards (IFRS), established a board to set international sustainability standards at COP26.	International standards for climate change disclosure are expected to be developed by the end of 2022
Nature Capital Protocol	Framework published by the Capitals Coalition in 2014 to figure out the direct and indirect dependence of corporate activities on natural capital	As of 2022, the Capitals Coalition is conducting a project called Transparent, to develop a methodology for applying natural capital accounting to management accounting and published the first draft in July 2021.
OECD Due Diligence Guidance for Responsible Business Conduct	A non-legally binding recommendation to multinational companies on responsible business conduct that is based on the OECD Guidelines for Multinational Enterprises. It recommends companies conduct risk-based due diligence to avoid and address negative impacts associated with their business operations and supply chains.	-
SBTs for Nature (Science-Based Targets for Nature)	Measurable, practical, time-bound goals, based on the latest available science, that enable companies for the interconnected terrestrial, freshwater, and marine systems in the value chain, to act within the limits of the Earth and in line with social and sustainability goals	Initial guidance for companies was published in September 2020. A methodology for setting SBTs for Nature is being developed to publish specific guidance in 2023 onwards.
Sustainable Finance Disclosure Regulation (SFDR)	It regulates sustainability disclosures related to financial institutions and financial instruments in the EU.	-
TNFD (Taskforce on Nature-related Financial Disclosure)	An international organization that establishes a framework for the assessment and disclosure of risks and opportunities related to natural capital and biodiversity for business activities.	A draft framework will be distributed in 2022, and following pilot projects involving companies and consultations with regulators, data producers, etc., the framework will be published in 2023
Corporate Sustainability Reporting Directive (CSRD)	It regulates sustainability disclosure for large companies about their business activities in the EU.	-
Corporate Sustainability Due Diligence Directive - Proposal	It requires companies to identify and, where necessary, prevent or mitigate the negative effects of their activities on human rights and the environment, such as child labour and Labor exploitation, pollution and biodiversity loss.	Proposal published in February 2022.
EU Deforestation Regulation - Proposal	To halt global deforestation, companies are required to conduct due diligence on their supply chains.	In December 2022, a provisional agreement on the draft regulation was concluded by the European Council and the European Parliament.

4. Biodiversity and related sector

Efforts in other sectors than biodiversity have positive and/or negative impacts on biodiversity as follows.

Sector	Summary	Relationship with biodiversity
Marine plastic waste	It is a generic term for various problems caused by marine plastic wastes (drifted matters, marine debris on surface water and deep-sea sediments), such as deterioration of the marine environment including ecosystems, degradation of coastal ecosystems, adverse effects on the landscape, maritime navigation problems, and impacts on fisheries and tourism.	In addition to the accidental ingestion of plastic bags and fishing nets by marine animals, in recent years there has been concern about the impact of microplastics (plastic waste smaller than 5 mm) on the marine ecosystem.
Climate change issues	The problem of climate change, also known as the "climate crisis," is an unavoidable and urgent issue that is linked to every single one of lives on the earth. Globally, we have observed a rise in average temperatures, melting of snow and ice, and a rise in sea level. In Japan, we also have observed a rise in average temperatures, heavy rainfall, damage caused by cyclones, and the impact on agriculture and ecosystems.	Climate change affects ecosystems. For example, it is predicted that up to about 20% of species in terrestrial ecosystems are likely to face very high extinction risks if temperatures rise by 2°C, and about 50% of them are likely to be extinction risk if temperatures rise by 5°C.
Just Transition	It means greening the economy fairly and inclusively for all stakeholders, creating opportunities for decent work, and leaving no one behind.	The concept of "fair transition" needs to be respected in the transition to a nature-positive world.
Gender	Gender refers to socially and culturally constructed characteristics of women, men, and others. It includes the roles of women and men, and/or their interrelationships constructed by social norms and other factors in a particular society, for instance.	Gender-based disparities in ownership and use rights pose a risk to biodiversity as the natural environment and natural capital might not be managed properly. Equal rights and opportunities for natural capital, regardless of gender, and stable use and conservation of natural capital lead to the preservation of biodiversity.
Circular Economy	The increasing demand for resources, energy, and food, and increased waste such as plastics, are becoming more serious throughout the world. The economic concept of using resources sustainably, instead of linear economy, is called circular economy.	Loss of biodiversity due to large-scale resource extraction can be avoided by promoting a circular economy.
Food security	It is achieved when all people have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs for an active and healthy life at all times.	Food production and agriculture highly depend on biodiversity, such as pollination, soil formation and maintenance, nutrient cycle, climate regulation, water supply, and pest control.
Human rights, Indigenous peoples	Human rights are "the right of all people to life and liberty and the and the pursuit of happiness" or "the right of human beings to live as human beings, a right that they are born with. Regarding the rights of indigenous peoples, the United Nations Declaration on the Rights of Indigenous Peoples was adopted in 2007.	It contributes to the conservation and sustainable use of biological diversity where traditional knowledge, technologies, and practices by indigenous peoples and local communities, as well as the use of biological resources, are respected and encouraged.
One Health	The concept is that humans, animals, and the environment (ecosystems) are interconnected. The stakeholders responsible for human and animal health and environmental conservation should build close cooperative relationships and work to solve cross-sectoral issues.	The concept of the impact of biodiversity conservation on human health is being developed.

5. Relationship between carbon neutral, circular economy, and biodiversity

Climate change problems, such as the torrential rains, became more frequent globally, and are referred to as the "climate crisis". Furthermore, economic activities and consumer behaviors of overproduction, consumption, and disposal lead loss of biodiversity, and bring the global environment to its limits.

There is an interrelationship between climate change, circular economy, and biodiversity.

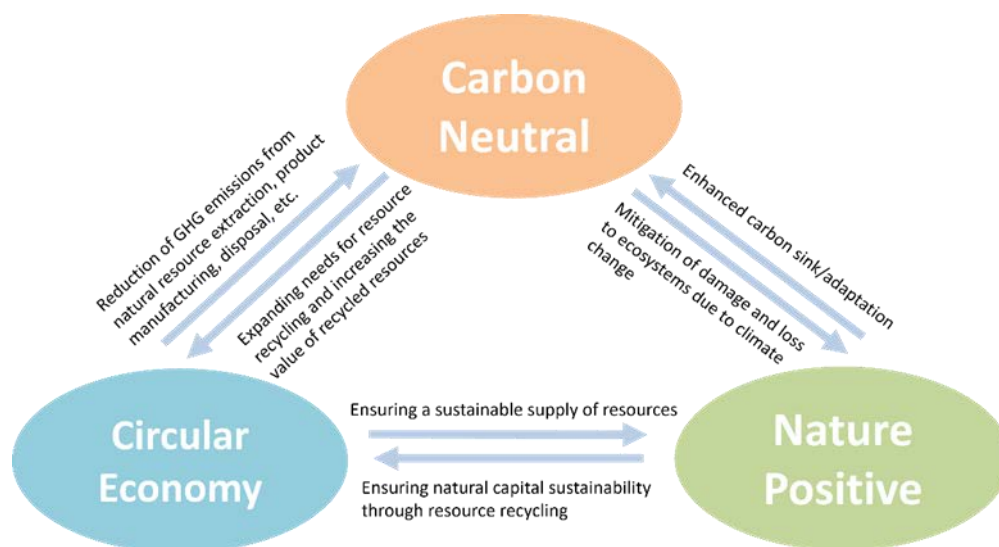
For example, from the perspective of resource recycling, over-production and over-consumption impair material cycles. It also causes climate change problems, depletion of natural resources, and loss of biodiversity due to overconsumption of fossil fuels and large-scale resource extraction etc.. Therefore, reduced consumption of natural resources contributes to mitigating climate change and biodiversity loss.

In relation to climate change (or decarbonization) for example, about 20% of species on terrestrial ecosystems are likely to face very high extinction risks if temperatures rise by 2°C, and about 50% are likely to be in very high extinction risks if temperatures rise by 5°C.¹⁸ Conversely, we can avoid such risks of extinction if we halt global warming.

Some actions on climate change mitigation have a positive impact on biodiversity, while others have a negative impact. Promoting business management that enhances corporate value and realizes a sustainable society at the same time, considering carbon neutral, circular economy, and biodiversity in an integrated manner, enables companies to respond to environmental requirements/needs efficiently and effectively.

In doing so, the concepts of NbS (Nature based Solution) and NCP (Nature Contribution to People) attracted attention recently. They design business activities to be more sensitive to biodiversity, and ecosystem conservation which brings various benefits, such as climate change mitigation, disaster risk management, and community development, Co-benefits help to start and continue these business activities.

■ Relationship between carbon neutral, circular economy, and nature positive¹⁹



¹⁸ Source: IPCC SIXTH ASSESSMENT REPORT (AR6) WG2 REPORT, 2022, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)

¹⁹ Source: STUDY GROUP ON BASIC MATTERS FOR THE SIXTH BASIC ENVIRONMENT PLAN, SECOND DOCUMENT: ENVIRONMENTAL, ECONOMIC, AND SOCIAL SITUATION AND DIRECTION OF ENVIRONMENTAL POLICY DEVELOPMENT (2023, MINISTRY OF THE ENVIRONMENT).

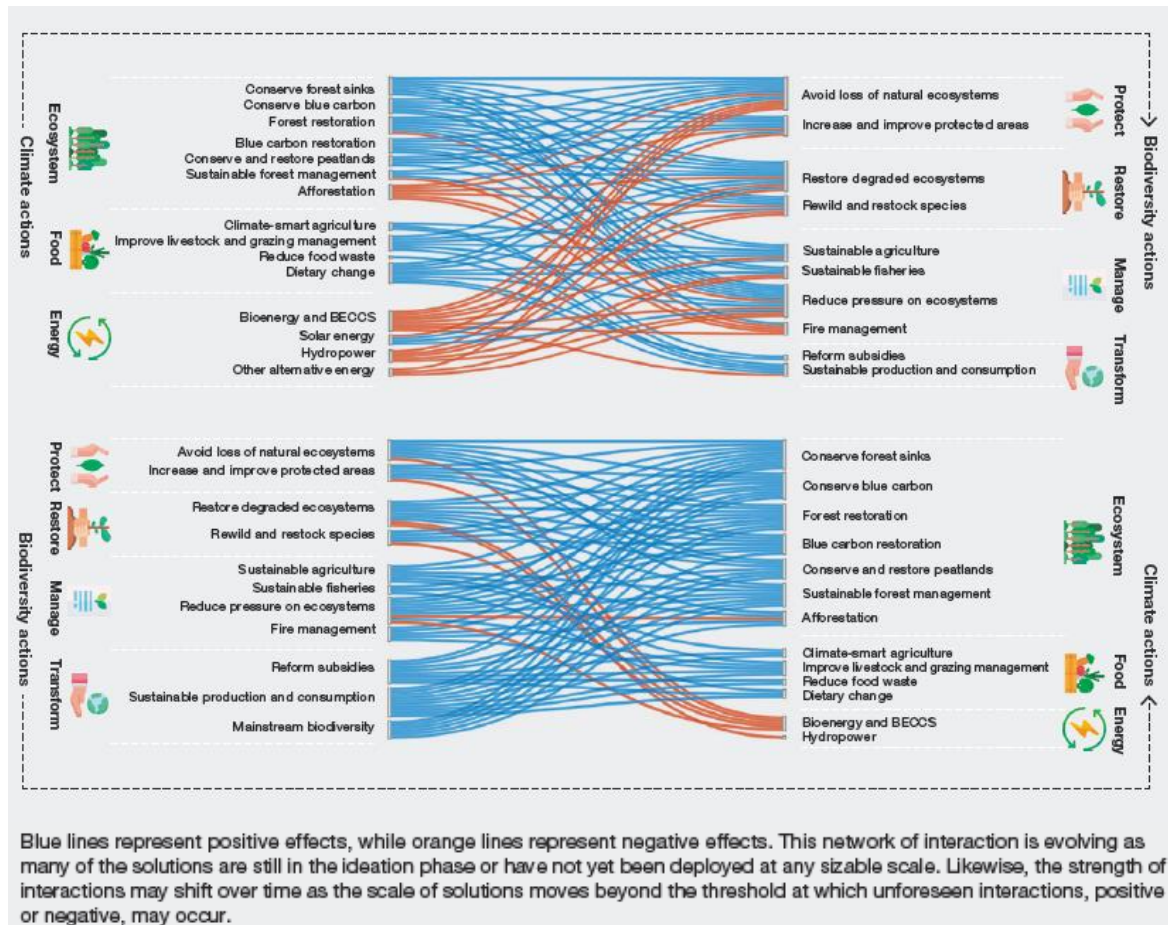
The workshop report refers to the following linkages between biodiversity and climate change and requires an integrated solution. Mitigating global warming and protecting biodiversity are interrelated, and achieving them is essential to the sustainable and equitable benefit among people.

Many actions on terrestrial and marine for ecosystem protection, sustainable management and restoration generate co-benefits for climate mitigation/adaptation and biodiversity goals. On the other hand, it is important to keep in mind that there may be negative impacts (trade-offs) between actions on biodiversity conservation and climate change mitigation.

■ Relationships between climate change mitigation and biodiversity conservation

The following figures show the impacts between climate change mitigation and biodiversity conservation. The blue line represents positive impacts (synergies) and the orange line represents negative impacts (trade-offs).

- ✓ Example of positive impacts: land protection is important to address biodiversity loss and generate co-benefits of climate change mitigation and adaptation.
- ✓ Examples of adverse effects: actions for climate change mitigation to increase carbon storage through biomass, such as large-scale forestation and crop cultivation for biomass energy production, may have negative impacts on biodiversity.



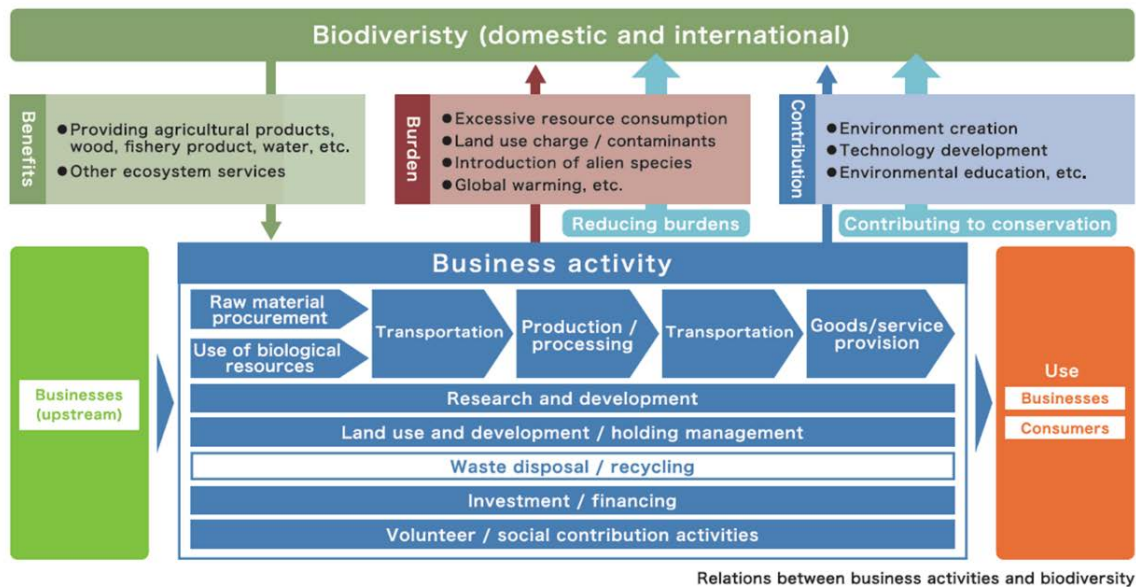
Chapter 3: Relationship between Business Activities and Biodiversity

1. Basic concept of the relationship between business activities and biodiversity

We receive benefits from ecosystems that are based on biodiversity and have impacts on it. For example, the figure below shows how we receive benefits and have impacts from/on ecosystems, focusing on business activities.

²⁰ BIODIVERSITY AND CLIMATE CHANGE IPBES-IPCC JOINT WORKSHOP REPORT: TRANSLATION AND COMMENTARY by IGES, 2021, Institute for Global Environmental Strategies (IGES)

■ Relationship between Business Activities and Biodiversity²¹



The benefits and impacts of biodiversity that we have are not limited to the supply of raw materials. Where we conduct our business activities, we may affect biodiversity in the process of developing or using land. Also, depending on where we procure from, the impact on biodiversity varies greatly. Furthermore, the products and services itself can also have an impact on biodiversity.

On the other hand, the technologies, products and services owned by businesses may have an innovative and positive impact on biodiversity conservation. Furthermore, they may be involved in - ecosystems based on biodiversity through investments in these activities or through social activities.

As mentioned in Chapter 1, biodiversity is the foundation of the economy, society, and the environment, and it has a significant impact on business activities if actions are not taken to address biodiversity loss. On the other hand, the transition to nature is expected to have great economic potential. This means that biodiversity is not only a risk but a business opportunity for companies to have an advantage over their competitors by being pioneers and influential in the market.

- More than half of the global GDP (\$44 trillion) is potentially threatened by the loss of nature. (The Future of Nature and Business by World Economic Forum)
- Transition to a nature -positive economy could provide annual business opportunities worth \$10 trillion. (ibid)

When adopting the concept of nature positivity into your business activities, you need to recognize how your business activities affect or depend on biodiversity, and how they are linked to business risks/opportunities, then determine the importance to the business. (Further details are available in Part 2).

At the same time, it would be necessary to show a story about biodiversity and natural capital to shareholders, investors, and other stakeholders. Therefore, the International Sustainability Standards Board (ISSB) proposes to follow the Guidance for Biodiversity-related Disclosures²² in disclosing sustainability-related financial information.

Business management that takes biodiversity and natural capital into account is required by financial institutions internationally. On the other hand, according to a survey by the Keidanren Council for Nature Conservation, private companies in Japan have difficulties making progress in their actions such as "difficulty in setting targets, indicators, quantification, and economic evaluation," "difficulty to link actions on nature to business profits," and "low relevance to their core business." ²³

²¹ Source: Biodiversity Private Sector Engagement Case Studies (2020, Ministry of the Environment)

²² The official name of the guidance is "CDSB Framework application guidance for biodiversity-related disclosures".

²³ Source: QUESTIONNAIRE ON BIODIVERSITY - SURVEY ON THE RELATIONSHIP BETWEEN NATURE'S BLESSINGS AND BUSINESS ACTIVITIES (2020, KEIDANREN COUNCIL FOR NATURE CONSERVATION)

However, our business activities depend on and influence ecosystems based on biodiversity at many stages of business operations. If we look at our supply chain, based on an understanding of the processes to create value for the products, we certainly utilize natural capital in the form of raw materials.

Therefore, to understand the impact on biodiversity, it is necessary to get a picture of the supply chain, but it is currently difficult to understand the entire supply chain of a company in detail. Therefore, it may be necessary to roughly identify processes and commodities that highly depend on, and have a large impact on biodiversity, and then to understand the supply chain in detail. (Further details are available in Part 2).

2. Basic relationships and references

When considering biodiversity-sensitive business, it is necessary to focus particularly on relationships between business activities and biodiversity, as well as the impact on business. In particular, it is necessary to understand the following concepts.

■ Business and Biodiversity

The TNFD defines “dependencies” as ecosystem services that an organization relies on for their business processes to function, such as a clean and regular water supply. In addition, TNFD described the impact on the nature of the business risks and opportunities as follows.

“Organizations also have impacts on environmental assets and ecosystem services that may be positive or negative. Short-term impacts on nature can result in changes in the quality and resilience of environmental assets, which in turn create medium- and long-term risks for organizations, given their dependencies. In short, today’s nature impacts can create tomorrow’s nature-related risks and opportunities”

■ Terms describing the relationship between business and biodiversity²⁴

Terms	summary
Nature	The natural world, with an emphasis on the diversity of living organisms (including people) and their interactions among themselves and with their environment.
Impacts	Changes in the state of nature may result in changes to the capacity of nature to provide social and economic functions. Impacts can be positive or negative.
Dependencies	Aspects of ecosystem services that an organization or other actor relies on to function.
Nature-related risks	Potential threats posed to an organization are linked to its and other organizations’ dependencies on nature and nature impacts. These can derive from physical, transition and systemic risks.
Physical risks/opportunities	They are classified as acute risks (event-driven) chronic risks (long-term changes) or both. Physical risks and opportunities will have financial implications for the organization.
Transition risk	Risks that result from a misalignment between an organization’s or investor’s strategy and management and the changing regulatory and policy landscape in which it operates. Developments aimed at halting or reversing the damage to nature, such as government measures, technological breakthroughs, market changes, litigation and changing consumer preferences can all impact risks.
Nature-related systemic risks	In addition to the financial risks to the organization itself, impacts and dependencies across the economy can create nature-related systemic risks. Systemic risks can refer to: (i) the risk that a critical natural system no longer functions properly; (ii) risks that arise at the portfolio level (rather than at the organization or transaction level) of a financial institution; and (iii) a risk to system-wide financial stability

■ Examples of dependence and impact on business activities²⁵

Examples of the dependence and impact of business activities include the following:

²⁴ Source: Compiled by the Ministry of the Environment from the TNFD Proposed Technical Scope (2021) and The TNFD Nature-related Risk & Opportunity Management and Disclosure Framework Beta v0.1 (2022)* The definition of influence and dependence is the same as the definition given in SBTs for Nature

²⁵ Notes: Based on "GUIDELINES FOR PRIVATE SECTOR ENGAGEMENT IN BIODIVERSITY, SECOND EDITION," (2017, MINISTRY OF THE Environment, JAPAN), with additions made by the Ministry of the Environment

Examples of "dependence"

- ✓ Does the business use biological resources such as food, wood, fibre crops, or water in its activities?
- ✓ If biological resources are used, are they abundant or not?
- ✓ If the resource is no longer available, are there cost-effective alternatives?
- ✓ Does the business include activities that utilize the natural environment, such as natural landscape, wild flora and fauna as ecotourism?
- ✓ Is the prevention of natural disasters by ecosystems closely related to stable business activities and the performance of the business?

Example of "Impact"

- ✓ Where and to what extent is the land used in the business activities? Does the land used in the business include the area that is considered to have high conservation value in terms of biodiversity?
- ✓ To what extent does land use reduce or separate habitat areas?
- ✓ To what extent are biological resources used in business activities?
- ✓ Have the business activities caused the introduction of exotic species or genetic contamination?
- ✓ Does the business activities cause environmental pollution or changes in the environment and affect animals or their habitats?
- ✓ Do the above impacts restrict others to receive the benefits from biodiversity?
- ✓ Does the above impacts affect the local society and culture?
- ✓ Are there possibilities that your company's technologies, products/services, and solutions can contribute to the conservation of biodiversity?
- ✓ Is it possible to create added value in the process from raw material procurement to disposal from a value chain perspective?

