

## Thinking about Biodiversity from an economic perspective

18 June 2021

- ▶ While many economic activities are based on the various benefits of biodiversity, recent studies suggest that the loss of biodiversity may progress in the future.
- ▶ Against this backdrop, new international biodiversity targets are expected to be adopted this year. In the future, we believe companies may be forced to take further action as biodiversity regulations tighten across the globe.
- ▶ As acknowledgement of the significance of biodiversity in the economy rapidly gains traction, we believe investors need to closely monitor the direction of the debate, considering the impact on companies from both the perspective of risk and opportunity.

The G7 Finance Ministers' Meeting was held on 4-5 June. In the statement adopted at the meeting, governments indicated that biodiversity is an environmental issue that they intend to take into account alongside climate change when making economic and financial decisions.

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Biodiversity is the richness of individuality and connectivity of living organisms and is made up of three levels: ecosystem diversity, species diversity and genetic diversity (Figure 1). This biodiversity allows us to enjoy the benefits of Nature's Contributions to People (NCP) in our daily lives.

**“Relationship between  
Biodiversity and  
the Economy”**

**Figure 1 : Biodiversity & Nature's Contribution to People (NCP)**

Type	Definition
Ecosystem* Diversity	Number of ecosystems within a geographical location
Species Diversity	Number of species and abundance of each species that live in a particular location
Genetic Diversity	Number of genetic characteristics in the genetic makeup of a species

\*An ecosystem is a community of living organisms in conjunction with the nonliving components of their environment, interacting as a system.

Category	Example
Regulating NCP	Regulation of freshwater quantity, Regulation of climate, Decontamination of soils and sediment
Material NCP	Materials and assistance
Non-material NCP	Learning and inspiration, Psychological experience

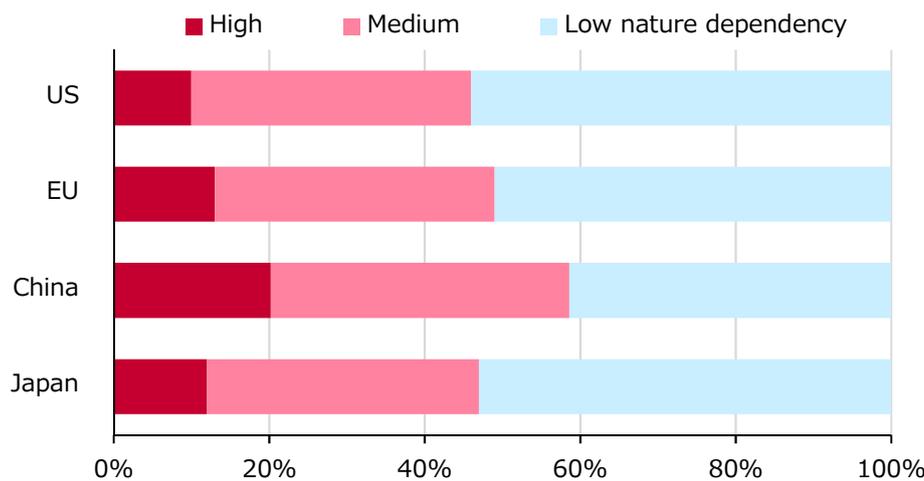
Source : Ministry of the Environment (Japan)

The NCPs can be divided into three main categories: "Regulating NCPs", such as climate regulation and soil erosion control; "Material NCPs", such as the utility value for the production of food and goods; and "Non-material NCPs", such as physical and psychological experiences through nature.

Biodiversity contributes to our lives in many ways, and a number of analyses have shown that it is also closely linked to economic activity. In January last year, the World Economic Forum (WEF) published a report entitled " Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy ".

The report shows that more than 40% of the gross domestic product (GDP) of the United States, the European Union, China and Japan is generated by industries with a medium or high dependence on nature (Figure 2).

**Figure 2 : Distribution of nature dependency classification by region**



Source : PwC

However, in recent years, there has been growing international awareness of the crisis regarding the loss of this biodiversity. This was triggered by the "Global Assessment Report on Biodiversity and Ecosystem Services" released by the "Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES)" in 2019.

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**“Recent studies suggest that biodiversity loss may increase in the future.”**

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In the report, 14 out of the 18 sub-items of the aforementioned NCP were shown to be on a downward trend since 1970. The report also points out that "direct factors" such as "changes in the use of land and sea" and "climate change" that lead to the degradation of nature, as well as "indirect factors" such as "production and consumption patterns" and "population dynamics" have been amplified rapidly over the past 50 years. The report states that transformative change on a global scale is essential to conserve the sustainability of nature.

The year 2021 could be an important turning point that will usher in social changes to avoid the loss of biodiversity. One of the largest international frameworks for biodiversity is the Convention on Biological Diversity (CBD).

