

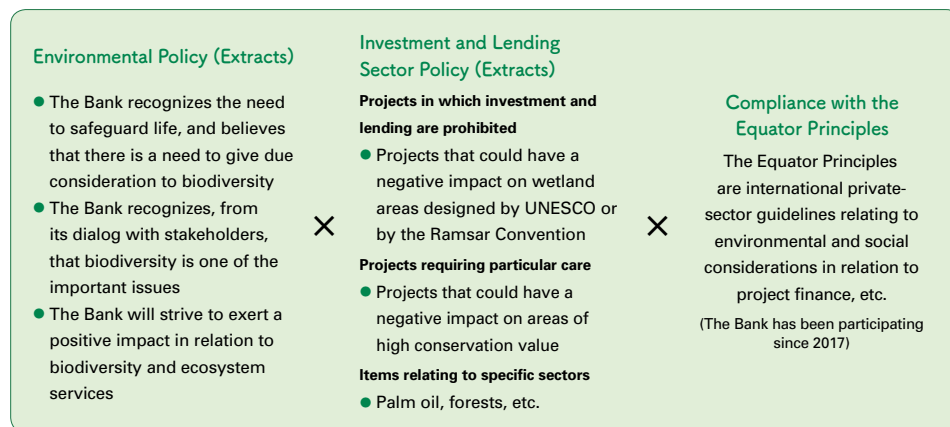
Natural Capital and Biodiversity

The Norinchukin Bank's Awareness of Natural Capital and Biodiversity, and Measures Implemented to Date

The Norinchukin Bank has set its purpose as: Dedicated to sustaining all life - Work together with our stakeholders to foster the agriculture, forestry and fisheries (AFF) industries and to create a prosperous future for food and lifestyles, and thereby contribute to a sustainable global environment. Natural capital and biodiversity are vital for realizing bountiful food and a rich natural environment, and so the Bank has positioned them as important issues that are directly linked to human life.

The Bank's Environmental Policy*1 emphasizes that loss of biodiversity amounts to destroying the wellspring of life; given that the agriculture, forestry and fisheries sector is the foundation for the Bank's operations, there is a clear requirement for the Bank to help protect this wellspring of life, and the Bank needs to give due consideration to safeguarding biodiversity in its business activities. As a risk management measure to realize this goal, besides stipulating in the Bank's Policy on Measures Relating to Concern for the Environment and Society in Regard to Investment and Financing that investment in or financing of projects over which there is concern from the perspective of safeguarding biodiversity in protected areas, forests or other specified sectors is prohibited or restricted, the Bank is also working to avoid negative impacts from its investment and lending activities through measures such as identifying and evaluating environmental and social risk in compliance with the Equator Principles*2. (See Fig. 1)

Fig. 1 The Bank's Policy and Initiatives in Relation to Natural Capital and Biodiversity



*1 For more details, see The Norinchukin Bank website: https://www.nochubank.or.jp/en/sustainability/management/policy/pdf/environmental_policy.pdf

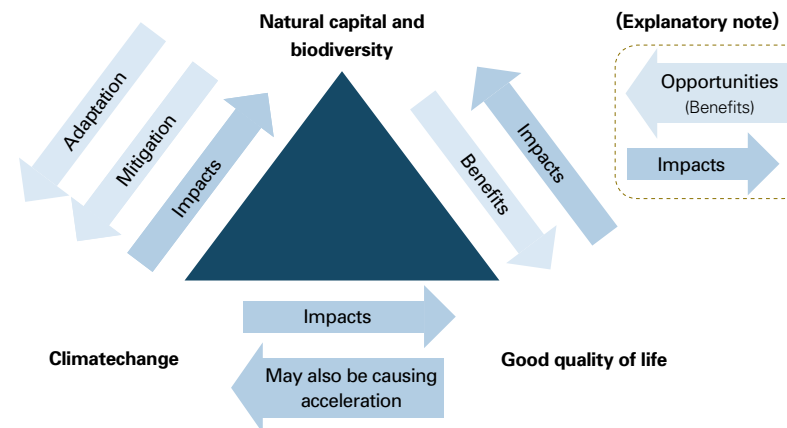
*2 For more details, see the official Equator Principles website (in English): <https://equator-principles.com>