■ Examples of risks and opportunities in business activities²⁶

Examples of risks and opportunities in business activities include:

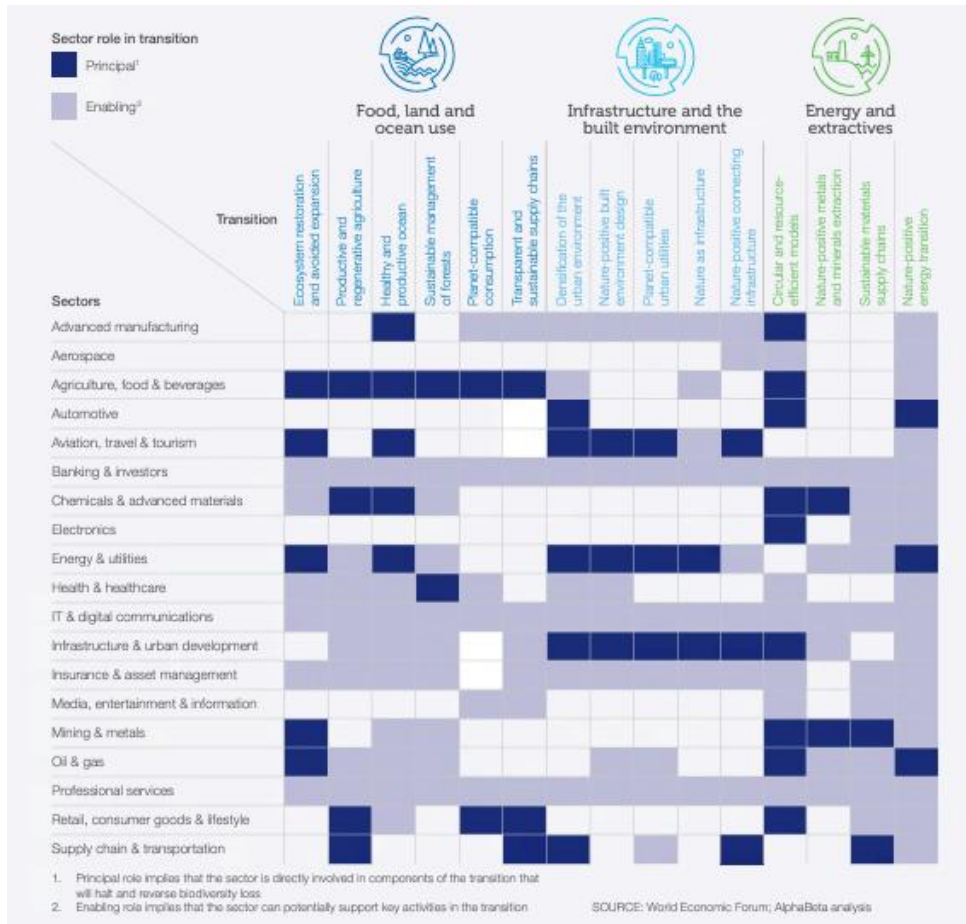
Category	Risk	Opportunity
Policy and regulation	<ul style="list-style-type: none"> Increased cost of raw material procurement due to stricter regulations on natural capital (e.g., higher unit prices for suppliers and additional tax) Decrease in biological resource quotas due to stricter regulations, usage fees, and increased costs of transportation Increased costs required to follow the regulations (certifications or permits and licenses) and lost sales opportunities when not compliant 	<ul style="list-style-type: none"> Permission to expand operations through biodiversity. Development and sales of new products that comply with new regulations, etc.
Public opinion	<ul style="list-style-type: none"> Damage to brand image due to negative reputation of adverse effects on biodiversity Difficulty in obtaining investment from investors due to fluctuating 	<ul style="list-style-type: none"> Improving brand image, attracting consumers and differentiation from competitors in the industry. Promote understanding and strengthen relationships with local stakeholders.
Market and Product	<ul style="list-style-type: none"> Decrease in customers due to changes in consumer behavior Decrease in market competitiveness of products and services due to fall in quality in terms of biodiversity. Possibility of business suspended by suppliers (both upstream and downstream in the supply chain) due to operations that are not biodiversity-sensitive (as a result of actions taken by suppliers to avoid reputational risk). 	<ul style="list-style-type: none"> Developing markets for new biodiversity-friendly products, services, certified products, etc. Development of new technologies, products, etc. that promote the conservation and sustainable use of biodiversity (*biomimicry, genetic resource utilization, etc.)
Finance	<ul style="list-style-type: none"> Reduced availability of loans due to stricter loan conditions at financial institutions. 	<ul style="list-style-type: none"> Attracting investors who place importance on ESG investments, etc., and expanding financing sources
Internal	<ul style="list-style-type: none"> Decrease in satisfaction among employees due to deterioration of corporate image. 	<ul style="list-style-type: none"> Increased employee satisfaction Securing Human Resources
Operation	<ul style="list-style-type: none"> Instability in raw material procurement (quality and quantity) due to a decrease in natural resources Raw material shortages and increased procurement costs due to declining natural resources Degradation of land /forests owned by the company due to lack of management. 	<ul style="list-style-type: none"> Establishment of production processes that are resilient to the decrease of natural resources, through sustainable use of natural resources. Strengthening supply chain resilience by management of suppliers Resilient national supply chain through the use of domestic natural capital.

²⁶ Note: Based on "GUIDELINES FOR PRIVATE SECTOR ENGAGEMENT IN BIODIVERSITY, SECOND EDITION" (2017, MINISTRY OF THE Environment, JAPAN), added by the Ministry of the Environment.

■ Example of Sectoral Analysis

A report, “The Future of Nature and Business” by the World Economic Forum” identifies the roles of business in 16 sectors, and their possible contribution to a nature positive economy. However, the report points out that such a transition requires actions not only by businesses, but also policies and regulations by governments, behavior change and social norms by civil society, and the development of IoT technologies and data utilization.

■ The Role of Each Sector in the Transition to a Nature-Positive Economy²⁷



■ Guidelines by business associations.

In understanding and analyzing the relationship between biodiversity and business activities, it is possible to refer to guidelines and plans developed by business associations.

In the evaluation and analysis of the dependencies, impacts, risks and opportunities of the business activities, it is not necessary to be in detail at the beginning of the process to raise the issue internally. It is important to first present a basic story to executives and external stakeholders about the relationship between the company's business activities. (Please refer to Q&As in Part 4.)

Detailed analyses are described process-by-process in Part 2 and Part 3.

²⁷ Source: Prepared by Ministry of the Environment based on [FIGURE E3 of THE FUTURE OF NATURE AND BUSINESS \(2020, WORLD ECONOMIC FORUM\)](#)

Part 2: Processes for Consideration of Biodiversity

This part of the report explains the basic principles and responsibilities of business when conducting activities for the conservation and sustainable use of biodiversity (Chapter 1), as well as the basic process (Chapter 2) for consideration of biodiversity in their business activities, in align with national and international frameworks.

In addition, the approach to handling these processes for a different type of industry and business is explained (Chapter 3) as depends on the type of industry and the nature of the business.

Chapter 1: Principles and Responsibilities Related to Biodiversity and Business Activities

The Convention on Biological Diversity, the Basic Environment Law, the Basic Act on Biodiversity, the National Biodiversity Strategy, and other relevant laws and regulations set forth appropriate principles and responsibilities for each entity, including businesses, to follow them. Below are some examples from the Basic Act on Biodiversity.

Principle: Avoid and minimise impacts on biodiversity (Article 3(2) of the Act)

In view of the fact that biodiversity has been damaged as a result of changes in socio-economic activities and that the use of natural resources is likely to have an impact on biodiversity in Japan and abroad, the use of land and natural resources shall be carried out in a sustainable manner to ensure that impacts on biodiversity are avoided or minimised.

Principle: Prevention and Adaptation in Accordance with the Precautionary Approach)) (Article 3.3 of the Law)

The conservation and sustainable use of biological diversity shall be carried out with the aim of responding by a preventive method, in which biological diversity is conserved while striving to enrich scientific knowledge, and an adaptive method, in which the state of biological diversity is monitored even after the project, etc., is started, scientific evaluations of the monitoring results are carried out, and the evaluation results are incorporated into the project, etc., taking into account the fact that biological diversity is a natural resource which is likely to be affected by human activities, taking into account the fact that biodiversity is based on a subtle balance and includes many phenomena that have not yet been scientifically explained, and that it is difficult to regenerate biodiversity once it has been damaged.

Principle: Long-term perspective (Article 3.4 of the Law)

The conservation and sustainable use of biological diversity shall be carried out with a view to striving for the preservation and regeneration of ecosystems, etc., from a long-term perspective, taking into account the fact that biological diversity provides many benefits continuously in the long term.

Responsibilities: Responsibilities of companies (Article 6 of the Act)

In conducting business activities, companies shall endeavor to reduce the impact on biodiversity and achieve sustainable use by understanding the impact of their business activities on biodiversity and conducting biodiversity-friendly business activities while coordinating with other companies and other persons concerned in accordance with the basic principles.

Chapter 2: Basic Process for Consideration of Biodiversity

1. Basic process for consideration of biodiversity

, The basic process in these guidelines is as follows.

Process 1: Assessment and System Development

Recognize the relationship between your business and biodiversity, develop a system to understand and analyze further details (impacts, dependencies, risks, opportunities, etc.) between the activities and biodiversity/natural capital in your business and supply chain/value chain, then identify critical areas to set the goal.

Process 2: Goal setting and planning

Establish strategies and policies, relevant indicators and targets, as well as implementation and monitoring plans for actions to implement these strategies and policies.

Process 3: Implementation

Implement the strategies and policies.

Process 4: Monitoring, evaluation and review

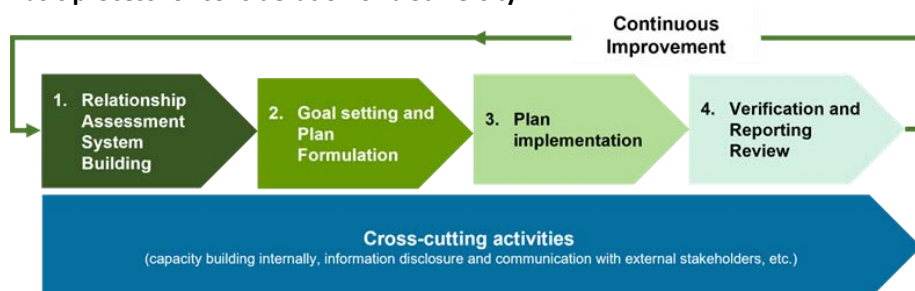
Monitor progress and results appropriately, and revise plans and goals if necessary.

In addition, as cross-cutting activities, (5) internal capacity building and (6) communication with external stakeholders, including information disclosure, should be conducted as needed. That enables the above processes to be more efficient, and the strategies to be aligned with business value. In particular, with regard to (5) internal capacity building, it is essential to raise awareness through training and education for all employees, including management, procurement, product development, manufacturing, and sales departments, in order to make the actions reasonable in terms of consideration of biodiversity. It is also effective to build capacity for consideration of biodiversity by utilizing the internal education system.

These processes vary in their relationships with biodiversity and the difficulty of acquiring data depending on the type and scale of business, and not all of the processes necessarily need to be accurate from the beginning. It would also be efficient to do it quick and dirty, and then revise these processes as needed in a flexible and agile manner.

Efficient activities can be achieved by aligning with the PDCA cycle in the environmental management systems that many businesses have already implemented, as well as with the international frameworks and targets for consideration of biodiversity and information disclosure that have been established in recent years. The PDCA cycle in the environmental management systems is described at the end of this chapter as a reference.

Basic process for consideration of biodiversity



Framework for the basic process

Process	Step	Outlines	Page
1. Assessment and structure development	1-1 Establishment of administrative structure	<ul style="list-style-type: none"> Clarify the responsibilities of the department in charge and the structure for reporting to the executives, etc. (e.g., designate a leading department and provide authority and resources for assessment and evaluations.) 	p.26
	1-2 Understand and analyze the relationship between business activities and biodiversity, assess impacts, and identify critical areas	<ul style="list-style-type: none"> Research and analysis of dependencies and impacts of the business activities, products and services on biodiversity, as well as the risks and opportunities for business management. Evaluation of the Impact of the business on biodiversity, etc. Selection of (critical) areas closely related to biodiversity and natural capital. 	p.26
2. Goal setting and planning	2-1 Setting strategies, policies, goals, and indicators	<ul style="list-style-type: none"> Setting strategies and policies for the conservation of biodiversity in critical areas, and setting targets and indicators as far as possible 	p.27
	2-2 Development of implementation and monitoring plans	<ul style="list-style-type: none"> Development of plans for specific implementation to achieve the targets, and plans for the acceleration and management of the implementation. 	p.28
3. Implementation	3-1 Implementation	<ul style="list-style-type: none"> Implementation Implementation of various activities based on the plans 	p.29
4. Monitoring, evaluation and review	4-1 Monitoring	<ul style="list-style-type: none"> Monitoring the progress of the plan Evaluation and analysis of the results of various activities based on the implementation plan Evaluation and analysis by the indicators 	p.29
	4-2 Review of plan	<ul style="list-style-type: none"> Flexible review based on the results of monitoring and evaluation Review of policies based on the results of activities, monitoring and evaluation Review and revise strategies, implementation plans/goals, and administrative structure Review by responsible parties 	p.29
Cross-cutting activities	5 Capacity building	<ul style="list-style-type: none"> Appropriate training and information sharing with management and employees 	p.30
	6 Information disclosure and communication with external stakeholders.	<ul style="list-style-type: none"> Appropriate disclosure and dialogue with investors Information disclosure and dialogue with external stakeholders (local governments, NGOs/NPOs, citizens, etc.) Developing and monitoring goals, indicators, and plans in collaboration with external stakeholders 	p.30

2. Details of each step

Process 1: Assessment and structure development

Step 1-1 Establish the administrative structure

Step 1-2 Understand and analyze the relationship between business activities and biodiversity, assess impacts, and identify critical areas (materiality)

- ❖ In order to promote biodiversity-related activities in your company, establish and strengthen the administrative structure accordingly. In addition, clarify the responsibilities of the departments in charge and the reporting line, etc.
- ❖ Understand and analyze how the business activities impact biodiversity (which may include activities in the supply chain).
- ❖ Understand regionality, if necessary (which geographical areas are involved and how the business activity depends on and affects regional biodiversity, based on the status of the regional natural environment).
- ❖ Analyze the risks and opportunities for management.
- ❖ Based on the above steps, identify priorities and key areas (materiality) for the business and management.

(Step 1-1)

First, establish the administrative structure to promote biodiversity-related activities in your company, and clarify the responsibilities of the department in charge, the administrative structure, and reporting line, etc. For instance, the company can designate a leading department, and provide authority and resources for the assessments. In addition, the initiative of executives is important for improved governance.

(Steps 1-2)

After establishing the administrative structure, the company identifies the scope of its activities, assesses dependencies and impact of the business activities on biodiversity and natural capital in each region, and analyzes how these activities take risks and opportunities for the company. Several frameworks including TNFD and SBTs for Nature provide analytical methods.

Depending on the industry, it may be desirable to analyze the relationship with biodiversity not only in the company's own business but also in the supply chain (upstream and downstream). Although the length and complexity of the supply chain may make it difficult to understand the relationship, the scope of activities should be determined based on feasibility and expected impact.

It would be also desirable to include in the analysis not only how business activities affect biodiversity, but also how changes in biodiversity affect business activities.

Based on the understanding and analysis of the impacts, it is recommended to identify the materiality to the company, and then proceed with a combination of qualitative and quantitative analysis of the impact of business activities on biodiversity and the risks and opportunities for the company.

According to the Keidanren Council for Nature Conservation (2020), in Japan, 57% of companies understand, analyze, and assess the impact of their business on biodiversity for "head office operations," 43% for "group companies," and 24% for "supply chain" respectively²⁸.

■ Importance of understanding the supply chain

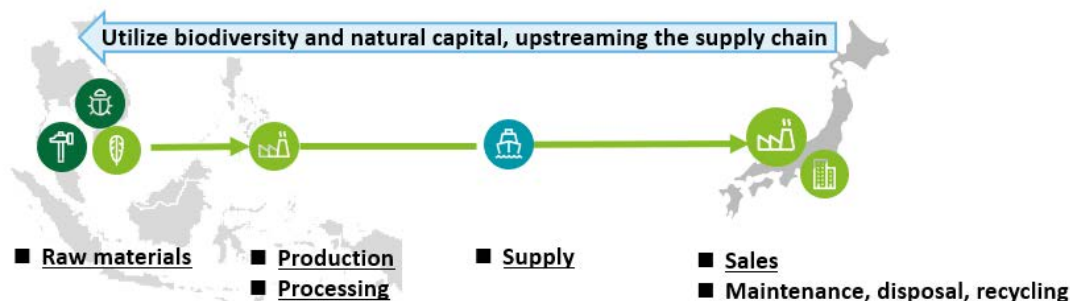
Looking down the supply chain, natural capital is used as raw materials for products. Therefore, it is necessary to understand your supply chain in order to understand the impact of your business activities on biodiversity as well as the impact of changes in biodiversity (quantitative and qualitative) on your company.

However, it is difficult to understand the entire supply chain of a company in detail. Therefore, after identifying activities and/or commodities that highly depend on, or have a larger impact on biodiversity, it would be

²⁸ Source: [QUESTIONNAIRE ON BIODIVERSITY - SURVEY ON THE RELATIONSHIP BETWEEN NATURE'S BLESSINGS AND BUSINESS ACTIVITIES \(2020, KEIDANREN COUNCIL FOR NATURE CONSERVATION\)](#)

necessary to understand the supply chain as much as possible, and then evaluate the impact on biodiversity while utilizing various databases and evaluation tools (see below). It is also necessary to ensure traceability where possible. The companies can prioritize the activities according to the business portfolio and gradually expand the scope of the activities as needed.

- The relationship between the supply chain and biodiversity



(Notes.)

For supply chain and value chains in which the company is not directly involved, it is difficult for the company to assess the impact on biodiversity, so it is necessary to ask suppliers to disclose data, and in some cases, the company may need to ensure consideration of biodiversity by procuring certified products.

On the other hand, it should be noted that when procuring certified products, it is not possible to ensure information on "ecosystem impacts" for specific products. In some cases, such as the EU's proposed regulation on mandatory due diligence in the prevention of deforestation, a certified product does not ensure traceability. Therefore, in addition to certification, some companies promote mapping or other projects to understand the impacts.

It is expected that financial institutions obtain information on dependencies, impacts, risks, and opportunities related to biodiversity at the industry or business unit level. In this case, the main input would be the data disclosed by the investee. In addition, using existing tools (such as the examples in Part 3), they can identify industries or companies that are considered to have significant risks to biodiversity, and request further information on these industries or companies.

Process 2: Goal setting and planning

Step 2-1 Setting strategies, policies, goals, and indicators

Step 2-2 Development of implementation and monitoring plan

- ❖ Based on the results of Process 1, establish the strategy and policy, as well as indicators and targets.
- ❖ Consider activities not only as risk mitigation but also as opportunities to lead to growth in business.
- ❖ Develop a plan that includes specific conservation and other activities to achieve the goal.
- ❖ The plan will also include monitoring of activities and review of the plan to make the PDCA cycle effective.

(Step 2-1)

The company establish strategies and policies for biodiversity based on the results of the analysis in Process 1. It is important to formulate strategies and policies in line with the impact and dependencies of business activities on biodiversity and natural capital.

Then, the company consider setting quantitative/qualitative goals and indicators as much as possible, to implement the strategies and policies. At this point, there may be cases where quantitative goals and indicators are not appropriate due to the type of industry, nature of business, etc. In such cases, qualitative goals can be

set, but it is recommended to explain the reasons why quantification is not appropriate. (The details of setting goals and indicators are described in Part 3.)

According to Keidanren Council for Nature Conservation (2020), 75% of companies have included the concept of biodiversity conservation in their management and environmental policies, 53% of them have set "qualitative targets", and 27% have set "quantitative targets" respectively.²⁹

It is possible to incorporate biodiversity perspectives into existing management and environment policies as well as procurement standards.

(Notes.)

In setting strategies and policies, it is recommended to be aligned with official targets and indicators such as the Kunming-Montreal Biodiversity Framework and the National Biodiversity Strategy, as well as indicators and targets in the international frameworks such as SBTs for Nature and TNFD. It is also important to follow declarations and guidelines by business associations if they have.

(Step 2-2)

After setting strategies, policies and goals, a detailed implementation plan is compiled including how and when they will be achieved.

For example, the content of the plan could include the deadline and quantity of target products to be switched to local, certified, and/or organic products in order to reduce the negative impact on biodiversity.

The plan also includes administrative and management structures to follow the PDCA cycle. In this regard, existing environmental management systems such as ISO 14001 and environmental committees can be utilized to promote activities for the conservation and sustainable use of biodiversity.

Examples of contents in the plan

- ✓ Structure (responsibilities and roles) for managing and monitoring environment-related risks and opportunities
- ✓ Compliance with environmental laws and regulations
- ✓ Standard procedures for managing impacts on the environment and regular training for it.
- ✓ Due diligence to prevent and minimize negative environmental impacts, including a checklist.
- ✓ Product life cycle assessment and product design to minimize environmental impact.
- ✓ Alignment with internationally recognized environmental certifications and standards (e.g., ISO 14001)
- ✓ Participation in international initiatives for biodiversity or natural capital
- ✓ Internal audits
- ✓ Supplier audits
- ✓ Regular training related to standard procedures for accident prevention and emergency management.

(Notes.)

If there are existing environment-related plans such as climate change, it would be more efficient and effective to integrate biodiversity with the existing plans as much as possible.

While it is desirable to set as precise and quantitative targets and indicators as possible, it is not appropriate to reduce the frequency of monitoring due to the increased cost of verification. It is effective to set short-term targets (annual targets) to periodically check progress toward the achievement of medium- to long-term targets (2030 targets or 2050 targets).

Process 3 Implementation

Step 3-1 Implementation

- ❖ Implement specific initiatives based on the structure, goals and plans developed in Processes 1 and 2.

²⁹ Source: [QUESTIONNAIRE ON BIODIVERSITY - SURVEY ON THE RELATIONSHIP BETWEEN NATURE'S BLESSINGS AND BUSINESS ACTIVITIES \(2020, KEIDANREN COUNCIL FOR NATURE CONSERVATION\)](#)

- ❖ Roles and responsibilities are allocated to implement the plan according to the structure. Executives initiate and support if necessary.
- ❖ Activities are implemented in relevant departments based on specific activity plans.

(Step 3-1)

The company implement specific activities based on the plan and regularly monitors and analyzes the progress and evaluates them. Based on the results, the company flexibly revise policies, targets, and implementation plans if necessary.