Last year, 2020 marked the end of the target period of “The Strategic Plan for Biodiversity 2011-2020” and its associated “Aichi Biodiversity Targets”, which were set by signatory nations to the CBD at the 10th Conference of the Parties (COP10) in 2010. “The Post-2020 Biodiversity Framework”, which includes new targets for the period up to 2030, is expected to be adopted at COP15 to be held in China in October this year.

**“Stricter regulations and information disclosure will require companies to take action on biodiversity”**

Based on the reflection of the failure of the Aichi Biodiversity Targets, the new framework is expected to include measures to better assure the targets are implemented, such progress monitoring. In addition, compared to the existing Aichi Biodiversity targets, the new framework is expected to include more targets related to social and economic activities. Under these circumstances, in addition to the direct impact of the loss of biodiversity on their business activities, companies may be forced to respond to tighter regulations as a result of policy review by governments in the future following the adoption of the new framework.

**Figure 3 : Timeline for the TNFD**

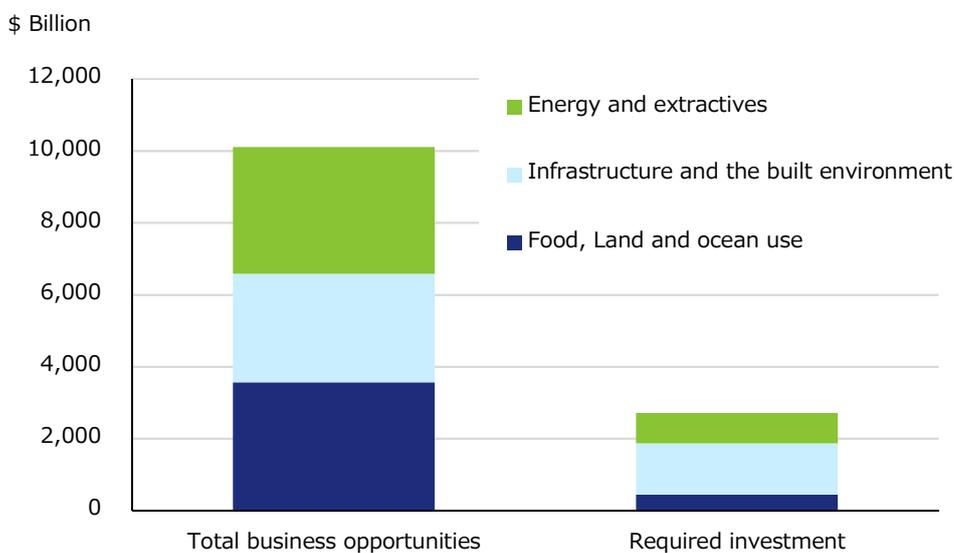
Phase	Period	Content
Prepare	Sep.20	Launch of Informal Working Group
	Jun.21	TNFD launches
Build	2021-22	Building the TNFD framework begins
Test	2022	Testing the framework across emerging and developed markets Revise framework
Consult	2023	Consultations with a range of financial regulators, data preparers and data users
Disseminate	2023	Launch of framework
Uptake	2023	Continued guidance to help uptake of the framework

Data : From December 31,2019 to May 26, 2021  
Source : TNFD

Another noteworthy development in terms of its impact on corporations is the move to strengthen nature-related information disclosure. In early June, the “Task Force on Nature-related Financial Disclosures (TNFD)” was formally launched with the aim of establishing a framework for corporate disclosure of nature-related risks (Figure 3).

TNFD is a private sector-led organization established by financial institutions and corporations in response to the Task Force on Climate-related Financial Disclosures (TCFD), which has greatly promoted corporate disclosure on climate change. In the aforementioned statement from the G7 Finance Ministers' Meeting, it was indicated that each country plans to develop a system to make corporate disclosure mandatory in line with the TCFD framework. Considering these trends in climate change-related disclosure, we think that companies will be required to disclose information in line with the framework established by the TNFD in the future.

**Figure 4 : Total business opportunities and annualized required investment by transitions in the three socio-economic systems**



Data : Annualized amount by 2030  
 Source: Reports of World Economic Forum

Biodiversity issues tend to focus on the risks to companies, but studies have shown that there are many opportunities to earn profits in the process of transitioning to a sustainable economy that takes biodiversity into account.

In a report titled "Nature and the Future of Business" released in July last year, the WEF estimated that about \$10 trillion in business opportunities could be created annually by shifting to a nature-positive system in the three sectors of food, land, and ocean use; infrastructure and the built environment; and energy and extractives (Figure 4). Considering that the world's GDP is just under \$90 trillion, the transformation of society to one that takes biodiversity into account is likely to have an extremely large scale impact on the economy.

As with the issue of climate change, international momentum for companies to address biodiversity is becoming an irreversible trend. As we approach a major turning point in the run up to COP15, we believe that investors need to look at the impact of biodiversity on corporate value from the perspective of both risks and opportunities. We will keep a close eye on the direction of the debate.

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**“Companies should identify risks and opportunities regarding biodiversity and closely monitor the direction of the discussion”**

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