Over the past few years, the "nature positive" movement, which seeks to stem the loss of natural capital and biodiversity and bring about a recovery, has been growing steadily more prominent on a global scale. In March 2022, the Taskforce on Nature-related Financial Disclosures (TNFD) announced the Beta v0.1 release of the TNFD Nature-related Risk & Opportunity Management and Disclosure Framework, reflecting an awareness of how vital information disclosure is for the transition to directing capital flows in a nature positive manner.

In December 2022, the United Nations Biodiversity Conference (COP15) was held in Montreal, Canada, and agreement was reached on a new set of global targets: the Kunming-Montreal Global Biodiversity Framework (GBF). Target 15 of the GBF encourages financial institutions and other large enterprises to disclose the risks, dependencies and impacts of their businesses in relation to natural capital and biodiversity.

The IPBES-IPCC Co-Sponsored Workshop Report on Biodiversity and Climate Change notes the need to aim for a simultaneous resolution of both the problem of climate change and the issue of safeguarding biodiversity; the report points out that this is important for realizing good quality of life and wellbeing for people, and outlines the risks associated with addressing these two issues separately (Fig. 2).

Fig. 2 Relationships Between Natural Capital and Biodiversity, Climate Change, and Good Quality of Life



Source: IGES 2021: IPBES-IPCC CO-SPONSORED WORKSHOP REPORT ON BIODIVERSITY AND CLIMATE CHANGE: Translation and Commentary by IGES. Takahashi, Y., Tsutaka, M., Tanabe, K., Hashimoto, Z., Moribu, N., Takeuchi, K., Ohashi, Y., Miwa, K., Yamanoshita, M., Takahashi, K., Watanabe, A., Watabe, A., Nakamura, E., Matsuo, A., Mori, H., Ito, N., Kitamura, E., Aoki, M. (Translation and Editing).Institute for Global Environmental Strategies (IGES), Hayama , 32p.

Related matters were discussed throughout FY2022 by the Bank’s Sustainability Committee, which reports directly to the Board of Directors, and five discussions on the topic of natural capital and biodiversity issues were also held by the Sustainability Advisory Board, which functions as an advisory body to the Board of Directors, with membership comprised of external experts. The Bank has thus been fostering an understanding of the issues, and engaging in discussion of related initiatives and policies, at senior management level.

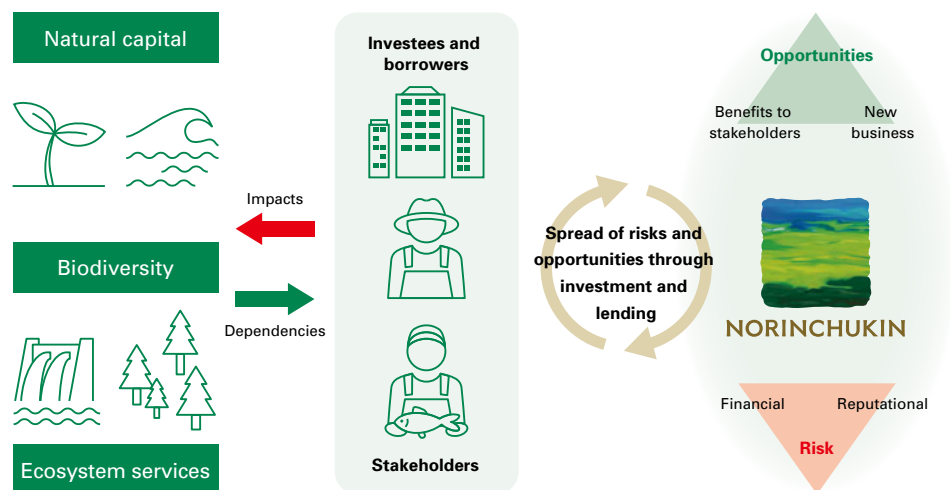
Besides responding to climate change issues through its commitment to realize Net Zero emissions, going forward the Bank will also be working to expand its measures addressing the twin issues of climate change and biodiversity through nature positive initiatives.