In general, a company have various departments and divisions such as management, environment, procurement, manufacturing production, R&D, design, sales, and facilities. Regarding the implementation of the plan, it is important that each of these departments work together to realize the overall policy and contribute to the achievement of the goals. Details of activities are available in Chapter 3, "Basic Approach by Industry and, Business ".

The relationship with the region where the office is located is also important, and when considering biodiversity, it is necessary to collaborate and cooperate with the region and local government. Chapter 3, "2. Information for Considering Cooperation with Local Governments," explains further details that may be helpful for collaboration and cooperation with local governments.

In the implementation of the plan, "Step 5 (internal capacity building)" and "Step 6 (information disclosure, communication with external stakeholders)," as cross-cutting activities, are implemented at the company or department/division.

Process 4: Monitoring, evaluation and review

Step 4-1 Monitoring

Step 4-2 Review of the plan

- ❖ Understanding the status of activities is essential to make the PDCA cycle effective.
- ❖ Conduct regular monitoring to manage progress.
- ❖ Based on the results of monitoring, review and revise targets and plans flexibly. In addition, disclose as much information(results) as possible.
- ❖ Based on the monitoring results, expand the scope of activities gradually, involving the supply chain and value chain.
- ❖ Analyze the international, national and regional status of biodiversity, and review the plan, taking them into consideration.

(Step 4-1)

It is important to monitor regularly, analyze the status of the activities, evaluate the progress and achievement, and reflect the results into the plan to make the PDCA cycle effective.

However, the subject, method and frequency of monitoring varies depending on the nature of the activities. It is recommended to conduct an analysis, integrating the results of monitoring of all activities in the company about once a year.

It is desirable to incorporate a system to review plans and policies through monitoring results and information disclosure, for example, by disclosing them on the annual Report, Sustainability Report, and CSR Report.

(Step 4-2)

The basic idea of the review is to set benchmarks for the relationship between biodiversity and business activities and improve the plan. It enables the company to review, revise and improve the administrative structure, the goals, and the activities.

As the business and social environments, as well as international and national status/trends on biodiversity, are not stable, It is important to review the plans and activities to respond to them.

(Notes.)

It would be desirable to flexibly revise targets and plans according to the progress of the Kunming-Montreal Biodiversity Framework, the National Biodiversity Strategy, and private sector-based international frameworks.

Cross-cutting activities

Step 5 Internal capacity building

Step 6 Information disclosure and communication with external stakeholders

- ❖ Share common understanding of biodiversity, natural capital and management within the company by promoting training and education for executives and employees, and active participation in national and international conferences.
- ❖ Through information disclosure on biodiversity and dialogue, the company can ensure communication with investors and local stakeholders, which provides business stability.
- ❖ In particular, information disclosure has become more important in recent years as an important part of a public relation and dialogue (engagement) with stakeholders, including investors. It must be implemented in accordance with international rules, regulations and guidelines.

(Step 5)

If efforts to conserve biodiversity remain to the person or department in charge, it would be difficult to be shared throughout the entire company as an important issue. First of all, it is fundamental that executives understand the relationship between biodiversity and business activities, for internal processes such as the development of the structure and governance. At the same time, it is necessary to establish and maintain internal communication procedures for other departments and employees to make these internal processes effective.

In doing so, it is recommended to utilize various guidelines by public organizations and/or business associations, including these guidelines. It is also recommended to actively participate in national and international conferences and events to learn about the latest national and international trends.

Step 6 "Information Disclosure and Communication with External Stakeholders", describes effective capacity building through dialogue with external experts.

(Notes.)

It is not easy for an individual company to gather a variety of knowledge from scratch. Participation in industry associations and various partnerships enables the company to build internal capacity to facilitate processes 1-4.

Ministry of the Environment website, Japan Conference on the 2030 Biodiversity Framework (J-GBF): Business Forum website³⁰

To achieve international targets and national strategies such as the Kunming-Montreal Framework for Biodiversity, the Japan-GBF (J-GBF) was established to promote the participation and cooperation of all sectors in Japan, including the national government, local governments, businesses, citizens, NGOs, and youth, and to promote initiatives for the conservation and sustainable use of biodiversity (Secretariat: Ministry of the Environment). Under the J-GBF, the "Business Forum" and "Regional Cooperation Forum" have been established to share information with Japanese companies and to share information on Japan's initiatives at international conferences.

(Step 6)

To achieve sustainable business, it is becoming essential not only to promote biodiversity-sensitive activities but also to gain social commitment to the business activities through active communication with internal and external stakeholders.

There are frameworks for disclosure regarding biodiversity, such as the TNFD and SBTs for Nature (see Part 3).

Through such information disclosure and dialogue (engagement), it is expected that executives and employees raise their awareness of the environment, and they would have insights for innovation and enhanced corporate value in their core business.

It would be desirable to ensure accessibility and regular disclosure of information, for example, by publishing integrated reports, sustainability reports, or CSR reports, on an annual basis on the website.

³⁰ Source: [MINISTRY OF THE ENVIRONMENT WEBSITE, JAPAN CONFERENCE ON 2030 BIODIVERSITY FRAMEWORK REALIZATION \(J-GBF\)](#)

(Notes.)

It is also useful to share information with environment-related support centers, various alliances, and private biodiversity initiatives.

The Ministry of the Environment has established Environmental Partnership Offices (EPOs) in various regions, as well as Regional Collaboration and Conservation Activity Support Centers at local governments for networking and introducing experts. Opportunities for networking are also provided by the "30 by 30 Alliance for Biodiversity", the Keidanren Council for Nature Conservation, JBIB, and the Nature Conservation Society of Japan (Nacs-J).

Examples of external stakeholders

- ✓ National government
- ✓ Local governments (providing local information on biodiversity, coordination and collaboration among various stakeholders,)
- ✓ NGOs/NPOs (hearing opinions on the impact of business activities on biodiversity, collaboration in policymaking and social activities, etc.)
- ✓ Citizens (collaboration in social activities, etc.)
- ✓ Academia and research institutions including universities, museums, and elementary education(providing scientific knowledge and information on indigenous ecological culture, conducting surveys on local ecosystems and local society, environmental education using corporate garden, etc.)
- ✓ Domestic and foreign business partners and related businesses

Reference for the basic process.

As the reference to follow the basic process, the procedures of existing frameworks, the Environmental Management System and the Natural Capital Protocol are shown below, in addition to the procedures of SBTs for Nature, a framework for goal-setting, and that of TNFD (LEAP approach), a framework for information disclosure.

2. Steps in the Environmental Management System

ISO14001 PDCA	Policies and leadership <ul style="list-style-type: none"> Commitment Environmental Policy Responsibilities, Authority, and Roles Plan <ul style="list-style-type: none"> Risks and Opportunities Goal setting Planning 	Operation <ul style="list-style-type: none"> Operation of the plan Management 	Performance <ul style="list-style-type: none"> Monitoring Measurement, analysis and evaluation Review 		Improvement <ul style="list-style-type: none"> Revision Continuous improvement
	Planning <ul style="list-style-type: none"> Clarification of challenges and opportunities in business Clarification of environmental management policy Assessing environmental impact and activities, and compiling environment-related laws and regulations 	Implementation <ul style="list-style-type: none"> Implementation and operation Development of administrative structure Education, training communication 	Monitoring and evaluation <ul style="list-style-type: none"> Monitoring and evaluating the progress Solving and preventing problems 	Overall evaluation and review <ul style="list-style-type: none"> Overall evaluation and review by representatives 	Support <ul style="list-style-type: none"> Communication Reporting

3. Steps to integrate natural capital into business (example of Natural Capital Protocol)

Overview of Natural Capital Protocol

The Natural Capital Coalition published this report in 2016. It provides a framework for identifying measuring and evaluating the impact and dependence of business activities on natural capital. It is designed to take natural capital into consideration in corporate decision-making.

Natural Capital Protocol: Steps to Integrate Natural Capital

Stage 1: Framework <ul style="list-style-type: none"> Development of a framework for evaluation 	Stage 2: Scope <ul style="list-style-type: none"> Setting purpose Identifying the scope of evaluation Estimation of impact and dependency 	Stage 3: Assessment and evaluation <ul style="list-style-type: none"> Assessing impact and dependencies Monitoring changes in the state of natural capital Evaluation of impact and dependencies 	Stage 4: Application <ul style="list-style-type: none"> Verification of the results and application
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4. Steps for goal setting (example of SBTs for Nature)

Overview of SBTs for Nature

SBTs for Nature are measurable, actionable, time-bound targets based on the latest available science that enable companies to act within the limits of the Earth and in line with sustainability goals with respect to the interconnection of water, biodiversity, land, and oceans in the value chain. Therefore, by setting targets for SBTs for Nature, companies can act in line with relevant UN conventions and the Sustainable Development Goals (SDGs).

A methodology for setting SBTs for Nature is being developed by the Science Based Targets Network, an international network of more than 45 organizations.

Further details for SBTs for Nature are available in Part 3.

SBTs for Nature: Steps in Goal Setting

Step 1: Assess	Step 2: Interpret and prioritize	Step 3: Measure, set and disclose	Step 4: Act	Step 5: Track
	<ul style="list-style-type: none">Consider possible impact		<ul style="list-style-type: none">Use the SBT framework to develop plans and take actions	<ul style="list-style-type: none">Monitor progress and review

5. Process for disclosure of information (example of TNFD)

Overview of TNFD and LEAP approach

TNFD is an international task force that develops a framework for the appropriate assessment and disclosure of risks and opportunities for corporate activities for natural capital and biodiversity. TNFD promote an integrated assessment for nature-related risks and opportunities so called LEAP(Locate, Evaluate, Assess, Prepare).

Further details of the TNFD and LEAP approaches are available in Part 3.

LEAP Approach: Disclosure Process

Process 1: Locate (Identify the firm's interface with nature)	Process 2: Evaluate (Consider nature dependencies and impacts)	Process 3: Assess (Material risks and opportunities)	Process 4: Prepare (Steps towards responding and reporting)
<ul style="list-style-type: none">Understanding the business footprintIdentifying interface with NatureIdentifying location/areasidentifying sector	<ul style="list-style-type: none">Identifying relevant environmental assets and ecosystem servicesIdentifying dependencies and ImpactsAnalyzing dependenciesanalyzing impacts	<ul style="list-style-type: none">Assessing risks and opportunitiesExisting risk mitigation and risk/opportunity managementAdditional risk mitigation and risk/opportunity managementMateriality assessment of risks and opportunities	<ul style="list-style-type: none">(Strategy and Resource Allocation) Strategy and resource allocation, measuring performance(Disclosure Action) Reporting, publication

Chapter 3: Basic Approach by Industry and Business

1. Basic approach by industry and business

Each of the processes described in Chapter 2 should be modified according to industry. The following table shows the classification of business activities for biodiversity by industry.

First, the company can identify activities for biodiversity in the respective industry in the table below to take action. After that, it is desirable to monitor the status of the supply chain and value chain in collaboration with suppliers for further actions to be taken accordingly.

■ Activities for biodiversity by industry³¹³²

Industry ³³		Classification in "Relationship between Economic Activities and Biodiversity"	Activity									
			1 Procurement of Raw	2 Production and Processing	3 Logistics	4 Sales	5 Maintenance, disposal and recycling	6 Development Land Use and	7 Land management	8 R&D and Innovation	9 Fundraising	
Primary industry	Agriculture, forestry	1a. Agriculture (crops), 1b. Agriculture (livestock), 1c. Forestry	✓	✓	✓	✓	✓	✓		✓		
	Fishing	2a. Fishery (other than aquaculture), 2b. Fishery (aquaculture)	✓	✓	✓	✓	✓			✓		
Seconda ry industry	Mining, quarrying, gravel extraction	3. Mining		✓	✓	✓	✓	✓		✓	✓	
	Construction	4. Construction	✓	✓	✓	✓	✓	✓		✓	✓	
	Manufacturing	5a. Manufacturing (electronics) 5b. Manufacturing (food and beverage) 5c. Manufacturing (pulp and paper)	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Tertiary industry	Electricity, gas, heat supply, and water supply	6a. Energy 6b. Water	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Telecommunications	7. Information and Communication			✓	✓	✓	✓	✓	✓	✓	
	Transportation and postal services	8. Transportation and postal services	✓		✓	✓		✓	✓	✓	✓	
	Wholesale and retail	9. Wholesale and retail	✓		✓	✓		✓	✓	✓	✓	
	Finance and insurance	10. Finance and insurance				✓		✓	✓	✓	✓	
	Real estate and leasing	11a. Real estate 11b. lease and rental				✓	✓	✓	✓	✓	✓	
	Academic research, professional and technical services	12. Academic research, professional and educational services, and teaching and learning support	✓		✓	✓		✓	✓	✓	✓	
	Accommodation and food services	13. Accommodation and food	✓		✓	✓	✓		✓	✓	✓	
	Lifestyle and entertainment	14. Lifestyle 15. Tourism	✓		✓	✓		✓	✓	✓	✓	
	Education and learning support	(see 12.)	✓		✓		✓	✓	✓	✓	✓	
	Medical care, welfare	16. Medical care and welfare	✓	✓	✓			✓	✓	✓	✓	
	multiservice	Post Office	(see 8.)	✓		✓	✓	✓	✓	✓	✓	✓
		Cooperatives	(see 1. or 2.)	✓	✓	✓	✓	✓	✓		✓	✓
	Service and hospitality		17. Recycling and waste disposal business	✓	✓	✓	✓	✓	✓	✓	✓	✓

³¹ Source: "GUIDELINES FOR PRIVATE SECTOR ENGAGEMENT IN BIODIVERSITY, SECOND EDITION," P. 22 (2017, MINISTRY OF THE ENVIRONMENT)

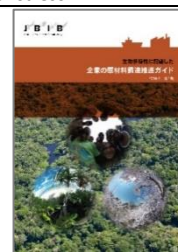
³² Source: Note: "✓" in the table indicates the type of activity for biodiversity that the industry can apply, but a blank also imply the possibility to apply those activities.

³³ Source: Japan Standard Industrial Classification (2013, Ministry of Internal Affairs and Communications)

■ Activities for biodiversity by supply chain and division

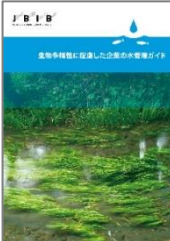
Specific examples for each stage of the supply chain and division are presented according to the following sections:

- ① Stages and divisions: It is classified by stages on the supply chain (raw material procurement ⇒ production and processing ⇒ distribution ⇒ sales ⇒ maintenance, disposal, and recycling) and by types of activities within the company (land use and development, land management, R&D and innovation, and financing).
- ② Relationships: It describes the relationships with biodiversity based on the nature of the activity. You can use it as a reference to assess your business activities.
- ③ Possible indicators and targets: It describes possible indicators and targets for the conservation of biodiversity.
- ④ Reference: It includes information on the efforts of industry associations and other organizations as a reference.

① Stage / Division	1 Procurement of raw materials
② Relationships	<p>[Impact on biodiversity (example)]</p> <ul style="list-style-type: none"> Through the procurement of biological resources as raw materials (e.g., timber, fishery products, agricultural products), business activities at the production sites (e.g., land use, use of biological resources) have a significant impact on biodiversity. Through the procurement of raw materials such as mineral resources (e.g., rare metals, copper, iron) in Japan and abroad, activities in the mining areas and other areas have an impact on biodiversity. <p>[Mitigation of negative impacts on Biodiversity (example)]</p> <ul style="list-style-type: none"> Reduction of raw material consumption through improvement of production processes, etc. Integrate consideration of biodiversity into the procurement standards in the guidelines (compliance, procurement of certified products, procurement for local biodiversity, etc.) Improving the supply chain through collaboration with suppliers and the application of traceability technology Sharing information within the industry Mitigation of water stress, introduction of technologies to reduce water withdrawal <p>[Characteristics].</p> <ul style="list-style-type: none"> Ensuring sustainable procurement for biodiversity leads to long-term procurement stability. Longer supply chains and the various suppliers make it difficult to manage and assess. Collaboration with suppliers is important. Since it is desirable to increase the volume of biodiversity-sensitive raw materials in the country, collaboration within the same industry is also effective. While suppliers are requested to consider biodiversity as necessary, it should be taken to avoid "abuse of dominant position" under the Antimonopoly Law.
③ Possible indicators and targets	<p>[Indicators and targets]</p> <ul style="list-style-type: none"> Percentage of certified raw materials procured (e.g., RSPO-certified palm oil, Rainforest Alliance-certified cacao, etc.) Percentage of raw materials sourced from regions with "high" or "very high" water stress
④ Reference	<p>Guidelines for biodiversity-sensitive procurement of raw material by JBIB (Japan Business Initiative for Conservation and Sustainable Use of Biodiversity)³⁴</p> <p>The guidelines show the risks and challenges in raw material procurement for biodiversity and provide possible solutions.</p> 

① Stage / Division	2 Production and processing
② Relationships	<p>[Impact on biodiversity (example)]</p> <ul style="list-style-type: none"> The use of fuel and water resources at the plant affects the availability of water and the ecosystem in the region. Water pollution due to the wastewater from factories and offices affects the habitat and ecosystem in rivers and seas. Light pollution (lighting) affects insects, plants, etc.


³⁴ Source: [JBIB WEBSITE](#)

	<ul style="list-style-type: none"> ● Inappropriate use of pesticides and fertilizers in crops, land and water management that only prioritize productivity affects biodiversity. ● It may compromise local societies, economies, and traditional cultures rooted in local biological resources. <p>[Mitigation of negative impacts on Biodiversity (example)]</p> <ul style="list-style-type: none"> ● Appropriate treatment of wastewater in accordance with environmental regulations ● Reduction of use of water through improvement of production processes, etc. ● Control and management of light leaks, lighting season and time, depending on the location. ● Obtaining certification for environmentally friendly agriculture, etc.
③ Possible indicators and targets	<p>[Indicators and Targets]</p> <ul style="list-style-type: none"> ● Percentage of factories and offices located in "high" or "very high" water stress ● Total water withdrawal, total water consumption ● GHG emissions (scope 1, 2, and 3 emissions)
④ Reference	<p>Water management guidelines for biodiversity-sensitive water management by JBIB (Japan Business Initiative for Biodiversity)³⁵</p> <p>It summarizes the results of research conducted by JBIB member companies on how companies can use water in a sustainable manner. Based on new issues such as water footprint, and balancing water withdrawal and wastewater on a watershed basis, it presents a direction toward water neutrality, where the impact on water resources is reduced to zero.</p> 

① Stage / Division	3 Logistics
② Relationships	<p>[Impact on biodiversity (example)]</p> <ul style="list-style-type: none"> ● Ballast water from ships and hull-fouling invasive species affect marine and coastal ecosystems. ● Invasive species associated with transportation (seeds on vehicle tires, contamination, etc.) affect biodiversity ● Exhaust from transportation affects the ecosystem <p>[Mitigation of negative impacts on Biodiversity (example)]</p> <ul style="list-style-type: none"> ● Water treatment systems and anti-fouling systems to prevent the impact of ballast water and hull fouling on ecosystems in marine and coastal areas, and ports ● Prevention of invasive species in cargo. ● Reduction of environmental impact through electrification of transportation (replacing fossil fuels with electricity). ● Local production for local consumption ● Reduce the ecological impact of paints on ships ● Use of wood in pallets, etc.
③ Possible indicators and targets	<p>[Indicators and Targets]</p> <ul style="list-style-type: none"> ● GHG emissions (scope 1 emissions), quantity of energy use, percentage of fuel oil, percentage of renewable energy

① Stage / Division	4 Sales
② Relationships	<p>[Impact on biodiversity (example)]</p> <ul style="list-style-type: none"> ● Indirect negative impact on natural capital, etc., due to food loss, etc. <p>[Mitigation of negative impacts on Biodiversity (example)]</p> <ul style="list-style-type: none"> ● Increasing biodiversity-sensitive products and services ● Integrate consideration of biodiversity into procurement policies and standards ● Provide information and raise awareness among consumers ● Reduction of food loss, etc. <p>[Characteristics].</p> <ul style="list-style-type: none"> ● Since the company can directly access consumers, there are risks and opportunities through consumers' behavior (e.g., less willingness to buy products due to lack of consideration of biodiversity, and/or creation of consumer needs for biodiversity-sensitive/local products and services through promotion). ● Consumer awareness and behavior are expected to affect the upstream supply chain.
③ Possible indicators and targets	<p>[Indicators and Targets]</p> <ul style="list-style-type: none"> ● Percentage of sales of biodiversity-sensitive products and services (e.g., detergent made by RSPO-certified palm oil, chocolate made by Rainforest Alliance-certified cacao, etc.)

³⁵ Source: [JBIB WEBSITE](#)

① Stage / Division	5 Maintenance, disposal and recycling	
② Relationships	<p>[Impact on biodiversity (example)]</p> <ul style="list-style-type: none"> ● Inappropriate treatment has negative effects on biodiversity, etc. <p>[Mitigation of negative impacts on Biodiversity (example)]</p> <ul style="list-style-type: none"> ● Conserving natural resources through repair and recycling of products, proper disposal, and reduction of disposal ● Proper repair of products ● Promotion of recycling and reuse ● Product design for easy repair and recycling 	
③ Possible indicators and targets	<p>[Indicators and targets]</p> <ul style="list-style-type: none"> ● Volume of waste, Volume and/or percentage of landfill, and recycling rate ● Volume of food waste 	
④ Reference	<p>Guidance on Disclosure and Dialogue to Promote Sustainable Finance for the Circular Economy (Ministry of the Environment and Ministry of Economy, Trade and Industry)³⁶</p> <p>The world's first circular economy-specific disclosure and dialogue guidance was developed by the government. The guidance is designed to promote dialogue between companies and investors.</p> <p>Waste treatment and recycling guidelines (Ministry of Economy, Trade and Industry)³⁷</p> <p>The guidelines were formulated by the Industrial Structure Council in December 1990 to promote voluntary actions by businesses. It sorts actions for waste treatment and recycling which should be done by businesses. The most recent follow-up was conducted in 2006.</p> 	

① Stage / Division	6 Land Use and Development	
② Relationships	<p>[Impact on biodiversity (example)]</p> <ul style="list-style-type: none"> ● Land use and development have significant direct and indirect impacts on biodiversity (e.g., soil runoff). <p>[Mitigation of negative impacts on Biodiversity (example)]</p> <ul style="list-style-type: none"> ● Appropriate measures such as tree planting and replacement ● Assess negative impacts on biodiversity in advance to avoid or reduce them ● Conservation and monitoring after land use/development ● Collaboration and dialogue with residents and other external stakeholders to avoid or reduce impacts, as well as planning, management, and monitoring with them ● In overseas operations, conserve and sustainably use biodiversity in collaboration with the government, and international NGOs, and work in compliance with the relevant laws and regulations in the country and region. <p>[Characteristics].</p> <ul style="list-style-type: none"> ● It is desirable to utilize databases (RESAS, etc.) maintained by the Ministry of the Environment and other organizations for mitigation. 	
③ Possible indicators and Targets	<p>[Indicators and targets]</p> <ul style="list-style-type: none"> ● Replaced area relative to the area of land development 	
④ Reference	<p>RESAS (Regional Economy (and) Society Analyzing System)</p> <p>A system that aggregates and visualizes big data from the public and private sectors, such as industrial structure, population and its' flow, to support various activities for regional development. It is provided in collaboration with the Secretariat of the Headquarters for the Creation of Towns, Hospitals, and Workplaces of the Cabinet Office and the Ministry of Economy, Trade and Industry. It can assess the impact of biodiversity using local revitalization indicators.</p>	

① Stage / Division	7 Land management	
② Relationships	<p>[Mitigation of negative impacts on Biodiversity (example)]</p> <ul style="list-style-type: none"> ● Conservation and management of land owned by the company (green land, forests, etc.). ● Participation and application to 30by30, Other effective area-based conservation measures (OECM), etc. ● Management of land to mitigate negative impacts such as the introduction of invasive species on local biodiversity, 	

³⁶ Source: [DISCLOSURE AND DIALOGUE GUIDANCE FOR PROMOTING SUSTAINABLE FINANCE IN THE CIRCULAR ECONOMY \(2021, MINISTRY OF ECONOMY, TRADE AND INDUSTRY, MINISTRY OF THE ENVIRONMENT\)](#)

³⁷ Source: [GUIDELINES FOR WASTE DISPOSAL AND RECYCLING \(2021, MINISTRY OF ECONOMY, TRADE AND INDUSTRY\)](#)

	<ul style="list-style-type: none"> Conservation and monitoring of biodiversity in the lands through collaboration with external stakeholders (residents, experts, NPOs, NGOs, and local governments), as well as creation of ecosystem networks with the surrounding area, and preservation of endangered species. Utilize certification system for nature-symbiosis areas developed by the Ministry of the Environment, and other certification systems that evaluate green spaces
③ Possible indicators and targets	[Indicators and targets] <ul style="list-style-type: none"> OECM area of land owned by the company.
④ Reference	Ministry of the Environment's "Nature-Symbiosis Site" certification system A system to certify areas where biodiversity is being conserved by private companies as "Nature-Symbiosis Site" is under development. It is scheduled to be established in 2023/2024. The Ministry of the Environment can register the certified "Nature-Symbiosis Site" as OECMs in the international database to show that they directly contribute to the Kunming-Montreal Biodiversity Framework.

① Stage / Division	8 R&D and Innovation
② Relationships	[Mitigation of negative impacts on Biodiversity (example)] <ul style="list-style-type: none"> To reduce the negative impact on biodiversity in the supply chain and contribute to nature-positive, research, development, and innovation are needed to create new businesses. (The scope of "R&D and innovation" is not limited to products and services, but also includes sales and marketing methods, as well as business models). Therefore, R&D and efforts for innovation should be done in various sectors and industries.) Providing the latest and innovative technologies, products, and services to contribute to biodiversity. Technology and utilization of data to assess the impact on biodiversity. Research and development of products, services, production methods, and construction methods that reduce the impact on biodiversity. Development of biodiversity-sensitive services, sales and marketing methods, and business models Technical cooperation and technology transfer to developing countries, etc. Compliance with ABS procedures [Characteristics]. <ul style="list-style-type: none"> The development of new products and services using genetic resources requires procedures based on the national and international framework of the ABS.
③ Possible indicators and targets	[Indicators and targets] <ul style="list-style-type: none"> Budget for R&D for research, development, and innovation of technologies, products, and services that can reduce negative effects on biodiversity and contribute to nature positive.
④ Reference	Business for GBF (Global Biodiversity Framework) project It was launched jointly by the Ministry of the Environment and Keidanren in November 2020. Many Japanese companies have technologies, products, and services that contribute to achieving the goals of the 2030 Biodiversity Framework (later known as the "Kunming-Montreal Biodiversity Framework"). This project shares these outstanding technologies, products, and services globally. Access and Benefit-Sharing (ABS) An internationally recognized concept for access to genetic resources and benefit-sharing. It is mentioned in the Convention on Biological Diversity and the Nagoya Protocol.

① Stage / Division	9 Fundraising
② Relationships	[Mitigation of negative impacts on Biodiversity (example)] <ul style="list-style-type: none"> Assessment and analysis of dependencies, impacts, risks, opportunities, etc., and disclosure of information [Characteristics]. <ul style="list-style-type: none"> To obtain investment and financing, it is essential to address ESG issues, including consideration of biodiversity in business activities. In addition to specific actions for biodiversity conservation, the company engages in dialogue with investors and other stakeholders through information disclosure. Currently, international discussions on the TNFD are ongoing, and it is necessary to align with these frameworks.
③ Possible indicators and targets	[Indicators and targets] <ul style="list-style-type: none"> Quantity of investment, financing, and revenues for businesses related to biodiversity conservation and nature positive

2. Basic concept for financial institutions

■ Concept

- ❖ Biodiversity and natural capital have a significant impact on the business of the investee, which can be risks and/or opportunities for financial institutions.
- ❖ As various international frameworks, such as the TNFD and Finance for Biodiversity, are under discussion and development, actions need to be taken in line with those international frameworks.

Biodiversity and natural capital are risks and opportunities for financial institutions, as they have a significant impact on the business of the investee. In this context, investments in biodiversity became more important as green finance and ESG investments expanded globally.

Therefore, it is important for financial institutions to analyze the risks to their portfolios based on the status of TNFD and other initiatives, to promote investments for biodiversity-sensitive business activities through dialogue (engagement) with investee.

Examples of actions

- ✓ Integrate consideration of biodiversity into criteria for investments
 - In project financing, if the project can be identified, utilize the Equator Principles and request an environmental impact assessment, including biodiversity as part of the review process.
 - For investing, confirm the consideration of biodiversity by the investee (e.g., existence of a policy on biodiversity conservation and sustainable use, utilization of environmental management system, etc.).
- ✓ Considering Principles for Responsible Investment (PRI) and biodiversity
- ✓ Develop and provide financial instruments that promote biodiversity-sensitive business activities (integrating consideration of biodiversity into the evaluation process for ratings for example).
- ✓ Sharing good practices on the conservation and sustainable use of biodiversity

① Industry	Financial Institutions
② Relationships	<p>[Mitigation of negative impacts on Biodiversity (example)]</p> <ul style="list-style-type: none"> Assessment and analysis of dependence, impact, risks, opportunities of the investee, and information disclosure <p>[Characteristics]</p> <ul style="list-style-type: none"> Biodiversity and natural capital itself have a significant impact on the business of the investee, which can be risks and/or opportunities for financial institutions. As various international frameworks, such as the TNFD and Finance for Biodiversity, are under discussion and development, actions need to be taken in line with those international frameworks
③ Possible indicators and targets	<p>[Indicators and targets]</p> <p>The following indicators are listed in the TNFD beta version.</p> <ul style="list-style-type: none"> Amount of investments to industry and company that are highly dependent on ecosystem services. Assets under management (AuM), investments, loans, and insurance exposed to significant risk Financial data (investment, financing, insurance, etc.) that demonstrates significant mitigation of nature-related risks. Financial data (investments, loans, insurance, etc.) with positive impacts on nature positive
④ Reference	<p>TNFD Annex 3.3 Supplement in the Financial Sector (Draft)³⁸</p> <p>Refer to Part 3</p> <p>TNFD Annex 3.4 Assessment and Disclosure Indicators for the Financial Sector (image)³⁹</p> <p>Refer to Part 3</p>

3. Collaboration with local governments

This section contains information for collaboration between businesses and local government/community.

As there are a variety of issues related to biodiversity in a region, concerned parties in the region need to work together to solve these issues. When considering collaboration with local communities, it is also necessary for businesses to make effective efforts in accordance with the characteristics of the local community.

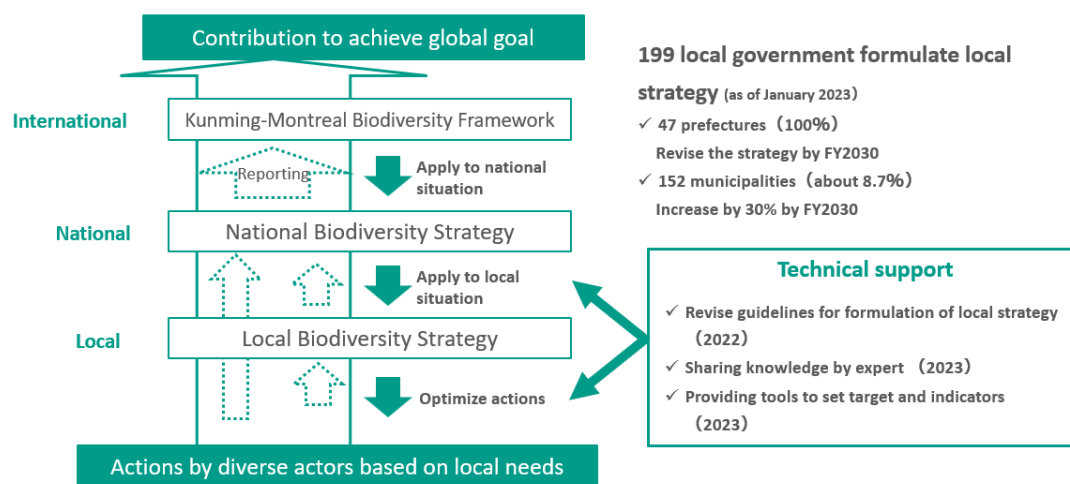
³⁸ Source: [THE TNFD NATURE-RELATED RISK AND OPPORTUNITY MANAGEMENT AND DISCLOSURE FRAMEWORK BETA V0.3 ANNEX 3.3 ADDITIONAL DRAFT DISCLOSURE GUIDANCE FOR FINANCIAL INSTITUTIONS \(2022, TNFD\)](#)

³⁹ Source: [THE TNFD NATURE-RELATED RISK AND OPPORTUNITY MANAGEMENT AND DISCLOSURE FRAMEWORK BETA V0.3 ANNEX 3.4 ILLUSTRATIVE ASSESSMENT AND DISCLOSURE METRICS FOR FINANCIAL INSTITUTIONS \(2022, TNFD\)](#)

Currently, 47 prefectures have already formulated regional biodiversity strategies by local governments, and the sub-regional strategies are under development by municipalities. It is important to make them consistent and coherent with global targets but also to be unique and take the characteristics of the local biodiversity and social norms into account. It is expected that regional strategies will be reviewed and revised based on the Kunming-Montreal Biodiversity Framework and the National Biodiversity Strategy.

The Ministry of the Environment promotes the formulation and revision of regional strategies based on the National Biodiversity Strategy through the publication of guidelines and providing technical support by experts.

■ Steady implementation of the National Biodiversity Strategy and regional biodiversity strategies



In addition, examples of activities related to biodiversity through collaboration between local governments and businesses are compiled in the Reference Materials section.

Part 3: Impact Assessment, Strategy and Goal Setting, and Information Disclosure

In this part, we will explain in more detail the concept of assessing the impact on biodiversity and natural capital, setting strategies and goals based on this assessment, and information disclosure in relation to the process for considerations of biodiversity described in Part 2.

Case studies are included in Chapter 4 in this part as references for impact assessment, strategy and goal setting, and information disclosure.

Chapter 1: Impact Assessment

1. Basic concept of impact assessment and analysis based on data and indicators

To integrate consideration of biodiversity into management and implementation, it is necessary to quantitatively assess the impact and dependence of business activities on biodiversity as much as possible and to analyze and evaluate the risks and opportunities for business derived from the assessment.

For the impact assessment by the company:

- there is an assessment of the negative impacts of business activities on biodiversity, including resource consumption, procurement, and land development.
- there is an assessment of the amount of contribution to the reduction of environmental burden by the activities, technologies, and products and services provided by businesses. However, it is necessary to identify a method and the indicators for the impact assessment.

For evaluation purposes, it is required:

- to select an appropriate method for the objectives of the evaluation.
- to select indicators according to the objectives evaluation.
- to collect data such as resource usage, waste volume, suppliers, procurement volume, and product data.

The examples of businesses listed in these guidelines are helpful in selecting methods and indicators. The relevant documents of the Kunming-Montreal Biodiversity Framework include Ecological Footprint (as a component indicator and a supplementary indicator) and LIME (as a supplementary indicator) to monitor the progress of the targets.⁴⁰

Subjects of evaluation include:

- the overall impact of the business,
- the impact of products or services,
- the impact of supply chain and value chain,
- quantitative change in impact from a specific year, and
- the impact of new products compared to the old ones.

Biodiversity and natural capital vary in vulnerability and impact depending on location. Therefore, depending on the objectives of the assessment, it may be necessary to assess the status of biodiversity and natural capital in each location where business activities are conducted.

⁴⁰ Indicators for measuring progress on the Kunming-Montreal Biodiversity Framework include

Headline Indicators: Indicators that capture the overall scope of goals and targets.

Component Indicators: optional indicators that cover all elements of each goal and target along with headline indicators

Auxiliary Indicators: any indicators that can be applied for thematic and detailed analysis of each goal and target

The company identify the business activities and locations in which the business is highly dependent on biodiversity, as well as the impacts. Then, the risks and opportunities to the business activities and society are analyzed in detail. In doing so, it is also important to indicate negative and positive impacts without offsetting them in the assessment, since ecosystems are site-specific.

While various methods of impact assessment have been proposed, this chapter includes the methods proposed by SBTs for Nature and TNFD, as well as examples of disclosures by advanced companies First, you can refer to the following methods, data, indicators, and tools.

■ Examples of evaluation methods, indicators, and tools for impact assessment

Category	Name	Outline	Case Studies (pages)
Biodiversity impact assessment (cross-sectional)	Ecological footprint	<ul style="list-style-type: none"> The results of the environmentally-extended input-output analysis, based on land area at the national level, are available. The volume and weight of each procurement item, enable us to estimate the country or region the item is likely to be procured as well as the level of environmental impact. If a country or region is identified, country- or region-specific data can be applied. Although a highly comprehensive analysis is available, it should be noted that the effects of chemical substances are not included in the results. It has also been used as an indicator in GBO4 and GBO5. the monitoring framework of the Kunming-Montreal Biodiversity Framework, has been a component and supplementary indicator of the target because of the availability of global and country-specific assessments and data since 1965. Licensing fees are required to make calculations based on their data (as of January 2023). 	Daiichi Sankyo (P65), Kao(P71)
	LIME2, LIME3	<ul style="list-style-type: none"> One of the Life Cycle Impact Assessment (LCIA) methods, which can assess the impact of business activities on multiple areas (biodiversity, primary production, climate change, air pollution, etc.). The Japanese version of LIME2 and the international version of LIME3 are being developed. The impact can also be evaluated in economic value. Due to the relatively large amount of inventory data required, basic municipality-level data may not be available. In LIME3, the G20 region is supported as a weighting factor. In the monitoring framework of the Kunming-Montreal Biodiversity Framework, it has been an example of an LCIA assessment indicator and a supplementary indicator to the target. Fee for inventory database is required to be calculated based on their data (as of January 2023). 	Taiheiyo Cement (P65), Kao, Sekisui Chemical, Toppan Printing, Fujitsu, Bridgestone, Ricoh
	ENCORE	<ul style="list-style-type: none"> The Natural Capital Finance Alliance led in development in collaboration with UNEP-WCMC and others. Tools help users to understand and visualize the impact of environmental changes on the economy. It visualizes how the business depends on and has an impact on nature, and how these potential dependencies and impacts can be business risks. Analysis results can be obtained by selecting the industry and production method. No license fees are required (as of January 2023). 	BNP Paribas (P66), Asset Management One (P68)
	GLOBIO	<ul style="list-style-type: none"> The GLOBIO model aims to inform and assist policymakers by quantifying the global impacts of human activities on biodiversity and ecosystems. It calculates the health of regional terrestrial biodiversity, expressed as mean species abundance (MSA), as a function of six types of impacts of human activities on the environment: land use, road construction, habitat fragmentation, hunting, atmospheric nitrogen deposition, and climate change. GLOBIO4 was developed in 2020 and has been widely used by the International Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), the Secretariat of the Convention on Biological Diversity (CBD), and others. 	Hermes (P69)

		<ul style="list-style-type: none"> No license fees are required (as of January 2023). 	
Biodiversity Impact Assessment (Local)	IBAT	<ul style="list-style-type: none"> Information on biodiversity, such as protected areas and endangered species, is integrated and displayed on a map. If a protected area is registered in the World Database on Protected Areas (WDPA) in the target country, it is possible to check the area to be conserved in the country as well as the Key Biodiversity Areas (KBA) on a map, and whether or not the area is affected by land use. While it contains information on the distribution of species on the KBA Target Species List or the IUCN Red List, there is no information on the importance of species in the region. It cannot identify the extent of distribution of important species for a region or site-specific biodiversity. Depending on the functions to be utilized, license fees are required (as of January 2023). 	Lotte (P69), Taiheiyō Cement (P65)
	WWF Biodiversity Risk Filter	<ul style="list-style-type: none"> A corporate and portfolio screening tool to help companies and investors prioritize the most important commodity and location to address biodiversity risks, increase business resilience, and contribute to a sustainable future. Scores of 33 items in 8 categories related to biodiversity can be checked at the sector level. No license fees are required (as of January 2023). 	-
Other (water, forests, etc.)	FAO/ AQUASTAT	<ul style="list-style-type: none"> It is a global database by the Food and Agriculture Organization of the United Nations (FAO), with more than 180 variables and indicators by country. Data can be reviewed in geography and population, water resources, water use, irrigation and drainage development, environment and health, etc., and can be used to identify hot spots. CSV data is available from the database distribution page. No license fees are required (as of January 2023). 	BNP Paribas (P66)
	Trase	<ul style="list-style-type: none"> Mapping the risks on forests by supply chain connecting consuming countries and traders with production sites. It enables visualization of countries, regions, and businesses with high rates of deforestation. The target commodities are 13 items that are strongly related to deforestation (soybeans, palm oil, beef, shrimp, cocoa, coffee, corn, wood pulp, palm kernel, chicken, cotton, sugar cane, and pork). No license fees are required (as of January 2023). 	Asset Management On (P68)
	WWF Water Risk Filter	<ul style="list-style-type: none"> Tools for screening and prioritization at the business and the portfolio. It allows businesses and investors to assess and prepare to address current and future water risks. It helps to identify future water risks on a map based on the Shared Socio-economic Pathway (SSP) scenario or the Representative Concentration Pathway (RCP) scenario. No license fees are required (as of January 2023). 	Kirin (P67)
	WRI Aqueduct - Water Risk Atlas	<ul style="list-style-type: none"> A risk mapping tool that can be used by businesses, investors, governments, and other users to understand where and how water-related risks and opportunities are occurring around the world. Water risk can be viewed on a map in (1) overall risk, (2) physical risk (quantitative), (3) physical risk (qualitative), and (4) regulatory and reputational risk. It enables users to search for a location by entering an address or importing a file. No license fees are required (as of January 2023). 	BNP Paribas (P66), Kirin (P67), Asset Management One (P68), Lotte (P69)

*A list of other data, indicators, and tools mentioned in TNFD, SBTs for Nature, etc. are listed in the Reference Materials section.

■ Financial data and indicators

Financial institutions need to analyze the impact, dependence, risks and opportunities on a sector basis for their investments. Below are examples of data and indicators used by financial institutions.

Data and indicators (and guidance on them)	Summary	Note
BFFI Model: Biodiversity Footprint for Financial Institutions (Case studies of forestation, coffee, and offshore wind power incorporating the EXIOBASE and ReCiPe models)	<ul style="list-style-type: none"> This report introduces a methodology for measuring the effects of biodiversity conservation and restoration through investment that may apply to the same-minded investment and financial institutions. 	<ul style="list-style-type: none"> It is an example of only investments closely related to biodiversity. This report summarizes the case studies and workshops that analyzed the contribution to the biodiversity of the investments using existing tools.
DNB Indebted to Nature (conversion of the three biodiversity-related risks to financial risk (physical, transition, and reputational risks))	<ul style="list-style-type: none"> It follows the model of environmental risks linked to financial risks analyzed by the Network for Greening the Financial System (NGFS) which was established by financial authorities in various countries. The risk of quantitative financial loss associated with biodiversity loss can be assessed for assets held by financial institutions. 	<ul style="list-style-type: none"> The analysis depends on existing available data on the financial condition and biodiversity of the financial institutions.
CISL Handbook for Nature-related Financial Risks (identification of the impact on the operating company for each physical risk, transition risk, liability risk, and financial risk as a result)	<ul style="list-style-type: none"> The report presents a categorization of natural environmental risks⁴¹, the impact of these risks on business, and the risks to financial institutions⁴². 	<ul style="list-style-type: none"> The actual usability of the system needs to be verified through case studies and other means.

⁴¹ Physical, transition, and liability risks

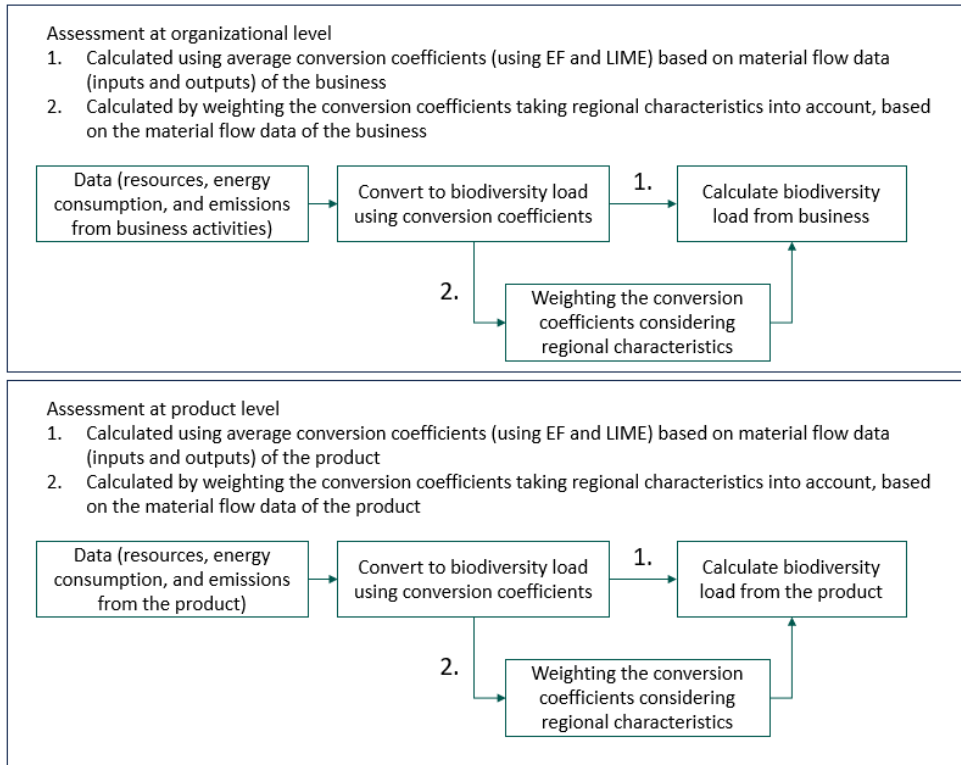
⁴² credit risk, market risk, liquidity risk, and business risk

■ Examples of Impact Assessment

Methods for assessing the impact (burden) of business activities on biodiversity

To assess the impact of business activities on biodiversity, you can use the conversion coefficients provided by various tools to calculate the burden on biodiversity based on the data of material flow of business activities.