Based on this relationship, and referencing the LEAP (Locate, Evaluate, Assess, Prepare) approach to risk and opportunity assessment that is advocated in the Beta v0.1 release of the TNFD Nature-related Risk & Opportunity Management and Disclosure Framework, the Bank has implemented experimental analysis of its portfolio. The LEAP approach begins with an examination of the types of business and entry points applicable to a financial institution, and of the types of analysis that should be performed. Through a series of flow stages – Locate the interface with nature, Evaluate the dependencies and impacts, Assess the material risks and opportunities, Prepare to respond and report – the LEAP approach enables the organization to identify, internally, its risks and opportunities in relation to natural capital (see Fig. 4).

The Bank’s Experimental Approach to Addressing the Issues of Natural Capital and Biodiversity

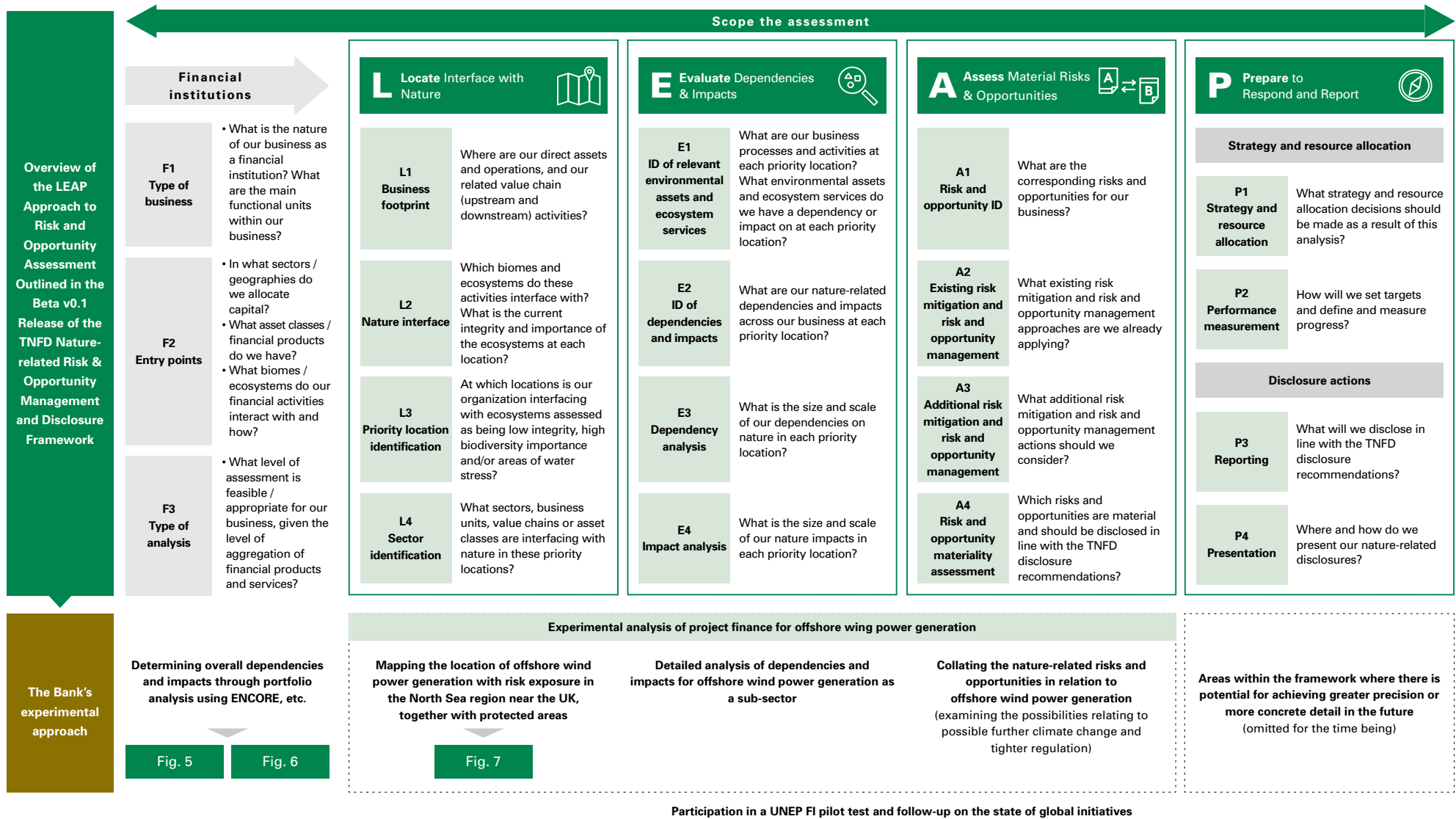
When analyzing the risks and opportunities relating to natural capital and biodiversity, the Bank has taken as the foundation the understanding and analysis of the relationship whereby the dependencies that investees and borrowers have in relation to natural capital and biodiversity and the impacts that they exert can, through investment and borrowing, spread to the Bank itself (Fig. 3).