In this case, there are two possible units of impact assessment: the "organizational level" and the "product/service level". Organizational-level impacts include the consumption of natural resources in business activities, land use associated with the establishment of business sites and factories, and disposal. On the other hand, individual products and services are related to the consumption of natural resources and disposal during their production and consumption processes (life cycle), which directly and indirectly affect biodiversity.



2. Identification of risks and opportunities for business activities

You can use data, indicators, and tools to calculate the impact and dependence on natural capital at key business locations, and then identify risks and opportunities for business activities and society.

There is no required method to follow for identifying risks and opportunities, and the TNFD Framework requires disclosure of such information as financial information. On the other hand, it is desirable to analyze a wide range of risks and opportunities (e.g., impacts on nature and society) as non-financial information and disclose them proactively in environmental reports.

Chapter 2: Setting Strategies and Goals

1. Setting Strategies and Goals for Biodiversity

After analyzing the impacts, dependencies, risks, and opportunities in business activities and biodiversity, the company proceeds with its actions as a business entity (e.g., establishing governance, and setting and implementing strategies and targets). After that, information disclosure to investors is made, focusing on finance.

Various frameworks are being developed for assessing impacts, setting targets, and disclosing information, such as the TNFD Framework, SBTs for Nature, CDP, and international standards for biodiversity. It would be desirable to work in line with these frameworks as much as possible. The following is an example of how to set strategies and targets based on these frameworks.

2. How to set biodiversity targets

When setting targets, it is desirable to set quantitative targets as much as possible, while utilizing the evaluation tools described in Chapter 1. On the other hand, depending on the nature of the business and its impact on biodiversity, setting quantitative targets may make it more difficult to take action. Below are some ideas for setting qualitative and quantitative targets based on international frameworks such as SBTs for Nature.

(1) Quantitative target setting

Setting quantitative targets has various advantages, such as clear targets and activities, monitoring of activities and detailed analysis, and transparency to stakeholders including investors. There is a growing demand for setting quantitative targets as much as possible.

On the other hand, there is no standardized method for quantification of biodiversity, the GHG Protocol for climate change. Therefore, at this moment, each company needs to set its indicators and targets based on the nature of its business and regional conditions. For example, the "impact of invasive species" is highly difficult to quantify, so it is necessary to consider targets while referring to indicators in the TNFD framework.

It is also important to note that businesses that depend on natural capital from a wide range of regions through their supply chains should set national or international targets, not just targets for a specific region for compliance reasons.

Examples of quantitative goal setting
Increase the percentage of certified products from x% to x% by 20xx.
By 2030, register 10% of its sites in the international database as OECMs
By 2030, reduce the negative impact on biodiversity in the entire supply chain by 30% from the current level by assessing the ecological footprint.
Triple the scale of products and services that contribute to biodiversity conservation by 2030
Promote technological development for the conservation of biodiversity and develop xx(number) new technologies
Increase the number of green products that contribute to biodiversity conservation to 30%
By 2030, provide training on biodiversity conservation for all employees

(2) Qualitative goal setting

It is often difficult to set and measure quantitative indicators for biodiversity because databases and tools are still under development, and the company may have to set qualitative targets to have comprehensive goals. In such cases, it is necessary to establish indicators for activities as much as possible, so that the progress and results of activities can be evaluated objectively. Examples may include the following.

Examples of qualitative goal setting
Promote dialogue with external stakeholders such as NGOs and NPOs regarding the assessment of business impact on biodiversity and their initiatives (frequency of dialogue or numbers of participants).
Create a map of the relationship between business activities and biodiversity
Develop a procurement policy that takes biodiversity conservation into consideration

3. Key points for goal setting

The following four points may be considered when setting specific targets. In addition to the following perspectives, it is also important to clearly define "by when," "by whom," and "what" for goal setting.

- ✓ **1: Setting targets for significant impacts on business and nature**
It is desirable to set the target considering the significance of the impact on business activities and biodiversity.
- ✓ **2: Set targets in line with global and national targets**
It is desirable to set targets in line with the quantitative targets set in the Kunming-Montreal Biodiversity Framework and the National Biodiversity Strategy. It can refer to the declarations and targets of private initiatives.
- ✓ **3: Gradual expansion of goal setting to entire business areas**
It is desirable to start by setting targets considering the impact on and contribution to biodiversity in business areas, while gradually expanding the target setting to the entire business activities and supply chain/value chain.
- ✓ **4: Site-specific goal setting**
It is necessary to consider the impacts according to the geographic characteristics of the supply chain. Ecosystem conditions vary from country and region, and they have their priorities. It is recommended to refer to "regional biodiversity strategies" and other regional plans established by local governments so that the company can take effective actions in accordance with the characteristics of the region.

4. A step-by-step approach to goal setting

While it would be ideal to set targets that are quantified, comprehensive, covering the entire supply chain/value chain, and beyond the international and domestic targets, given the developing methodology and the ongoing discussion of domestic and international frameworks, it is practical to gradually set and revise the target.

The following is a step-by-step approach for goal setting, developed with reference to the Maturity Model such as ISO 37153 and TNFD frameworks. However, it is not strict, and companies do not necessarily need to follow it.

Ultimately, it is expected that activities align with major national and international targets and guidelines, such as the SBTs for Nature guidance and the Kunming-Montreal Biodiversity Framework, which will be developed.

If a company has already established targets in its environmental management system, it is expected to aim for a higher level, such as "Level 4" (some activities have been initiated or implemented to be aligned with international frameworks like SBTs for Nature) or "Level 5" (activities have been continuously implemented in line with international frameworks). For companies that have not yet set biodiversity targets, they are expected to aim for "Level 2" (setting targets for a part of their business activities related to biodiversity) or "Level 3" (setting biodiversity targets based on their environmental management system, and continuously

implementing activities considering biodiversity), and then work toward the higher levels. Of course, it is appreciated to aim for "Level 4" or "Level 5" from the beginning.

Companies that are uncertain about the relationship between biodiversity and their business activities should analyze their dependence on and impact on biodiversity, risks and opportunities as the first step, rather than setting formal targets.

■ A step-by-step approach to goal setting

Level	A step-by-step approach to goal setting	The next step
1	The target for biodiversity has not been set.	<ul style="list-style-type: none"> Consider the inclusion of biodiversity targets in environmental activities. If the company has already set targets for climate change and resource recycling, consider adding biodiversity-related targets to them.
2	Targets are set for a part of business activities related to biodiversity.	<ul style="list-style-type: none"> If the company has already set targets, implement activities for biodiversity by using an environmental management system. ISO 14001 and Eco Action 21 are useful references.
3	Targets for biodiversity based on the environmental management system are set and continuously implementing activities considering biodiversity.	<ul style="list-style-type: none"> If the company use an environmental management system to set goals and carry out activities, consider using the SBTs for Nature framework so that the company can meet international requirements. See Chapter 2, Section 6.
4	Some activities have been initiated or implemented to be aligned with international frameworks like SBTs for Nature	<ul style="list-style-type: none"> If the company use the SBTs for Nature or other frameworks to set goals, continue and consider expanding the scope of activities.
5	Activities have been continuously implemented in line with future international frameworks like SBTs for Nature	<ul style="list-style-type: none"> If the company already implement activities in response to international frameworks, continue and lead the industry.

■ Level of ambition of the target

Apart from the goal-setting process described above, there is a "level of ambition" that indicates the difficulty of achieving a goal. In setting goals, the level of ambition for the company is also an important issue. It is one way to efficiently improve the state of biodiversity by setting more ambitious targets for areas that have a large impact on biodiversity or have a high potential for reducing negative impacts.

For example, in the case of a quantitative goal of "reduce burden by XX%" a reduction of 80% would be more difficult than a reduction of 50%. However, when applied to individual companies, an 80% reduction for Company A may not be the same level of difficulty as an 80% reduction for Company B.

It is also important to constantly analyze whether the achievement of goals is affecting improvements in the state of biodiversity.

5. Relationship between strategy and goal setting

Setting quantitative targets has various advantages, such as clear targets and activities, monitoring of activities and detailed analysis, and transparency to stakeholders including investors. There is a growing demand for setting quantitative targets as much as possible. On the other hand, it is considered difficult to set biodiversity targets based on a unified quantification method like GHG emissions in the field of climate change, because the conditions and impacts of biodiversity vary from region to region. It is also advisable to keep in mind that the data and indicators are expected to develop in the future and should be updated accordingly. Therefore, while setting quantitative targets as much as possible, it is also important to have a story that can explain "why it is important for our business activities to work on biodiversity" not only within the organization but also to stakeholders such as investors and consumers.

(1) Creating a coherent strategy and story

It is necessary to explain the importance of activities for biodiversity to the company and society from the perspectives of the risks and opportunities for the company. In addition, by describing the activities(responses) with the qualitative or quantitative impact on those risks and opportunities, the activities would be more coherent. Furthermore, by showing the relationship between the activities in the pipeline and the ongoing activities, it becomes a coherent story based on past achievements.

It is also important to create stories and implement strategies in relation to the PDCA cycle in the environmental management systems that many businesses have already had, as well as to the international frameworks for natural capital, target setting, and information disclosure. It is also important to receive feedback from investors, consumers, other stakeholders, and the market, on the disclosures to improve it.

(2) Set goals to support the strategy

Based on the strategies and stories, in setting actual targets, it is advisable to refer to the targets set in the Kunming-Montreal Biodiversity Framework and the National Biodiversity Strategy.

■ Examples of business-related targets in the Kunming-Montreal Biodiversity Framework

Target	Summary
2	At least 30% of degraded ecological areas are under effective restoration
3	At least 30% of land, water and sea to be protected by protected systems such as OECMs (30 by 30 target)
6	Reduce the introduction of invasive alien species by at least 50%.
7	Reducing excess nutrients lost to the environment by at least half, reducing the overall risk from pesticides and highly hazardous chemicals by at least half, and preventing, reducing, and working towards eliminating plastic pollution
13	Take actions to ensure the fair and equitable sharing of benefits for genetic resources from digital sequence information (DSI) and facilitate a significant increase of the benefits shared in accordance with the Access and Benefit-Sharing (ABS).
14	Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting
15	Take legal, administrative or policy measures to encourage and enable business, and in particular to ensure that large and transnational companies and financial institutions
16	Reduce the global footprint of consumption equitably, including through halving global food waste, significantly reducing overconsumption and substantially reducing waste generation

■ Examples of Goals in National Strategies

The National Biodiversity Strategy sets out the following target states and target actions for businesses. Although the following are national targets, the role of business is important in achieving them. Therefore, businesses are expected to set their targets and action plans while taking into account the goals of the National Biodiversity Strategy.

In setting these targets, the scope of impact, dependence, risk, and opportunity analysis (at the company, including group companies, or the entire supply chain) and materiality are taken into consideration.

Targets in Basic Strategy 3 of the National Biodiversity Strategy

Since it is essential for the nature-positive economy to transform society, target states for integrating biodiversity and natural capital into business activities would be set from the perspectives of the financial sector, overall business activities, and the agriculture, forestry, and fisheries sectors. In addition, to achieve these target states, it includes target actions related to actions to encourage the evaluation, analysis, and disclosure of the impact of business activities on biodiversity, actions to utilize the benefits from the sustainable use of biological resources for conservation, and actions to support businesses that contribute to the conservation of biodiversity.

From a financial perspective, to promote the realization of nature positive economy through investments, it is necessary to provide technical advice to help companies quantitatively assess and analyze the impact of their activities on biodiversity, set targets, and disclose information, as well as to create the environment for investments by promoting information disclosure by companies, raising awareness on financial institutions and investors, and promoting dialogue between business and investor, thereby expanding the scale of ESG investment and financing and promoting allocation for the biodiversity. It is also necessary to promote technologies and services that make a positive contribution to biodiversity in all business activities. At the same time, it is necessary to promote the sustainable use of biological resources and give back to biodiversity conservation through access to genetic resources and the fair and equitable sharing of benefits from their use. Through these efforts, it is necessary to increase positive contributions to biodiversity and reduce negative impacts in all business activities. From the perspective of agriculture, forestry, and fisheries, it is necessary to provide support to reduce negative impacts and increase positive contributions to biodiversity at each stage from production to consumption to expand sustainable agriculture, forestry, and fisheries in the country.

[Target States]

- ✓ ESG investments that contribute to biodiversity conservation are promoted, and resources are appropriately allocated to actions that contribute to biodiversity conservation.
- ✓ Reducing the negative impacts of business activities on biodiversity, increasing positive impacts, reducing biodiversity-related risks for companies and financial institutions, and promoting actions to ensure sustainable production is progressed.
- ✓ Sustainable agriculture, forestry, and fisheries are expanding.

[Target Actions]

- ✓ Promote quantitative assessment of impacts of business on biodiversity, analysis of the current status, science-based target setting, and information disclosure, as well as create the environment to promote investment by financial institutions and investors, and promote activities to conserve and restore biodiversity from the perspective of investment and financing.
- ✓ Promote support for technologies and services that contribute to biodiversity conservation.
- ✓ Conduct ABS associated with the use of genetic resources.
- ✓ Expand sustainable, environmentally friendly agriculture, forestry, and fisheries, including a 10% reduction in chemical pesticide use (risk equivalent).

6. Goal setting based on SBTs for Nature

■ SBTs for Nature⁴³ (Science Based Targets for Nature)

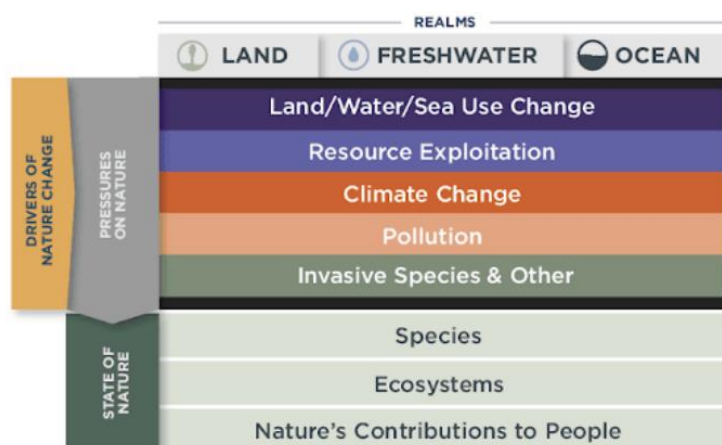
As discussed in Part 2, SBTs for Nature are measurable, actionable, time-bound targets based on the latest available science that enables companies to act within the limits of the Earth and in line with sustainability goals with respect to the interconnection of water, biodiversity, land, and oceans in the value chain. It defines the direct and indirect factors contributing to the degradation of nature, as well as the state of nature itself, and proposes to set targets based on five categories of direct factors.

As actions to be taken by business, it presents the importance of understanding the science of loss of nature and the impact of business activities on biodiversity, and then setting goals to transform their business, thereby reducing the negative impact on the natural environment and biodiversity, and promoting net positive contributions to biodiversity (restoration and regeneration) to ensure the sustainable business.

Initial guidance to set targets and indicators was published in September 2020.

■ High-level target categorization for SBTs for Nature

The Science Based Targets Network, an international network of more than 45 organizations, is developing a methodology for setting SBTs for Nature, and while the SBTs for Nature guide is still under development, a guide for setting water-related targets that consider watershed conditions, SBTs for Water, "Setting Site Water Targets Informed By Catchment Context: A Guide For Companies" has been published.



⁴³ Sources: [SCIENCE-BASED GOAL SETTING ON NATURE INITIAL GUIDANCE FOR COMPANIES EXECUTIVE SUMMARY \(JAPANESE ONLY\) \(2020, SBTs FOR NATURE\)](#)

■ SBTs for Nature: Steps and points for goal setting

Step	Action	Deliverables
Step 1: Assess	<ul style="list-style-type: none"> Gather and/or supplement existing data to estimate your value chain-wide impacts and dependencies on nature, resulting in a list of potential 'issue areas' and value chain locations for target setting. 	<ul style="list-style-type: none"> Initial assessment of the environmental footprint and a list of potential issue areas and locations
Step 2: Interpret and prioritize	<ul style="list-style-type: none"> Interpret the outputs of Step 1, prioritizing key issues and locations to take action. You will consider actions across different 'spheres of influence' from your operations to the landscapes surrounding your value chain(s). 	<ul style="list-style-type: none"> Candidate sites for target setting, and the initial estimation of the required efforts
Step 3: Measure, set and disclose	<ul style="list-style-type: none"> Collect baseline data for prioritized targets and locations. Using the data from this and previous steps, you can set targets aligned with Earth's limits and societal sustainability goals and then disclose these publicly. 	<ul style="list-style-type: none"> Detailed baseline and targets, action program with timelines and deadlines for achieving the targets
Step 4: Act	<ul style="list-style-type: none"> Once targets are set, you utilize SBTN's Action Framework (AR3T: Avoid, Reduce, Regenerate, Restore, and Transform) to make a plan and begin to address your contributions toward the unsustainable use and loss of nature key impacts. 	<ul style="list-style-type: none"> Basic plan for actions in priority locations
Step 5: Track	<ul style="list-style-type: none"> Monitor progress toward your targets, report publicly on this progress, and adapt your approach as necessary. 	<ul style="list-style-type: none"> Publication of activities Internal knowledge and lessons learnt.

SBTs for Nature AR³T (action framework)

SBTs for Nature recommends AR³T as a framework for actions that businesses should take to achieve goals for the Earth and nature. As shown in the figure on the right, it consists of four steps: Avoid, Reduce, Restore & Regenerate, and Transform.



Chapter 3: Information Disclosure

1. Basic concept of information disclosure

The analysis of impacts, dependencies, opportunities, and risks in business activities, as described, as well as the strategies and goals based on that analysis would be published, and the company communicate with stakeholders to deepen understanding of the business and lead to opportunities for fundraising and market reputations. It is also expected to raise awareness of executives and employees on the environment, as well as obtain insights from external stakeholders that contribute to innovation and corporate value in the business. On the other hand, failure to disclose that information may be regarded by stakeholders as a failure to fulfil corporate accountability and social responsibility, leading to risks in fundraising and market reputation, as well as being a transition risk in the global movement toward disclosure.

Currently, the TNFD framework is progressing for information disclosure by businesses regarding biodiversity, and it is expected to follow the TNFD framework. In Europe, regulatory information disclosure systems such as the Sustainable Finance Disclosure Regulation(SFDR) have been established. When the company aims to expand its business internationally, it is necessary to pay attention to the information disclosure systems in other countries. On the other hand, it should be noted that the TNFD Framework is intended to disclose financial information, and non-financial information that is not directly related to the business such as impacts on nature, may not necessarily be subject to disclosure. Therefore, it may be appropriate to disclose a wider range of information than that of the TNFD Framework to stakeholders such as local communities.

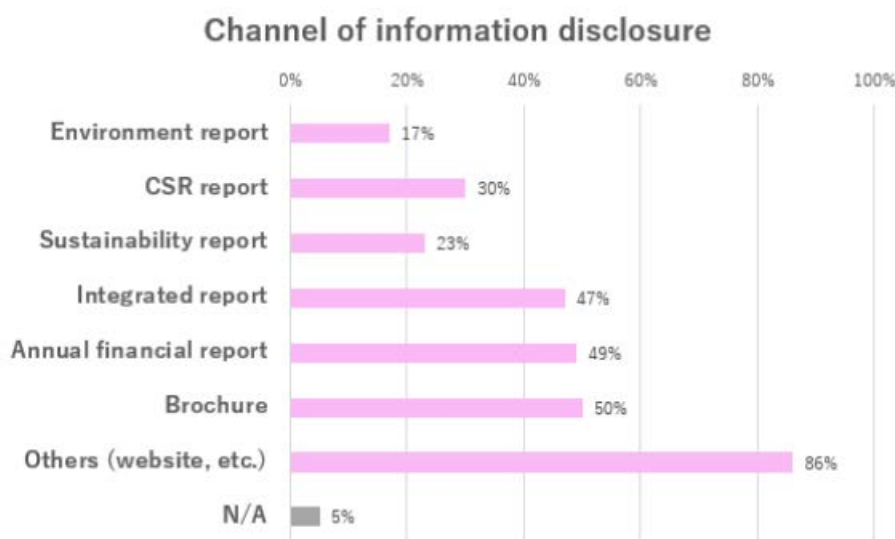
In addition to information disclosure, compliance with the Due Diligence Directive and the Taxonomy is also becoming a requirement, particularly in Europe. By responding to these regulations in an integrated manner through analysis of impact, dependence, opportunity, and risk, it would be easier to respond to international market trends.

2. Channel of information disclosure

(1) Current status of media used for information disclosure

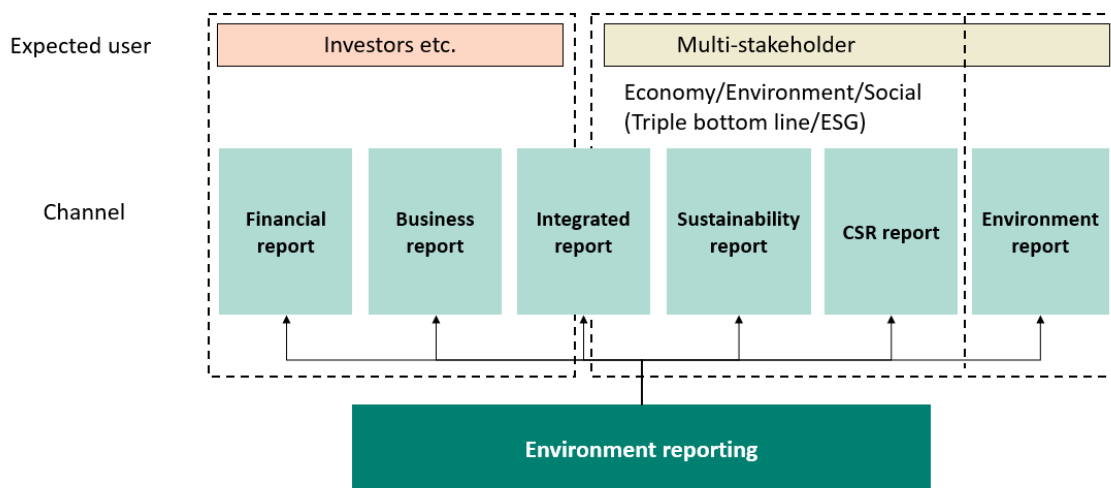
According to a survey by the Keidanren Council for Nature Conservation, the majority of the media currently used for biodiversity-related information disclosure are websites followed by booklets and brochures, annual financial reports, and integrated reports, and it is not limited to conventional environmental and CSR reports.

Websites, booklets, and brochures are effective for disseminating not only financial information but also non-financial information to a wide range of stakeholders. It is appropriate to use different media depending on the target population.



■ Disclosure of media for environmental reports by expected appeal destination⁴⁴

⁴⁴ Source: COMMENTARY FOR ENVIRONMENTAL REPORTING - ENVIRONMENTAL REPORTING GUIDELINES 2018 COMPLIANCE (2019, Ministry of the Environment).



3. Framework of information disclosure

There are some frameworks of information disclosure for your reference. Disclosure based on the size of the business and the interest of the stakeholders is appropriate.

(1) Information disclosure based on environmental reporting guidelines

The Environmental Reporting Guidelines by the Ministry of the Environment of Japan cover not only biodiversity and natural capital but also environmental reporting as a whole. For example, if the company have been reporting on climate change, it is expected to add information on biodiversity and natural capital to the report.

■ Overview of basic descriptions in the Environmental Report⁴⁵

Overview of basic descriptions in the Environmental Report																																				
Item	Summary																																			
Basic Information																																				
Basic Requirements	<ul style="list-style-type: none">✓ Reporting Organizations: Scope of organizations to be included in environmental reporting✓ Reporting period: Period covered by the report (it is important to be done regularly, at least once a year)✓ Standards, guidelines: Name of the standard or guideline applied✓ Structure of the environmental report: If the report is to be published in multiple media or formats, explain the structure using a visual method such as a diagram so that the interrelationships among them can be clear.																																			
Changes in Performance Indicators	<ul style="list-style-type: none">✓ From the performance indicators that show the results of actions for the environment, select two to three important indicators, and describe changes over the past three to five years while also listing the main business indicators. <p><Example of change in performance indicator></p> <table><tr><th></th><th>Unit</th><th>FY20X1</th><th>FY20X2</th><th>FY20X3</th><th>FY20X4</th><th>FY20X5</th></tr><tr><td>Net sales</td><td>Billion JPY</td><td>2,300</td><td>2,550</td><td>2,870</td><td>2,600</td><td>3,120</td></tr><tr><td>ROA</td><td>%</td><td>5.6</td><td>6.3</td><td>7.2</td><td>6.8</td><td>8.0</td></tr><tr><td>Primary unit of GHG emission</td><td>t CO₂e / Billion JPY</td><td>7.6</td><td>7.4</td><td>7.0</td><td>7.1</td><td>6.5</td></tr><tr><td>Disposal of waste</td><td>t</td><td>5,000</td><td>4,880</td><td>4,200</td><td>3,900</td><td>3,850</td></tr></table>		Unit	FY20X1	FY20X2	FY20X3	FY20X4	FY20X5	Net sales	Billion JPY	2,300	2,550	2,870	2,600	3,120	ROA	%	5.6	6.3	7.2	6.8	8.0	Primary unit of GHG emission	t CO ₂ e / Billion JPY	7.6	7.4	7.0	7.1	6.5	Disposal of waste	t	5,000	4,880	4,200	3,900	3,850
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Disposal of waste	t	5,000	4,880	4,200	3,900	3,850																														
Item																																				
Commitment	<ul style="list-style-type: none">✓ Commitment of executives to address key environmental issues																																			
Governance	<ul style="list-style-type: none">✓ Governance structure of the company✓ Representative for managing important environmental issues.✓ Role of the board members and the executives in the management of significant environmental issues																																			
Stakeholder Engagement	<ul style="list-style-type: none">✓ Policy for stakeholder relations✓ Summary of stakeholder engagement																																			
Risk management	<ul style="list-style-type: none">✓ Methods for risk identification, assessment and response✓ Interrelation of the above methods with overall risk management																																			
Business model	<ul style="list-style-type: none">✓ Business model																																			
Value chain management	<ul style="list-style-type: none">✓ Value chain overview (value chain map)✓ Green procurement policy, targets and achievements																																			

⁴⁵ Source: [ENVIRONMENTAL REPORTING GUIDELINES 2018](#) (2018, Ministry of the Environment).

	✓ Status of environmentally friendly products and services
Long-term vision	✓ Long-term vision and period ✓ Reasons for choosing the period
Strategy	✓ Business strategies to achieve a sustainable society
Procedure to identify critical environmental issues	✓ Procedures to be followed when the company identifies a significant environmental issue (implementation procedures) ✓ List of significant environmental issues identified (results) ✓ Reasons for identified environmental issues to be important (criteria) ✓ Boundary of important environmental issues (scope of business activities)
Key environmental issues for businesses	✓ Policy and action plan ✓ Targets and results of actions based on performance indicators ✓ Calculation method of performance indicators ✓ Scope of performance indicators ✓ If the financial impact of risks and opportunities is significant, the quantity of those impacts and the method used to calculate them ✓ Assurance report if an independent third-party assurance has been provided

(2) Information disclosure based on CDP

CDP has added six new biodiversity-related questions to the 2022 Climate Change Questionnaire. These questions are based on the IUCN Corporate Reporting on Biodiversity Guidelines, which intend to collect data on the progress/degree of implementation of biodiversity strategies in the companies, and indicate key areas where businesses should report information.

■ Additional biodiversity questions added to the CDP⁴⁶ (2023 version, tentative translation)

question number	Questions related to biodiversity
C15.1	Is there board-level oversight and/or executive management-level responsibility for biodiversity-related matters within your organization?
C15.2	Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?
C15.3	Does your organization assess the impact of its value chain on biodiversity?
C15.4	What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?
C15.5	Does your organization use biodiversity indicators to monitor performance across its activities?
C15.6	Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

⁴⁶ Source: [CDP WEBSITE](#)

4. A step-by-step approach to information disclosure

As described in Chapters 1 and 2, international frameworks such as the TNFD are still under development, and the indicators and targets are expected to vary depending on the situation of the business and other factors. Therefore, it is desirable to take a step-by-step approach to information disclosure as is the case of target setting.

The following is a step-by-step approach to information disclosure, with reference to the Maturity Model of ISO 37153 and other standards, to provide an outline of each step. However, it is not a required approach, and it does not necessarily mean that the steps must be taken in this order.

Many businesses implement information disclosure in their environmental management systems. For those that have already implemented biodiversity-related information disclosure in their environmental management systems, it is expected that they would aim for a higher level of disclosure, such as "Level 4" (a part of activities have been implemented to follow international frameworks (such as TNFD) that will become necessary in the future) or "Level 5" (activities have been continuously implemented to follow international frameworks (such as TNFD) that will become necessary in the future) as is the case of target setting. Companies that have not yet disclosed biodiversity-related information are expected to aim for "Level 2" (disclosed information on some of their biodiversity-related activities) or "Level 3" (disclosed biodiversity-related information based on their environmental management system, and are continuously considering biodiversity), and then move on to the next level.

The highest level (Level 5), implements activities in line with national and international trends and guidelines, such as the Kunming-Montreal Biodiversity Framework adopted at COP15, the TNFD Framework, IIRC, and GRI Standards. On the other hand, for those businesses that have not disclosed information, it is expected that they would disclose information with items that are easy to disclose in the environment sector (e.g., decarbonization).

■ Step-by-step approach to disclosure

level	Description	To the Next Level
1	No disclosure on activities related to biodiversity	<ul style="list-style-type: none"> Consider the inclusion of information on biodiversity in environmental reports and other documents. If the company has already disclosed information on climate change and resource recycling, consider adding a biodiversity section to them.
2	Disclosure of information on some activities related to biodiversity	<ul style="list-style-type: none"> If the company has already disclosed information, please continue to disclose information on biodiversity by using an environmental management system or other means. ISO 14001 and Eco Action 21 are useful references.
3	Disclosed biodiversity-related information based on their environmental management system, and continuously took biodiversity into consideration	<ul style="list-style-type: none"> If the company use an environmental management system to disclose information, consider using the TNFD framework, to follow international requirements. Refer to Chapter 3, Section 5.
4	A part of the activities has been implemented to follow international frameworks (TNFD)	<ul style="list-style-type: none"> If the company uses the TNFD framework or other information disclosure tools, continue and consider expanding the scope of information disclosed.
5	Ongoing implementation of activities in line with international frameworks (e.g., TNFD)	<ul style="list-style-type: none"> If the company have already implemented disclosure in line with international frameworks, continue and lead the industry and supply chain.

5. Information disclosure in line with the TNFD

The items covered by the TNFD recommended disclosure are Governance (the organization's governance of nature-related dependencies, risks and opportunities), Strategy (key risks and opportunities related to the business, strategy, and finance), Risk and impact management (identification and assessment of nature-related risks and management), and Metrics and targets (targets and indicators to assess and manage nature-related risks and opportunities). These are included in the basic processes discussed in Part 2.

■ TNFD Recommended Disclosure⁴⁷

TNFD recommended disclosures			
Governance	Strategy	Risk & impact management	Metrics & targets
Disclose the organisation's governance of nature-related dependencies, impacts, risks and opportunities.	Disclose the effects of nature-related dependencies, impacts, risks and opportunities on the organisation's business model, strategy and financial planning where such information is material.	Describe the processes used by the organisation to identify, assess, prioritise and monitor nature-related dependencies, impacts, risk and opportunities.	Disclose the metrics and targets used to assess and manage material nature-related dependencies, impacts, risks and opportunities.
Recommended disclosures	Recommended disclosures	Recommended disclosures	Recommended disclosures
<p>A. Describe the board's oversight of nature-related dependencies, impacts, risks and opportunities.</p> <p>B. Describe management's role in assessing and managing nature-related dependencies, impacts, risks and opportunities.</p> <p>C. Describe the organisation's human rights policies and engagement activities, and oversight by the board and management, with respect to Indigenous Peoples, Local Communities, affected and other stakeholders, in the organisation's assessment of, and response to, nature-related dependencies, impacts, risks and opportunities.</p>	<p>A. Describe the nature-related dependencies, impacts, risks and opportunities the organisation has identified over the short, medium and long term.</p> <p>B. Describe the effect nature-related dependencies, impacts, risks and opportunities have had on the organisation's business model, value chain, strategy and financial planning, as well as any transition plans or analysis in place.</p> <p>C. Describe the resilience of the organisation's strategy to nature-related risks and opportunities, taking into consideration different scenarios.</p> <p>D. Disclose the locations of assets and/or activities in the organisation's direct operations and, where possible, upstream and downstream value chain(s) that meet the criteria for priority locations.</p>	<p>A(i) Describe the organisation's processes for identifying, assessing and prioritising nature-related dependencies, impacts, risks and opportunities in its direct operations.</p> <p>A(ii) Describe the organisation's processes for identifying, assessing and prioritising nature-related dependencies, impacts, risks and opportunities in its upstream and downstream value chain(s).</p> <p>B. Describe the organisation's processes for managing nature-related dependencies, impacts, risks and opportunities.</p> <p>C. Describe how processes for identifying, assessing, prioritising and monitoring nature-related risks are integrated into and inform the organisation's overall risk management processes.</p>	<p>A. Disclose the metrics used by the organisation to assess and manage material nature-related risks and opportunities in line with its strategy and risk management process.</p> <p>B. Disclose the metrics used by the organisation to assess and manage dependencies and impacts on nature.</p> <p>C. Describe the targets and goals used by the organisation to manage nature-related dependencies, impacts, risks and opportunities and its performance against these.</p>

Even CSR activities (nature conservation in local communities, contributions to the 30 by 30 targets, etc.) can help to understand local communities and raise awareness of employees by disclosing information with a story of the relationship between CSR and the risks and opportunities on the business.

TNFD conduct pilot tests and develops and publishes guidance to support information disclosure. In addition, TNFD has launched an initiative called the "Nature-related Data Catalyst" to promote the assessment of the current status and development of nature-related data. (as of February 2023)

⁴⁷ Source: The [TNFD NATURE-RELATED RISK & OPPORTUNITY MANAGEMENT AND DISCLOSURE FRAMEWORK BETA v0.3, 2022, TNFD](#).

Collaboration with society and local communities in TNFD

The TNFD presents that the impact and dependence of business activities on nature varies from place to place and it is closely related to society and local communities. Local communities and civil society may have specific perspectives and experiences on how the business activities interact with nature, and they may also have specific knowledge and expertise to measure and assess the local ecosystems. Considering these perspectives in impact assessments can strengthen the commitment of executives the focus on nature-related risks and opportunities in the investment portfolio.

The TNFD framework lists the following risks and opportunities

■ Risks and Opportunities in the TNFD Framework⁴⁸

Main Category	Sub-category	Example
Risk	Physical risk	Acute risks (natural disasters), chronic risks (loss of pollination services)
	Transition risk	Policy and legal risk (compliance), market risk (changes in supply, demand, and financing due to changes in consumer and investor trends), technical risk, and reputational risk (brand value from society, customers, and communities)
	Systemic risk	Ecosystem collapse risk, aggregated risk, and spillover risk throughout the financial system
Opportunity	Improved resource efficiency	(Opportunities from increased resource efficiency of natural resources such as water and energy)
	Market	(Opportunities to develop new markets by introducing products, services, and solutions with low environmental impact)
	Fundraising	(Opportunities through easier access to financing through ESG)
	Resilience	(Opportunities through resilient supply chain resiliency)
	Reputation	(Business opportunities through reputation from stakeholders)

■ LEAP Approach⁴⁹

The LEAP approach, also introduced in Part 2, is a voluntary guidance to support internal analysis and discussion for disclosure, in which the company present an integrated assessment process for nature-related risks and opportunities within their business. This process consists of four steps. After scoping, the impact and dependence of the business on nature, and the risks and opportunities to the business are assessed.

In the LEAP approach, the following questions are asked with respect to setting the scope before the analysis. Then the steps in the LEAP approach are presented.

- ✓ What are the organization's activities where there are likely to be material nature-related dependencies, impacts, risks and opportunities?
- ✓ Given the current level of capacity, skills and data within the organization and given organizational goals, what are the resource (financial, human and data) considerations and time allocations required and agreed upon for undertaking an assessment?

(①) (Locate: locate the interfaces with nature)

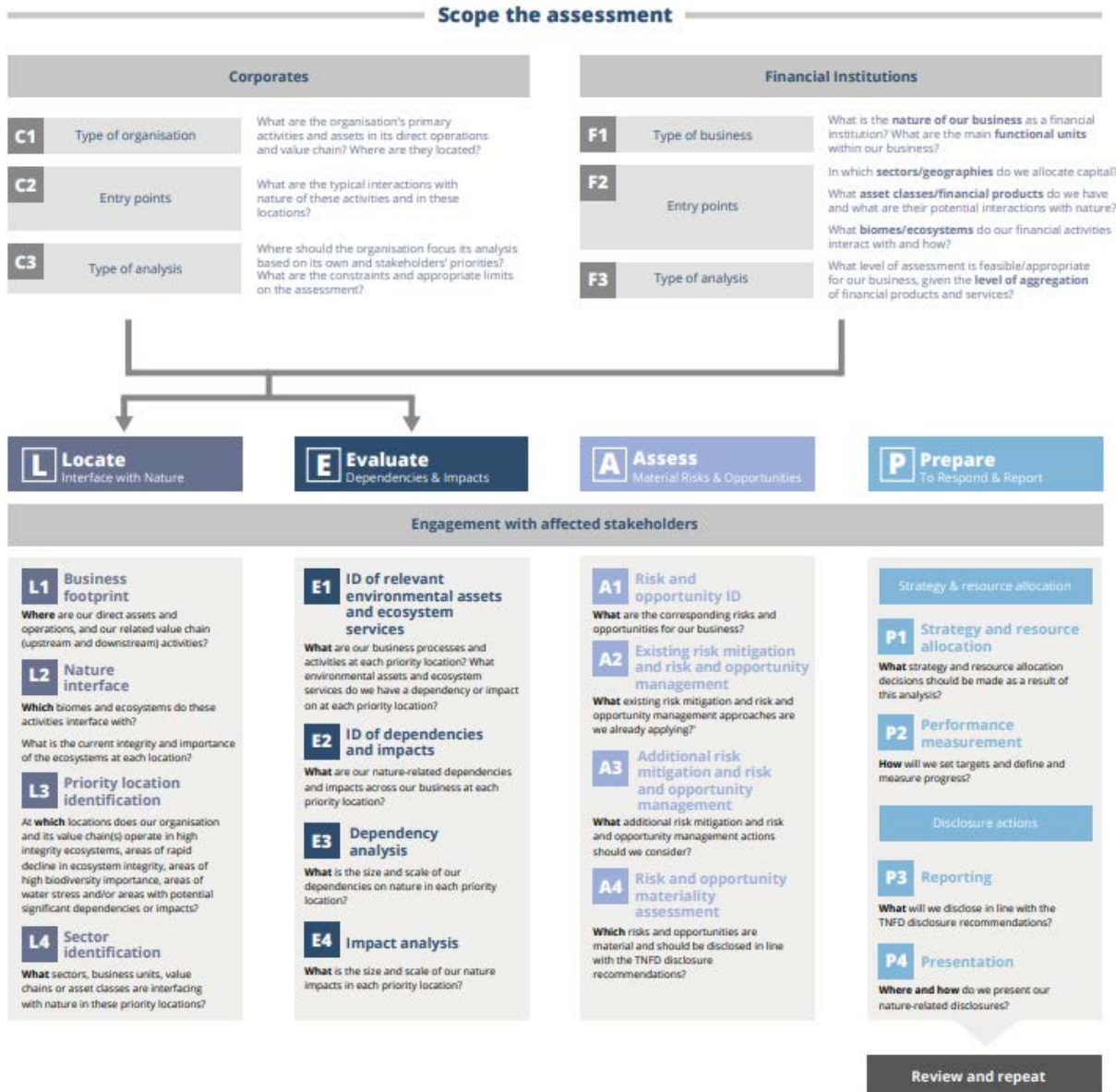
Since dependence and impacts on nature vary from place to place, it is essential to understand where the company or supply chain conducts business activities (L1) and then to understand the natural conditions (ecosystem/biome) specific to that location (L2). Therefore, information about business activities and the natural environment of the area is essential. The company then identifies what business activities have interface with priority areas for biodiversity or water stress (L3 and L4).

⁴⁸ Source: The [TNFD NATURE-RELATED RISK & OPPORTUNITY MANAGEMENT AND DISCLOSURE FRAMEWORK BETA V0.1, 2022, TNFD.](#)

⁴⁹ Source: The [TNFD NATURE-RELATED RISK & OPPORTUNITY MANAGEMENT AND DISCLOSURE FRAMEWORK BETA V0.3, 2022, TNFD.](#)

(②)(Evaluate: evaluate dependencies and impacts on nature)

Identify the natural capital and ecosystem services(E1) based on the business activities and priority areas identified in ① which they depend or have impact on, identify their relationship (dependence or impact) (E2), and analyze their scale and degree (positive or negative) (E3 and E4).



TNFD has also developed an initial list of non-financial priority sectors. While all non-financial sectors are affected by nature-related risks and opportunities, TNFD has identified sectors that are more financially sensitive due to their dependence and impact on nature than others. Additional guidance will be published for these sectors in the future.

8 non-financial priority sectors

- ✓ Food & beverage
- ✓ Renewable resources and alternative energy
- ✓ Infrastructure
- ✓ Mining, mineral processing
- ✓ Health care
- ✓ Resource transformation
- ✓ Consumer goods
- ✓ Transportation

(③)(Assess: assess nature-related risks and opportunities to your organization)

Based on the dependencies and impacts described in (2) above, risks (physical risks and transition risks) in the organization are identified (A1). Then, the mitigation and management measures already in place for those risks are reviewed (A2), and if those measures are not sufficient for risk mitigation, additional measures are considered to be taken (A3). At the same time, the company assess the opportunities for their business(A5).

The company should also analyze the impact of nature-related risks and opportunities on its financial performance (revenues and costs) and financial condition (assets and dept).

(④)(Prepare: prepare to respond to nature-related risks and opportunities, including reporting)

It is divided into two phases: "Strategy and resource allocation" and "Disclosure actions". Based on the results of the risk/opportunity analysis described in ③, the strategy and resource allocation are determined (P1). In addition, determine how goals would be set and how progress would be defined and measured (P2).

For the disclosure action, determine what would be disclosed following the TNFD disclosure proposal (P3). then decide where and how the company would present their nature-related disclosure(P4).

Strategy development based on scenario analysis

As one of the disclosure recommendations, the TNFD requests "an explanation of the resilience of the strategy, taking a variety of scenarios into consideration". One approach is "scenario analysis," which allows for flexible business decisions by considering future uncertainties and constructing business strategies that can respond to a range of future scenarios. Many companies have already conducted scenario analysis on climate change in line with the disclosure recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

The TNFD v0.4 beta to be released in 2023 will include draft scenario guidance on biodiversity and natural capital.

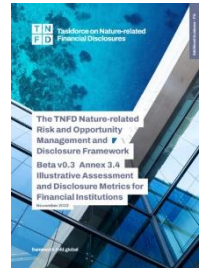
■ LEAP-FI focused on the needs of financial institutions.

TNFD recognizes that the scope and type of analysis vary depending on the type of financial institution, the type of asset or financial instrument, the sector, the region, and the investment theme. Therefore, TNFD has developed a customized LEAP-FI specifically for financial institutions as investors or capital managers.

Specifically, in addition to the four phases of the LEAP approach (Locate, Evaluate, Assess, and Prepare), the LEAP-FI outlines a series of scoping questions to help financial institutions prioritize and focus on the assessments of investment portfolios. The LEAP-FI is designed to help financial institutions move through the "Locate" and "Assess" phases of LEAP, depending on the business activities, asset classes/financial instruments. While it is generally the same as for the non-financial sector, additional guidance has been issued for the financial sector due to certain points to be noted.