Fig. 3 Relationship Between Natural Capital, Biodiversity and The Norinchukin Bank (conceptual image)



Source: Compiled by the Bank, with reference to the Natural Capital Protocol, etc.

Fig. 4 Overview of the LEAP Approach to Risk and Opportunity Assessment Outlined in the Beta v0.1 release of the TNFD Nature-related Risk & Opportunity Management and Disclosure Framework, and The Norinchukin Bank's Experimental Approach



Source: Compiled by the Bank with reference to P.12-13 of the Japanese-language translation of the TNFD Nature-related Risk & Opportunity Management and Disclosure Framework: Beta v0.3 Release Executive Summary.

To narrow down the areas which should be prioritized when analyzing its portfolio, the Bank has made use of ENCORE*³ etc. to implement sector-specific analysis of dependences and impacts.

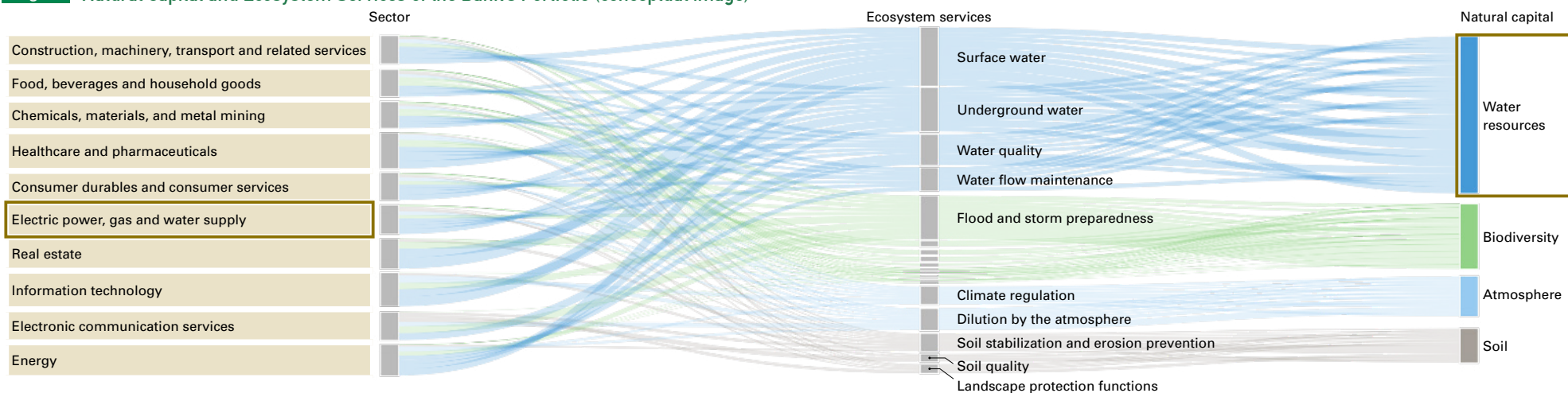
*3: ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure) is a risk management and analysis tool for nature-related risks, provided by the Natural Capital Finance Alliance (NCFA).