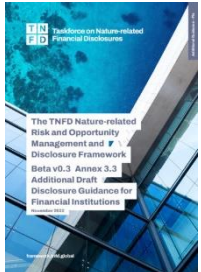
Annex 3.4 Illustrative Assessment and Disclosure Metrics for Financial Institutions (image)⁵⁰

- ✓ Four types of indicators exist dependency metrics, impact metrics, risk metrics, and opportunity metrics.
- ✓ Each is an indicator for their exposure (the amount of exposure to sectors with significant biodiversity impact, etc.)
- ✓ Numerous relevant research papers are referred



Annex 3.3 Additional draft disclosure guidance for financial institutions⁵¹

- ✓ Guidance for additional disclosures for the financial sector.
- ✓ The financial sector includes banks, insurance, asset managers and asset owners, and development banks.
- ✓ It assumes disclosure for the entity as a whole, not for financial instruments.
- ✓ Many parts are the same as with the TNFD framework, but there are additional points to consider
 - No specific supplemental guidance for financial institutions
 - The strategy is as follows
 - ✧ Strategy B "Describe the impact of nature-related risks and opportunities on the organization's businesses, strategy and financial planning."
 - Financial institutions should describe qualitatively their consideration of nature-related risks and opportunities as well as provide quantitative information on those risks and opportunities.
 - In all cases, this should factor in a view of nature-related dependencies and impacts, including their location where possible. It is recognized that for both qualitative and quantitative information, financial institutions have a reliance on disclosures from non-financial corporates, so there may be limitations to what financial institutions can disclose.
 - ✧ Strategy C: "Describe the resilience of the organization's strategy, taking into consideration different scenarios".
 - Description of the scenarios used, including the critical input parameters, assumptions and considerations, and analytical choices.
 - How such scenarios are integrated with (or distinct from) climate related or other internally used scenarios.
 - Time frames used for the nature-related scenarios, including short-, medium-, and long-term milestones.
 - How the outputs from the scenario analysis are used in risk management processes, given the financial institution's activities and relevant timeframes (e.g. the maturity of loans for banks differs from the holding periods of asset owners, which differs from the liability duration for insurers / re-insurers).
 - ✧ Strategy D "Describe the organization's interactions with low integrity ecosystems, high importance ecosystems or areas of water stress."
 - Financial institutions may disclose metric(s) that represent the volume (e.g. absolute amount or percentage of lending, assets managed or owned, or insurance premiums underwritten) to companies with potential nature-related risks emerging from dependencies and impacts on nature due to their operations. Over time as the disclosure approach becomes more mature this disclosure may also include a sector and/or geographic component (e.g. country, biome and/or ecosystem).
 - Risk assessment, indicators and targets are also described for supplementary guides in financial institutions and will be added in the future.



⁵⁰ Source: [THE TNFD NATURE-RELATED RISK AND OPPORTUNITY MANAGEMENT AND DISCLOSURE FRAMEWORK BETA V0.3 ANNEX 3.4 ILLUSTRATIVE ASSESSMENT AND DISCLOSURE METRICS FOR FINANCIAL INSTITUTIONS \(2022, TNFD\)](#)

⁵¹ Source: [THE TNFD NATURE-RELATED RISK AND OPPORTUNITY MANAGEMENT AND DISCLOSURE FRAMEWORK BETA V0.3 ANNEX 3.3 ADDITIONAL DRAFT DISCLOSURE GUIDANCE FOR FINANCIAL INSTITUTIONS \(2022, TNFD\)](#)

6. Others

(1) Due diligence

OECD Due Diligence Guidance for Responsible Business Conduct defines due diligence as "the process enterprises should carry out to identify, prevent, mitigate and account for how they address these actual and potential adverse impacts in their operations, their supply chain and other business relationships"

■ EU Corporate sustainability due diligence (published February 2022)

European Commission adopted a proposal for a Directive on corporate sustainability due diligence in February 2022. The aim of this Directive is to foster sustainable and responsible corporate behavior and to anchor human rights and environmental considerations in companies' operations and corporate governance. The proposal will go to the European Parliament and the Council for approval. Once adopted, Member States will have two years to transpose the Directive into national law and communicate the relevant texts to the Commission.

Target	Companies in the EU in Europe	Non-EU companies
Group 1	More than 500 employees and more than EUR 150 million net turnover worldwide	More than EUR 150 million net turnover worldwide
Group 2	More than 250 employees and more than EUR 40 million net turnover worldwide, and operating in defined high impact sectors, e.g. textiles, agriculture, extraction of minerals.	More than EUR 40 million net turnover worldwide, and operating in defined high impact sectors, e.g. textiles, agriculture, extraction of minerals.

■ "EU Deforestation-Free Regulation ""(Political agreement in December 2022)

In December 2022, a provisional agreement was reached by the Council and the European Parliament on a draft Regulation on the prevention of deforestation in the EU. The Regulation aims to prevent global deforestation and forest degradation caused by the expansion of agricultural land for commodity crops. It requires that commodity crops supplied to or exported from the EU are not produced on agricultural lands developed through deforestation ("Deforestation-Free"). If a non-EU company supplies a commodity crop to the EU market, the first distributor/seller in the EU market is responsible for the due diligence. The regulation sets mandatory due diligence rules for all operators and traders who place, make available or export the following commodities from the EU market: palm oil, cattle, wood, coffee, cocoa, rubber and soy. The rules also apply to a number of derived products such as chocolate, furniture, printed paper and selected palm oil based derivatives.

EU member states will be responsible for enforcing the Regulation and setting penalties. The EU member states will be responsible for enforcing the regulation and setting penalties for violations. The new rules also take into account the protection of human rights related to deforestation and a reference was added to the principle of free prior and informed consent of indigenous peoples.

(2) EU taxonomy for sustainable activities (effective 2020)

The EU promotes sustainable finance based on the EU Action Plan on sustainable finance adopted in 2018, which regulates the disclosure of information related to taxonomy (classification and definition of environmentally sustainable economic activities). The Regulation sets "protection and restoration of biodiversity and ecosystems" as one of the objectives, aiming to ensure that by 2050, all ecosystems and their services worldwide are restored, resilient, and protected.

Screening Criteria for Biodiversity⁵²

- ✓ SC1: Activities that actively or passively improve the condition of ecosystems or maintain it in good condition.
- ✓ SC2A: Activities that are undertaken in such a way that the pressure they are responsible for is kept to a sustainable level, i.e. a level below which there is no harmful effect on the ecosystem.
- ✓ SC2B: Activities that are undertaken in such a way that the pressure on the environment is much lower than the baseline (i.e. if a similar activity was taking place instead), but are higher than the sustainable level and thus have a harmful effect on the ecosystems compared to no activity taking place (reduction of biodiversity or ecosystem services). Activities that have a negative impact on ecosystems (reduction in biodiversity or ecosystem services) compared to no activity because their environmental impacts are much lower than the baseline (for the same type of activity) and higher than sustainable levels.

Examples of activities related to direct improvement and restoration of environmental conditions⁵³

- ✓ Crop production
- ✓ Animal production
- ✓ Tourism, sports and leisure activities
- ✓ Forestry and logging
- ✓ Construction (including conversion from other land uses)
- ✓ Passenger or freight land transportation
- ✓ Hydropower (dams, weirs, run-off-the-river)
- ✓ Marine fishing
- ✓ Water transport
- ✓ Wind, wave and tidal power
- ✓ Manufacture of food and beverage products

⁵² Source: PLATFORM ON SUSTAINABLE FINANCE : TECHNICAL WORKING GROUP (2022, European Commission)

⁵³ Source: PLATFORM ON SUSTAINABLE FINANCE : TECHNICAL WORKING GROUP (2022, European Commission)

Chapter 4: Case Studies

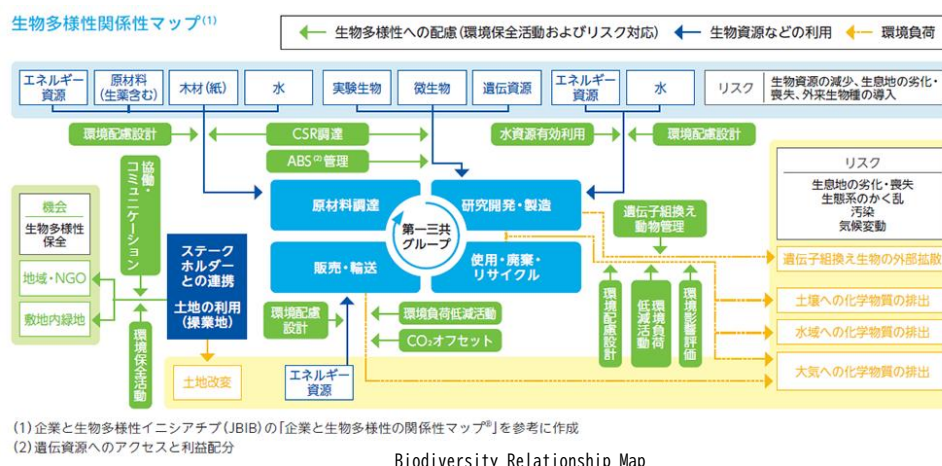
- Business case studies on impact assessment, strategy and goal setting, and information disclosure

Daiichi Sankyo Company, Limited

Impact assessments using ecological footprints⁵⁴

Daiichi Sankyo conducts surveys in Japan and other countries on biodiversity-related activities, use of biological resources, and compliance with the Cartagena Protocol, and identifies key issues by assessing relationships with biodiversity and analyzing risks and opportunities.

Daiichi Sankyo collaborated with experts from the Global Footprint Network, an NGO, to calculate the "Ecological Footprint," an indicator related to biodiversity, for all environmental impacts of the Group's business activities in Japan. The calculation results are used as an indicator of overall environmental impact, including biodiversity, by checking and monitoring changes over time in the "relationship (trade-off) between environmental impact reduction and biodiversity conservation."



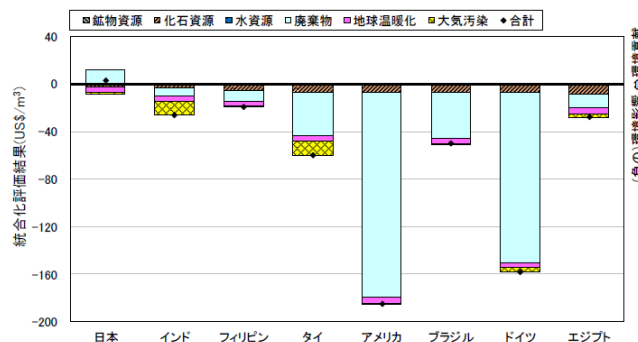
Taiheiyo Cement Corporation

Location analysis and disclosure of mines and protected areas by IBAT,

Assessment and disclosure of environmental impacts of concrete during its life cycle by LIME3⁵⁵

Taiheiyo Cement Corporation recognizes that mines have the greatest relationship with biodiversity in cement production, and is conducting environmental impact assessments. For the limestone mine located near the cement plant, IBAT is used to analyze the relationship between the limestone mine and the nature conservation areas designated by the International Union for Conservation of Nature (IUCN).

In addition, environmental impacts during the life cycle of concrete produced in various countries are assessed by LCA (LIME3) to identify critical impact areas. The results of the environmental impact assessment showed that in many countries, environmental impacts from land reclamation of demolished concrete, consumption of fossil resources, and CO₂ emissions are important, with air pollution being a significant impact in some cases.



Results of LIME3 environmental impact assessment of concrete throughout its life cycle

⁵⁴ Source: DAIICHI SANKYO COMPANY, LIMITED WEBSITE

⁵⁵ Source: ANNUAL JOURNAL OF CONCRETE ENGINEERING, VOL. 42, NO. 1: PAPER ENVIRONMENTAL IMPACT ASSESSMENT OF CONCRETE IN VARIOUS COUNTRIES CONSIDERING VARIOUS IMPACT AREAS (2020, JAPAN CONCRETE INSTITUTE)

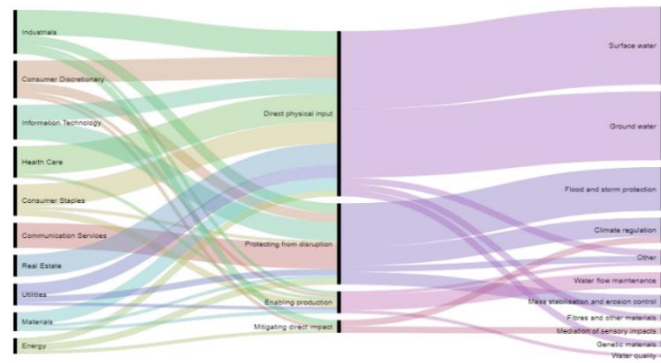
BNP Paribas Asset Management

Assessment and disclosure of portfolio companies' dependence on ecosystem services by ENCORE

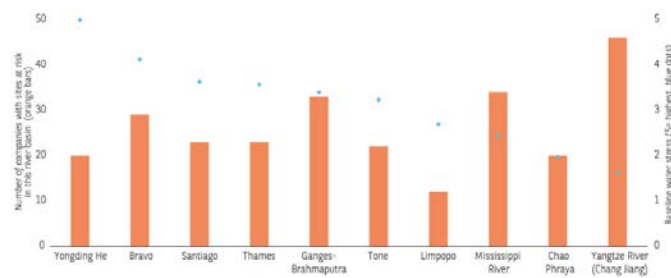
Analysis and disclosure of water-related risks for the companies by FAO/ AQUASTAT, WRI Aqueduct - Water Risk Atlas
56

As part of its sustainability efforts, BNP Paribas Asset Management developed a biodiversity roadmap in 2021. At that time, the company used ENCORE to identify dependence on coal-based services by sector in the portfolio. Water, flood/storm protection, and climate regulation were identified as the most important ecosystem services on which the investment portfolio depends, so those are current priorities.

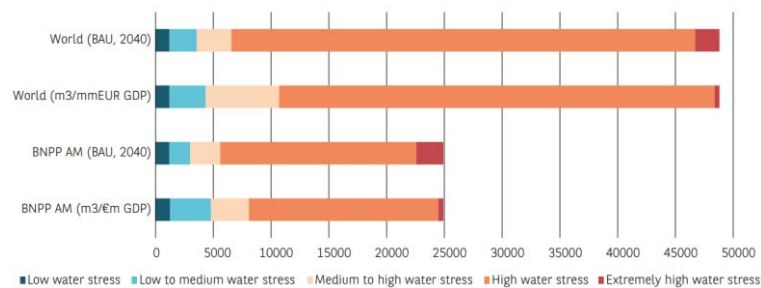
In addition, BNP Paribas Asset Management analyzes the water stress of their portfolio companies, utilizing databases and tools such as FAO/ AQUASTAT and WRI Aqueduct - Water Risk Atlas.



Dependence on ecosystem services per euro invested, according to ENCORE



Number of locations of own portfolio companies in stressed river area based on WRI Aqueduct - Water Risk Atlas



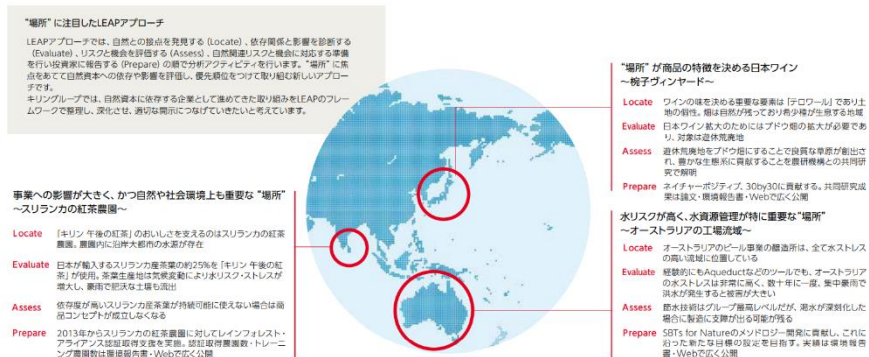
BNP Paribas' water stress levels based on assets under management, according to FAO/ AQUASTAT, WRI Aqueduct - Water Risk Atlas
(Compared to the world average, now and 2040 (Business-as-Usual))

⁵⁶ Source: [SUSTAINABLE BY NATURE: OUR BIODIVERSITY ROADMAP \(2021, BNP PARIBAS ASSET MANAGEMENT CO.\)](#)

Kirin Group

Information disclosure(trial) in line with the TNFD LEAP process and SBTs for Nature AR3T framework, Water stress analysis and disclosure at manufacturing sites by WWF Water Risk Filter, WRI Aqueduct - Water Risk Atlas for ⁵⁷

The Kirin Group recognizes that the conservation of natural capital such as biological and water resources requires a local perspective because their characteristics vary by "region" and "location" and discloses information following the TNFD LEAP approach.



Trial disclosure in line with TNFD LEAP approach

Furthermore, recognizing that the business depends on natural capital such as agricultural products (biological resources) and water, the company is proceeding with a trial evaluation of the AR3T Framework in the SBTs for Nature as being consistent with its previous approach.



Pilot evaluation in line with the SBTs for Nature framework

The Kirin Group prioritize location by analyzing risks (water stress) and impacts (water withdrawal) on watersheds of its manufacturing sites according to the proposed methodology in SBTs for Nature. Water stress is assessed using the WWF Water Risk Filter and the WRI Aqueduct - Water Risk Atlas.

試行的な優先順位付け

国	製造拠点	水ストレス	取水量	生物多様性のリスク
アメリカ	Biokyouwa	★★★★★	★★★★★	★★★
タイ	Thai Kyowa Biotechnologies	★★★★★	★★★★★	★★★
日本	協和ファーマケミカル	★★★★★	★★★★★	★★★
日本	キリンビール取手工場	★★★★★	★★★★★	★★★
日本	キリンビール横浜工場	★★★★★	★★★★★	★★★
日本	キリンビバレッジ 御殿場工場	★★★★★	★★★★★	★★★
日本	協和キリン富士工場	★★★★★	★★★★★	★★★
オーストラリア	ライオン Tooheys Brewery	★★★★★	★★★★★	★★★
日本	キリンビール 名古屋工場	★★★★★	★★★★★	★★★
中国	上海協和アミノ酸	★★★★★	★★★★★	★★★
日本	キリンビバレッジ 湘南工場	★★★★★	★★★★★	★★★
オーストラリア	ライオン Castlemaine Perkins Brewery	★★★★★	★★★★★	★★★
中国	麒麟啤酒 (珠海) 金華工場	★★★★★	★★★★★	★★★
アメリカ	New Belgium Brewing Fort Collins	★★★★★	★★★★★	★★★

※水ストレスは、利用可能な水資源量について評価する3つの指標 (AqueductのBaseline water Stress, Water Risk FilterのBaseline Water Depletion and Blue Water Scarcity)を用いて評価

※取水量は、水ストレスが高い14地点の総取水量に対する割合

※生物多様性は、製造拠点の流域のIUCNレッドリストに基づいて算出された指標 (START (Species Threat Abatement and Restoration, threat-abatement: 脅威の軽減) と STARR (restoration: 復元) のスコアと、製造拠点の流域から半径50km以内に魚類、両生類、カメ、甲殻類、トンボなど水域に生息するBiodiversity elements triggering KBA criteriaが存在するか否かで評価)

Based on WWF Water Risk Filter, WRI Aqueduct - Water Risk Atlas, etc.,

Trial Prioritization List of Kirin's Manufacturing Sites

⁵⁷ Source: Kirin GROUP ENVIRONMENTAL REPORT 2022 (2022, KIRIN GROUP)

Asset Management One Co., Ltd.

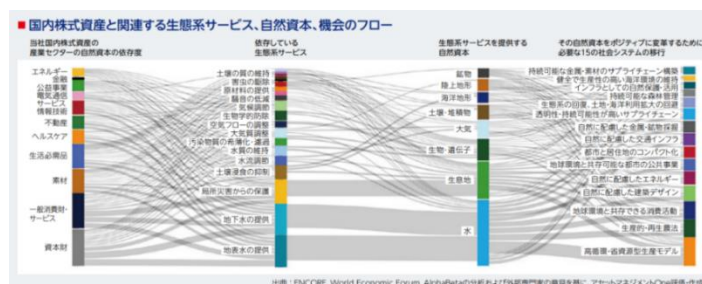
Analysis and disclosure of relationships between domestic equity and ecosystem services by ENCORE

Assessment and disclosure of supply chains by Trase

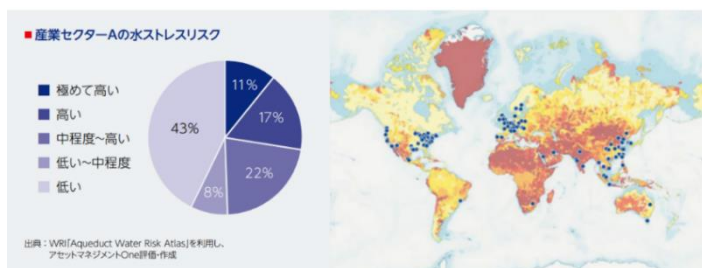
Analysis and disclosure of water intensity per sales of domestic equity by WRI Aqueduct - Water Risk Atlas⁵⁸

As a first step to follow the TNFD Framework, Asset Management One is attempting to analyze domestic equity using the TNFD Framework's LEAP-FI approach to assess nature-related risks and opportunities by utilizing analysis tools such as ENCORE, with the support of external experts.

Regarding the "Locate" of the LEAP-FI approach, in the "Forest" sector, Asset Management One use the Trase tool to analyze deforestation risk in global supply chains. In addition, in the area of water, Asset Management One uses WRI Aqueduct - Water Risk Atlas to calculate water intensity per unit of sales for each sector based on available data for listed companies in Japan, identifies sectors with high freshwater water intensity, and analyzes global water stress risk for the five major companies in Sector A with the highest water intensity.



Domestic equity and associated ecosystem services, natural capital, and opportunity flows from ENCORE and other sources



WRI Aqueduct - Water Stress Risks in Industrial Sector A from the Water Risk Atlas

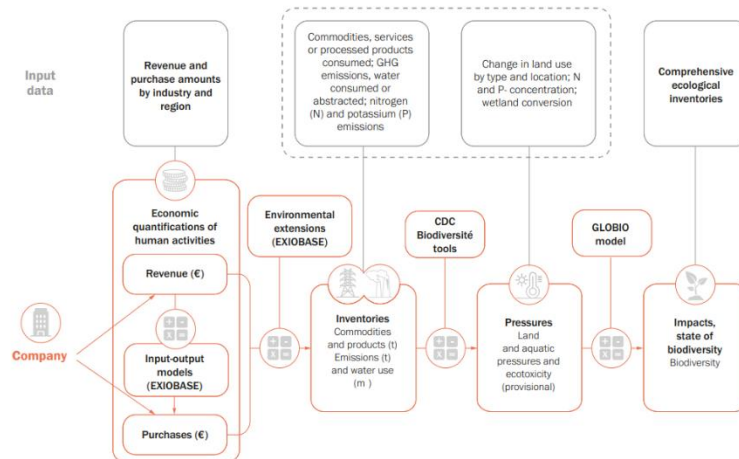
⁵⁸ Source: [ASSET MANAGEMENT ONE CORPORATION SUSTAINABILITY REPORT, 2022, ASSET MANAGEMENT ONE CORPORATION.](#)

Hermes International

Analysis of impact on biodiversity throughout the value chain by GLOBIO and other tools⁵⁹

Hermes International analyzes the impact of various components of economic activity on ecosystems using GLOBIO and other tools. Hermes International use GLOBIO to analyze eight types of impacts on nature (land use, fragmentation, atmospheric nitrogen deposition, climate change, hydrological disturbance, wetland use, and wetlands). fragmentation, atmospheric nitrogen deposition, climate change, hydrological disturbance, wetland conversion, nutrient emissions, and land use change in the watershed)

DATA COLLECTION AND ANALYSIS PROCESS (CDC BIODIVERSITÉ, 2020)



Process for collecting and analyzing data on the relationship between business activities and biodiversity

Lotte Corporation

Assessment and disclosure of biodiversity Risk of Company's Production Sites by IBAT⁶⁰

Lotte Corporation uses IBAT to assess the biodiversity risk of their production sites (8 in Japan and 4 overseas) within a 10 km radius by overlapping with World Heritage Sites, Ramsar Convention Wetlands, UNESCO Man and the Biosphere Programme, IUCN Key Biodiversity Management Categories (I-V), IUCN Red List, Key Biodiversity Area, IUCN Red List).

→ 生物多様性リスク評価

2022年3月末時点

	国内拠点	海外拠点	合計
世界遺産	0	0	0
ラムサール条約湿地	2	0	2
ユネスコMAB	0	0	0
Ia	0	0	0
Ib	0	0	0
IUCN	0	0	0
カテゴリー	0	0	0
III	0	0	0
IV	8	1	9
V	5	1	6
KBA	3	1	4
IUCNレッドリスト	3	0	3

IBAT's Biodiversity Risk Assessment of Production Sites

⁵⁹ Source: [HERMÈS INTERNATIONAL UNIVERSAL REGISTRATION \(2021, HERMÈS INTERNATIONAL\)](#)

⁶⁰ Source: [Lotte CORPORATION SUSTAINABILITY DATA BOOK 2022 \(2022, LOTTE CORPORATION\)](#)

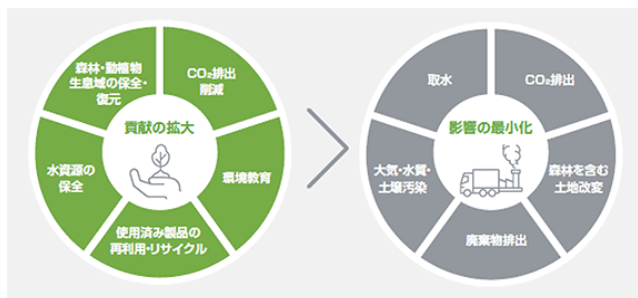
Bridgestone Corporation

"No Net Loss of Biodiversity" is a long-term environmental goal for 2050, based on the Environmental Declaration, which aims for symbiosis with nature.⁶¹

Bridgestone's "Environmental Declaration" contains their unchanging desire "for all future generations to live with peace of mind," and Bridgestone is committed to reducing CO2 emissions in response to the urgent issue of global warming, by developing and utilizing technologies that "use resources with care," to "live in harmony with nature,"

Bridgestone has set "No Net Loss of Biodiversity*" as the long-term environmental goal for 2050 and aims to continue living in harmony with nature by maximizing its contribution to biodiversity while minimizing the impact of business activities on it.

*Minimizing the impact of business activities on biodiversity while offsetting the loss to the ecosystem as a whole through biodiversity restoration and other contributions.



(Left) Bridgestone's Environmental Declaration (Refined in 2011)

(Right figure) Conceptual diagram of "Biodiversity No Net Loss"

Michelin Group

Biodiversity Commitments for 2030⁶²

The Michelin Group has announced its commitments for biodiversity for 2030. The commitments include the following targets: "100% of LCA with biodiversity criteria" and "80% of natural rubber production must meet the environmental criteria of the Sustainable Natural Rubber Policy."



Biodiversity Commitments for 2030

⁶¹ Source: [BRIDGESTONE CORPORATION WEBSITE](https://www.bridgestone.com/en/sustainability/environmental_declaration)

⁶² Source: [MICHELIN GROUP WEBSITE](https://www.michelin.com/fr/fr/biodiversite)

TAISEI Green Target 2050, a long-term environmental goal, promoting activities to realize Nature Positive.⁶³

To realize a sustainable and environmentally friendly society, the TAISEI Group has established "TAISEI Green Target 2050," a long-term environmental target toward 2050, aiming to realize "three societies (decarbonized society, circular society, and society in harmony with nature)" and solve "two specific issues (forest and water). About a society in harmony with nature, TAISEI Group aims to realize Nature Positive, minimizing the negative impacts associated with construction projects and maximizing the positive impacts of projects for nature.



Long-term Environmental Target TAISEI Green

Kao Corporation

Sustainable sourcing of natural capital (palm oil) ⁶⁴⁶⁵

In recent years, it has become increasingly important to consider human rights in activities related to biodiversity. Kao Corporation is committed to sustainable procurement of palm oil, one of the most important natural capitals, with full consideration for human rights. Kao also believes that to solve deforestation, which is deeply related to biodiversity, it is essential to support independent small-scale plantations, which are likely to have human rights issues.

As an example, together with Apical Group (oil supplier) and Asian Agri (oil production company), Kao is implementing the "SMILE*" program to support small-scale palm plantations in Indonesia to improve their productivity and obtain certification for sustainable palm oil (RSPO certification). In addition, Kao has started to operate the Grievance Mechanism (direct dialogue mechanism) for the small-scale palm plantations supported by the "SMILE" program.

*"SMILE": Smallholder Inclusion for Better Livelihood & Empowerment program

プロジェクト: **SMILE** (**S**MALLHOLDER **I**NCLUSION for better **L**IVELIHOOD & **E**MPowerMENT)

協働先：Apical Group(地味製造・販売)、Asian Agri(農薬・フランチャイズ会社)、Royal Golden Eagle(傘下企業)

目的：インドネシア小規模農国の生産性向上・RSPO認証取得促進による生活改善に貢献
⇒ 生産性向上によって新規森林開拓を抑制

場所：インドネシア、スマトラ島

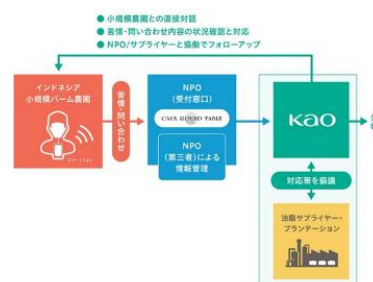
実施期間：2020年～2030年、総支援農園数 4986農園：総面積 17,879ha

実施要項：・生産性向上に向けた農業技術支援

- ・RSPO取得に向けた管理方法の教育
- ・安全教育と安全に作業できる環境づくり
(倉庫、消火設備、看板の設置)
- ・花王から技術提供（アシロバンド）による農薬容器削減と収量向上



SMILE™ Program Overview



Small Palm Plantation Grievance Mechanism

⁶³ Source: TAISEI CORPORATION WEBSITE

⁶⁴ Source: PROGRESS IN SUPPORTING SMALL-SCALE PALM PLANTATIONS IN INDONESIA (2022, KAO CORPORATION)

⁶⁵ Source: **KAO CORPORATION TO BEGIN OPERATING A GRIEVANCE MECHANISM FOR SMALL-SCALE PALM PLANTATIONS IN INDONESIA** (2022, KAO CORPORATION).

Kering Group

Integration of the three areas of climate, biodiversity, and circularity in the environmental policy in the mid-long-term strategy⁶⁶

Assessment of the entire supply chain using the EP&L (Environmental Profit and Loss) method.⁶⁷

The Kering Group's mid- long-term strategy, the "2025 Strategy," outlines three areas in the environmental policy: climate, biodiversity, and circularity.

About the area of biodiversity, in 2020, the company published a corporate biodiversity strategy aimed at halting the loss of biodiversity, restoring ecosystems, regenerating species, and encouraging organizational change throughout the supply chain.



EP&L (Environmental Profit and Loss Calculation) Results

To balance the conservation of natural resources and business development, Kering calculates its environmental footprint and its economic value by assessing the entire supply chain using the EP&L (Environmental Profit and Loss) method. The six items used to determine their footprint are air emissions, GHGs, land use, waste, water consumption and water pollution.

⁶⁶ Source: [2021 UNIVERSAL REGISTRATION DOCUMENT ANNUAL FINANCIAL REPORT - INTEGRATED REPORT \(2021, KERING\)](#)



⁶⁷ Source: [KERING GROUP WEBSITE](#)

Enel SpA

Materiality analysis is both in "financial materiality" (the impact of the issue on the company) and "impact materiality" (the impact of the company on the issue).⁶⁸

Enel SpA presents the results of materiality analysis both in "financial materiality (the impact of the issue on the company)" and "impact materiality (the impact of the issue on the company)" in the four areas of planet, people, prosperity) and principles of governance.

For example, the second issue in the planet area is "ecosystem conservation and environmental management," which presents the degree of impact of biodiversity loss on business activities and the degree of impact of business activities on biodiversity.

Material issues	Impact materiality			Financial materiality	Double materiality	Strategy and performance (Ref. CHAPTERS/ paragraphs of Report)
	Main impact generated (potential/actual)	Type of impact	Impact materiality level (Severity/ Magnitude)	Main reference SDG for positive impacts	Financial materiality level (Impact suffered)	
 PLANET Decarbonization of the energy mix	Reduction of emissions through improvement of the national energy mix by increasing the installed renewable capacity	+	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	7 13	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	THE PATH TO NET ZERO
	Failure to reduce emissions due to the ongoing process of shutting down thermoelectric power plants	-	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	
 PLANET Conservation of ecosystems and environmental management	Promotion of energy efficiency to reduce energy consumption	+	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	7 12	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	TOWARDS A "NATURE-BASED" MODEL
	Increased noise pollution which contributes to loss of biodiversity in the surrounding area	-	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	

Results of the analysis in the planet area

United Utilities Group

Disclosure in line with the four pillars of the TNFD framework (governance, strategy, risk and impact management, and metrics and targets)⁶⁹

Within its annual report, United Utilities Group reports on governance, strategy, risk management, and metrics and targets in line with the TNFD Framework.

For example, as part of the "governance" United Utilities has established an Environmental Advisory Group. This group is responsible for ensuring that commitments to nature-related strategies (including land, watersheds, clean air, plastics, waste, water quality, water resources, and natural capital) are implemented.

Governance

Our interactions with the natural environment are broad and complex. Overall accountability rests with executive management who strive to comply with the legal and regulatory requirements as set out in our environmental policy. Matters are regularly reviewed at the board's corporate responsibility committee. The environmental advisory group is a management group with a remit to ensure the delivery of the environmental policy commitments including nature-related strategies (e.g. land, catchment, clean air, plastics, waste, water quality, water resources, and natural capital). Governance for these strategies is through cross-departmental working groups comprised of subject matter experts and decision makers to drive implementation. Governance around investment in nature-related risks and opportunities is applied as part of our Internal Control Manual.

Information disclosure in the "Governance" part of the TNFD Framework

⁶⁸ Source: [ENEL SPA SUSTAINABILITY REPORT 2021, ENEL SpA, 2021.](#)

⁶⁹ Source: [UNITED UTILITIES ANNUAL REPORT AND FINANCIAL STATEMENTS \(2022, UNITED UTILITIES\)](#)

Part 4: Q&A

This part provides answers to frequently asked questions by businesses. To implement biodiversity actions in business activities, it might be useful in your organization's internal coordination.

Chapter 1, "Q&A for Practitioners," suggest answers to questions from the management or executive level.

Chapter 2, "Q&A for Practitioners (SMEs)," suggest answers to questions from the management or executive level in SMEs.

Chapter 3, "Q&A for Financial Institutions," suggest answers to questions from the management or executive level in financial institutions.

Chapter 1: Q&A for Practitioners

Q1-1. Why should our company work on biodiversity?

A1-1. Because doing nothing could be a huge business risk.

- The climate change issue has triggered an expansion of the criteria for evaluating corporate value to include long-term corporate sustainability (expansion of stakeholder capitalism). The Japanese government has also stated the importance of disclosing not only financial information but also non-financial information. For example, when financial institutions make investments, one of their criteria is increasingly including the perspective of how companies consider their response and actions to biodiversity and natural capital from both financial and non-financial perspectives, to ensure sustainability.
- Therefore, the consideration of biodiversity in business activities is important for attracting investments as well as for reputation, and the failure of this may pose a significant risk to business in the future.
- Procuring raw materials devastating the ecosystem (even if you don't know it) is not sustainable business management.
- On the other hand, it is also important to consider to contribute to the conservation of biodiversity globally, through the technologies, products and services of your company. It would be an opportunity for the growth and competitiveness of the company.

Q1-2. We don't think our business has relative biodiversity, but do we still have to work on it?

A1-2. No analysis and evaluation could be considered an abandonment of accountability.

- (As for the risk of inaction, see Q1-1.) It is important to analyze and evaluate the relationship between biodiversity and business activities before determining whether biodiversity has an impact on business activities (or business activities have an impact on biodiversity). If you claim that your company has no relationship with biodiversity without analysis and evaluation, even if there is no relationship, the company would be regarded as not fulfilling accountability.
- It can be said that all businesses relate to biodiversity as they use land, water, natural resources, or energy.
- Therefore, it would be better to start by identifying the relationship between business activities and biodiversity.

Q1-3. Is there any penalty if we don't work on biodiversity?

A1-3. Penalties are expected, especially in international supply chains and investments in the future.

- As of FY2022, there are no legal penalties in Japan for failure to address biodiversity.⁷⁰
- On the other hand, there are various regulations, mainly in Europe, to conserve biodiversity and natural capital (internalization of externalities), such as the EU Deforestation Regulation, which prohibits the use of raw materials produced through deforestation. That regulation makes it difficult to export to the countries in the future.
- If the European Taxonomy Regulation defines business activities that take biodiversity and natural capital into consideration, business as usual may not be eligible for global investments.
- Therefore, to prepare for such transition risks, it is advisable to identify risks and opportunities related to your company's activities, biodiversity and natural capital, and to consider a policy to deal with them in advance.

Q1-4. Currently, there are no clear targets or indicators for biodiversity, and data is limited. Compared to climate change initiatives such as the Paris Agreement and GHG protocols, it may be more difficult to address biodiversity.

A1-4. Although it is less developed compared to climate change initiatives, actions can be taken even under the current situation. Also, a convincing story is more important than detailed targets and indicators as the first step.

- Compared to climate change, actions for biodiversity are more difficult because there are no clear targets or indicators, and the impact of the same action on natural capital and biodiversity can vary greatly depending on the location.
- On the other hand, the "Natural Capital Protocol," "Ecological Footprint," and "LIME" (which are also explained in these guidelines) have provided certain methodologies. In addition, more indicators and databases are being developed in the "TNFD Framework" and "SBTs for Nature".
- Data and methodologies for biodiversity and natural capital are still developing and are expected to evolve over the long term. While precise targets are important, what is more important is to make it clear why biodiversity is important from a mid to long-term perspective, and how it is connected to its business activities.

Q1-5. Is it possible to assess the whole supply chain?

A1-5. Step by step approach is important. In doing so, you can promote initiatives in collaboration with other companies, or work with other areas such as climate change, human rights, and economic security.

- As Japan depend on other countries to obtain natural capital, assessing the whole supply chain requires a considerable amount of effort. Therefore, it is important to identify the material area and its relationship with nature for your company and then assess it step by step.
- Supply chain issues have also existed in other areas such as climate change, human rights, and economic security, with a certain degree of progress already made, particularly in addressing Scope 3 climate change.
- The assessment of the supply chain should be done based on existing information as the first step and then expanded as necessary.
- Therefore, it would be better to collect information on biodiversity in combination with relevant information such as GHG emissions that are already underway, rather than trying to gather information on the whole supply chain only for biodiversity.
- It would also be better to collect biodiversity-related information in areas where traceability has already been secured.

⁷⁰ In Japan, the Natural Parks Law (e.g., unauthorized planting in national parks), the Law for Conservation of Species (e.g., capture and transfer of species designated by law), and the Invasive Alien Species Act (prohibition of the keeping, etc. of specified alien species) all have laws and regulations with penalties for content that directly damages biodiversity. Especially in recent years, the regulations and penalties have been strengthened through legal revisions, and the legal risks are increasing. On the other hand, there are also laws that promote biodiversity conservation, such as the Act on the Promotion of Distribution and Use of Legally Logged Timber, etc. (commonly known as the Clean Wood Act), which was enacted in 2017 to promote the distribution and use of timber and its products made from trees harvested in compliance with the laws of Japan and the country of origin. There are also

- However, the data required for climate change is not necessarily the same as the data for biodiversity (e.g., the latter requires the status of biodiversity in each region where business activities are conducted).) Since it is difficult to obtain such data from a company, it is important to work in collaboration with associations, governments, and international NGOs.

Q1-6. Due to climate change actions, we can't address biodiversity issues at the same time. Should we respond to climate change first?

A1-6. It is important to address biodiversity from the perspective of combating climate change.

- In the field of climate change, there is a growing recognition that climate change and ecosystems are inseparable (see the Glasgow Climate Agreement at COP26 of the United Nations Framework Convention on Climate Change and the IPCC Sixth Assessment Report). The European taxonomy rules also include a "Do No Significant Harm" (DNSH) condition (no significant harm to any of the six environmental goals, such as climate change, biodiversity, etc.).
- Furthermore, there has been growing concern about greenwashing in carbon credits and green finance, and efforts that focus exclusively on climate change may be at risk.
- Assuming that companies will eventually be required to work on biodiversity, integrating climate change and biodiversity, rather than considering them separately, will lead to more creative and cost-effective approaches for your company.

Q1-7. What should we do for dialogue with investors?

A1-7. While preparation of disclosure in line with the TNFD Framework is fundamental, it is also important to make a story about the relationship between business activities and biodiversity. In addition, responding to CDP and other evaluation and rating agencies is also considered an important step toward dialogue with investors.

- Basically, it is expected that the contents (governance, strategy, risk management, and indicators and targets) should be prepared in line with the TNFD framework.
- On the other hand, as described in Q1-4, detailed methods for risk management, indicators/targets, data sets, and scenario analysis are expected to be developed in the future, and there are limitations in disclosing such information. Therefore, it is important to create a mid to long-term story to explain how biodiversity and natural capital would relate to the business, and how risks/opportunities would be taken.

Q1-8. What is the definition of Nature Positive?

A1-8. The Japanese government uses the term in the National Biodiversity Strategy and other documents to mean "halting and reversing the loss of biodiversity".

- There is no internationally agreed definition of Nature Positive. However, its importance is agreed by the G7 countries in the G7 2030 Nature Compact, an annex to the Leaders' Communiqué of the Cornwall Summit in 2021.

Q2-1. Why should our company be involved in biodiversity conservation?

A2-1. Your company may be required to take responsibility as a supplier or a local company.

- As the international influence of the TNFD framework increases, suppliers will be required to strengthen management throughout the supply chain. Even if the company does not follow the TNFD, the buyer would request to do so.
- In addition, as awareness of biodiversity is raised, the local communities may request the company to take more responsibility, either as users of local natural capital (land and water) or as entities responsible for conserving biodiversity in the region (such as 30 by 30).
- These are business risks, but they can be converted into business opportunities through distinctive actions for biodiversity.

Q2-2. We don't have human/financial resources, where should we start working on biodiversity?

A2-2. First, you can evaluate the relationship between business activities nature and water resources. Then, you may start with areas that are relatively easy to address, such as 30 by 30.

- The first step is to assess how your business activities relate to nature, water, and land. In assessing the relationship, you can ask the local government whether your location is rich in nature or not and whether there is a water shortage. You then identify important relationships between local biodiversity and your business.
- After identifying critical business activities for biodiversity, you consider how you can reduce risk and create opportunities.
- For example, the promotion and support of regional OECM registration for 30 by 30 would lead to risk reduction for business activities as it secures water resources, disaster prevention and mitigation.

Q3-1. Why is it necessary to consider biodiversity in investments and loans?

A3-1. Biodiversity compliance can be a major financial risk for investees at the industry level.

- Biodiversity and natural capital may be a risk or opportunity for financial institutions, as they have a significant impact on the business of the investee.
- In this context, green finance and ESG investments have been expanding internationally in recent years. It is expected to increase the impact of these investments on business for the conservation of biodiversity.
- The importance of the response by financial institutions is internationally recognized, as it can be seen in the Kunming-Montreal Biodiversity Framework⁷¹.

Q3-2. How should financial institutions themselves take action for biodiversity?

A3-2. It is important to support the actions of investees through dialogue with them. It is expected to review the portfolio based on the dialogue with the investee and the results of sector-specific risk assessments.

- Financial institutions should provide qualitative explanations as well as quantitative information related to impacts, dependencies, risks, and opportunities of the investee's business activities for nature.
- However, there are limitations of both qualitative and quantitative information to be disclosed, since it depends on disclosures from investees.
- TNFD is developing LEAP-FI as an integrated assessment process for nature-related risks and opportunities for financial institutions and published a part of it.
- In addition to the LEAP-FI, TNFD plans to publish use cases and case studies, including examples of disclosures for financial institutions, by the end of 2023.

Q3-3. How should we conduct dialogue with investees?

A3-3. Discuss how actions for biodiversity will lead to reduce risks and increase opportunities in their business for the mid to long-term.

- It is important to make investments and loans that promote biodiversity-sensitive business activities through dialogue with investees in line with the latest status of TNFD and other initiatives.
- During engagement, it is important to discuss how actions for biodiversity will lead to reduce risks and increase opportunities in their business activities for the mid to long term.

Q3-4. How should financial institutions assess investees, and how should we work with them?

A3-4. The first step would be to analyze the information disclosed by investees. In addition to public information, it may also be necessary to take opportunities for dialogue to assess transparency and content, if necessary.

- According to the Evaluation Criteria and Perspective on "Environmentally Sustainable Companies" (Ministry of the Environment, 2018), which focuses on information disclosure by companies especially for investors, the following are examples of important items related to biodiversity-related information disclosure.
 - If biodiversity is an important issue for the business, is it indicated the reasons why it is considered important?
 - Are business risks/opportunities related to biodiversity identified considering the company's business model and phase?
 - Have strategies, guidelines, and commitments been developed to address biodiversity?
 - Are management activities for risks associated with biodiversity, supply chain and value chain taken?
 - Are Key Performance Indicators (KPIs) and targets established to evaluate and manage risks and opportunities related to biodiversity, and are their performance monitored?

⁷¹ Kunming-Montreal Biodiversity Framework Target 15 "To promote actions to progressively reduce negative impacts on biodiversity, reduce biodiversity-related risks to business and financial institutions, and ensure sustainable modes of production, while encouraging and enabling business to Take legal, administrative or policy measures to ensure that businesses, especially large corporations, multinational corporations and financial institutions, are able to do the following, while encouraging and enabling them to do the following.

- Is corporate governance regarding biodiversity and other related risks and opportunities demonstrated?
- In addition, existing tools in Part 3 may be used to identify industries and companies in which significant biodiversity and natural capital risks are expected in the investment portfolio and to request information on those industries and companies.

March 2023

Nature Positive character
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