Insights Obtained from the Bank’s Portfolio Analysis Using ENCORE

Portfolio Dependency Trends

The analysis showed that there were significant dependencies in relation to water resources across a broad range of sectors. Not only are the food and beverage (consumer staples), electric power and gas, and water supply (public utilities) sectors dependent on water for manufacturing, stable operation and service provision, other sectors which at first glance might not seem to be closely related to nature are also dependent on water because they benefit from ecosystem services, such as flood and storm preparedness, maintenance of water quality, etc.

Fig. 5 Natural Capital and Ecosystem Services of the Bank’s Portfolio (conceptual image)

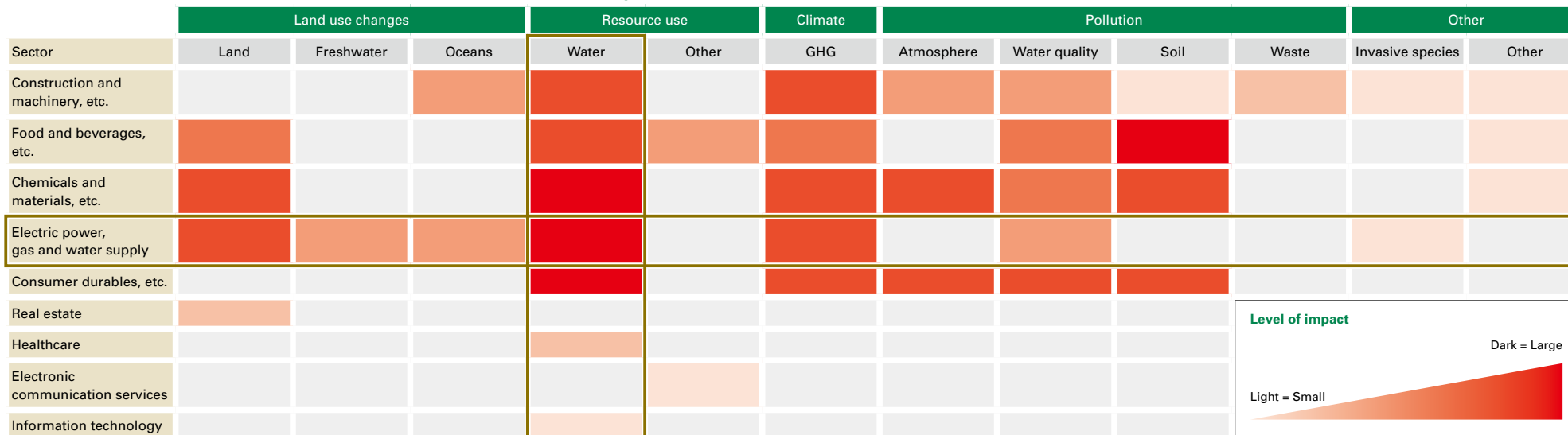


Portfolio impact trends

The results of analysis referencing the impact drivers (factors that can exert an impact on nature) noted by IPBES*⁴, which include changes in land use, resource usage, climate change, pollution and “other” (impact of invasive species, etc.), showed that four sectors – construction and machinery, food and beverages, chemicals and materials, and electric power, gas and water supply – had particularly pronounced impacts on natural capital and biodiversity through water use, GHG emissions, etc.

*4 IPBES: Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

Fig. 6 Impacts on Natural Capital of the Bank's Portfolio (conceptual image)



Source and notes: Compiled by the Bank using ENCORE, etc. Scope covers loans, equities, corporate bonds, etc.; sovereign debt and investments in or loans to government agencies, etc., are excluded. The reference date is March 31, 2021. Weighting was assigned according to the degree of exposure for each sector in the portfolio as at the reference date.

Measures based on the insights obtained through analysis

Based on the portfolio analysis, the Bank has been focusing on the above-mentioned four sectors that have a particularly pronounced impact on natural capital and biodiversity, and has made the examination of water resource and climate dependencies, which it has been confirmed are significant dependencies for the Bank's entire portfolio, the main axis for analysis in the near term. The Bank has become even more keenly aware of the need, in order to further enhance the precision of the analysis, to undertake analysis of dependences and impacts at the level of individual sub-sectors and individual business activities, and to identify the type of investment or lending (direct, indirect, etc.) and the location of the exposure (i.e., the country or region, and the location of the business activity, project or production facilities, etc.).

Taking location data constraints into account, the Bank has focused on water resources, which are a form of natural capital for which the Bank's portfolio has particularly high dependencies, and on the electric power, gas and water supply sector, where there has significant impacts, and has undertaken experimental analysis, using the LEAP approach, of project finance for offshore wind power generation.

Experimental Utilization of the LEAP Approach, Taking Offshore Wind Power Generation as an Example



Locate – Location identification

The interface between the investees and borrowers and nature was confirmed by mapping location data for offshore wind power projects for which there is actual exposure against the location of nature conservation zones in the North Sea region (Fig. 7).

Evaluate – Identification of dependencies and impacts

The special characteristics of this sub-sector were identified. For example, offshore wind power generation is affected by wind conditions, and is thus dependent on the atmosphere and on climate. In addition, because the foundations for offshore wind power facilities rest on the seabed, and because the power is generated by the turning of turbine blades on the sea, offshore wind power generation may have an impact on marine ecosystems.

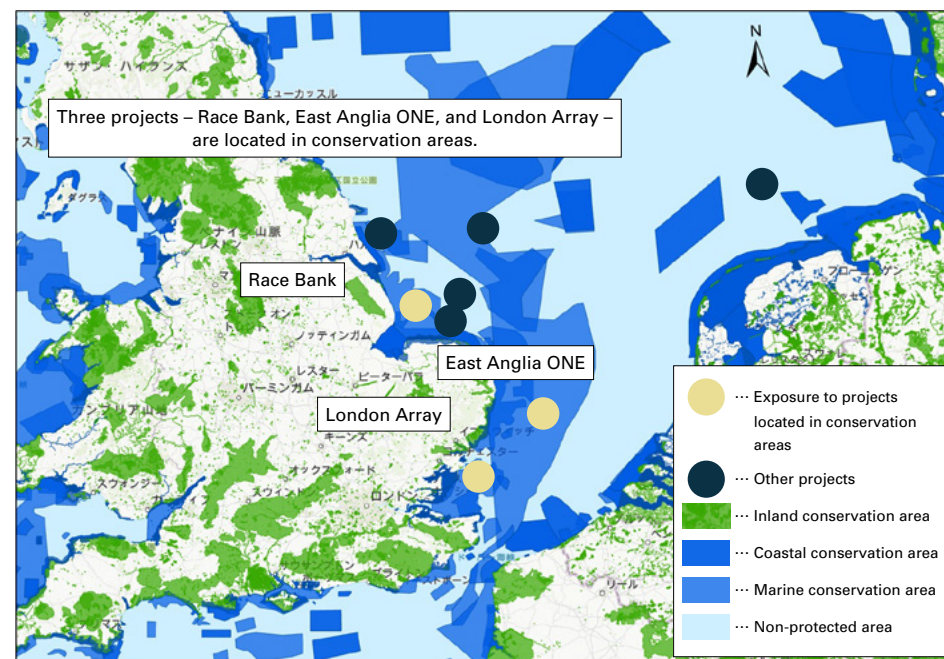
Assess – Identification of risks and opportunities

Based on the identification of dependencies and impacts, the risks were reexamined with a focus on exposure to projects located in conservation zones. The Bank's assessment was that its investment was undertaken in line with the Bank's own Investment and Lending Policy and with the Equator Principles, in projects for which environmental assessments had been properly performed, and that both physical risks and reputational risks had been properly controlled. Having made concrete assumptions regarding possible future changes in wind conditions and possible future tightening of regulations on marine life protection, the Bank implemented preliminary examination of future risks and opportunities.

Prepare – Strategies and Disclosure

It is anticipated that this will be addressed through future initiatives

Fig. 7 Mapping of Exposure to Offshore Wind Power Generation in the North Sea Against Conservation Areas



Source: Compiled by the Bank, with reference to ArcGIS, UNEP WCMC (<https://resources.unepwcmc.org/search?theme=nature-conserved>)

The Bank's Strategic Direction for Future Initiatives

In November 2022, Hirotaka Hideshima, an Executive Advisor to the Bank, was appointed as a TNFD Taskforce Member*⁵, in which he is contributing to the development of a global disclosure framework. In addition, the Bank is a co-convenor of the TNFD Consultation Group of Japan, and is engaged in efforts to disseminate and promote understanding of the TNFD Nature-related Risk & Opportunity Management and Disclosure Framework: Beta v0.3 Release within Japan. With the aim of promoting and supporting, in its role as a financial institution, a transition to a nature positive approach in the business activities of its investees and borrowers, in February 2023 The Norinchukin Bank launched the Finance Alliance for Nature Positive Solutions (FANPS) together with Sumitomo Mitsui Financial Group, MS&AD Insurance Group Holdings, Inc., and Development Bank of Japan (DBJ). Going forward, besides expanding these initiatives, the Bank will also be implementing measures aimed at realizing a nature positive approach and fulfilling the Bank's purpose by following the development of the TNFD disclosure framework and monitoring trends in public sector and private sector discussion of natural capital and biodiversity, and by further strengthening its identification and analysis of risks and opportunities.

*5 A total of 40 TNFD Taskforce Members have been chosen from various countries and regions to discuss the TNFD framework.

Topics

Efforts to Develop and Promote TNFD

As a member of the TNFD Task Force, the Bank participates in the development of a global framework in addition to being actively involved in developing and promoting TNFD, natural resources, and biodiversity in Japan through speaking at events and other activities. For example, Executive Advisor Hideshima serves as a Task Force member and lectured at the May 2023 executive meeting of the Keidanren Committee on Nature Conservation. There, he discussed matters such as the key points of the TNFD beta version v0.4.



HIDESHIMA Hirotaka, Executive Advisor to the Norinchukin Bank

Topics

Investment in World Bank Bonds Focused on Biodiversity Conservation

The Bank invested in Sustainable Development Bonds issued by the World Bank (officially known as the International Bank for Reconstruction and Development) aimed at raising awareness of biodiversity. Through investing in these bonds, the Bank aims to work together with the World Bank to raise awareness of the importance of biodiversity and its conservation in developing countries.

[Reference: Project Case Study]

- The Bank adopts an integrated landscape management approach in the Cerrado biome of Brazil. This approach supports 4,000 landowners and agricultural producers in low carbon farming through habitat restoration and low carbon farming technical assistance.
- In Turkey, a project is conducted where nature is used to simultaneously reduce poverty and vulnerability in rural areas. Methods include restoring forest landscapes, creating jobs, training for sustainable agriculture, and building resilient infrastructure to improve irrigation and water supply.

* The case studies referenced above are intended for project introduction purposes only. The use of the funds raised by the Bonds is not limited to the above projects or fields.