MIZUHO

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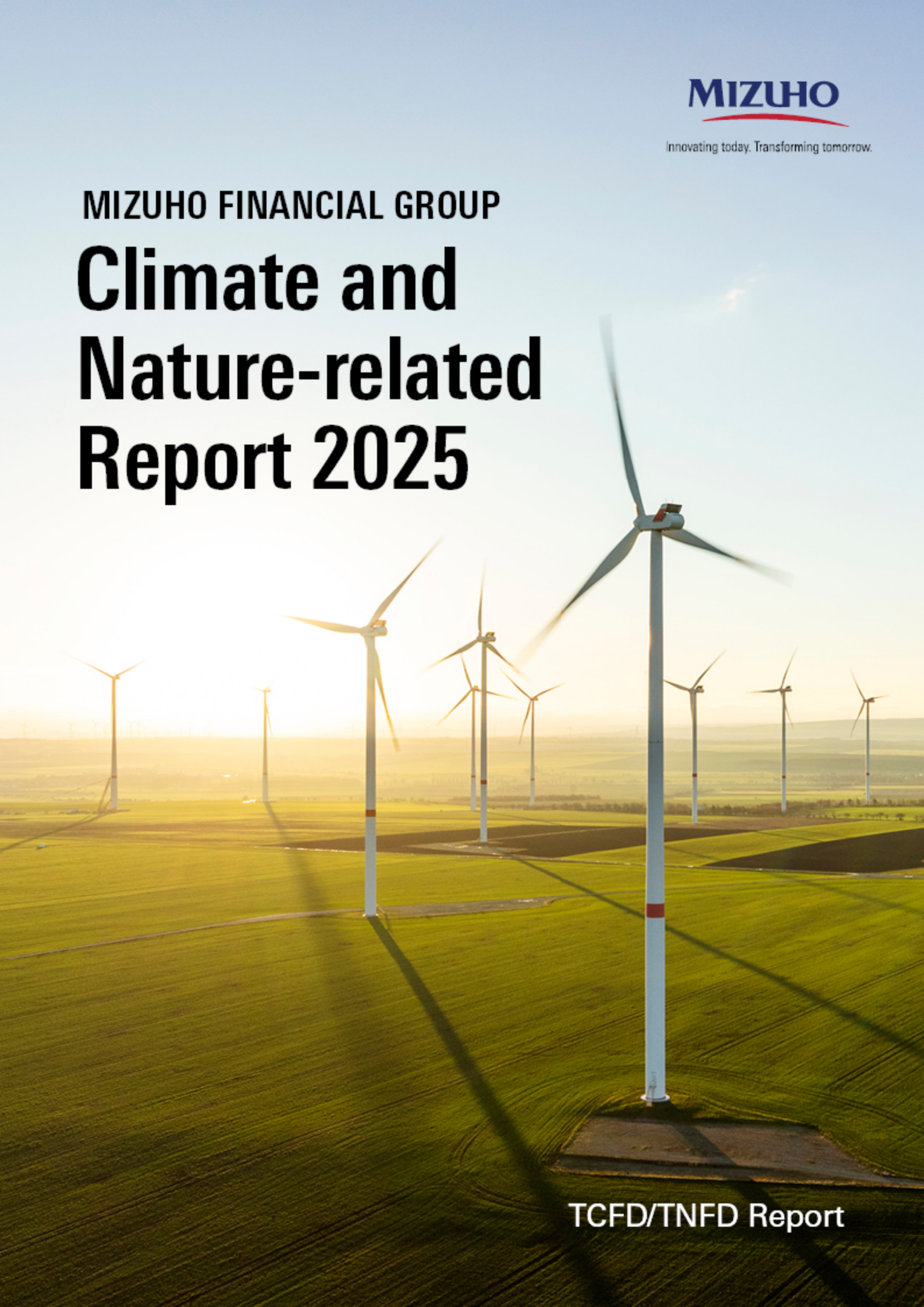
MIZUHO FINANCIAL GROUP

Climate and Nature-related Report 2025



TCFD/TNFD Report

CEO Message

In 2024, the global average temperature rose by more than 1.5°C, which is above pre-Industrial levels for the first time, underscoring the occurrence of extreme weather incidents such as heat waves, torrential rains, and droughts across the globe. The large-scale wildfires that occurred in Japan and many other countries, which remain fresh in our memory, are also regarded to be, in part, caused by global warming. Climate change damages the natural environment, while the loss and degradation of nature, in turn, further accelerates climate change. This negative cycle underscores the growing urgency of addressing environmental challenges from both climate and nature perspectives.

At the same time, the energy transition is facing increasing complexities, given the growing demand for electric power caused by widespread adoption of generative AI and other technologies, alongside rising commodity prices and insufficient infrastructure capacities. Given these circumstances, government policies in many countries and corporate strategies are being restructured based on multiple factors including economic viability, energy, technology, and supply chains, making the transition pathways increasingly complex.

Nevertheless, even in this complex landscape, Mizuho's role remains steadfast: namely, leveraging of our deep knowledge of industry trends and the Group-wide capabilities to anticipate future transformations and support our clients in taking on these challenges. FY2024 was a year in which we further strengthened this role by achieving progress based on our strategies. In this report, we present highlights of our progress in addressing climate change, natural capital, as well as capability building for further actions.

Reinforcing climate change responses

At Mizuho, we have an integrated approach to responding to climate change, with a focus on three perspectives — *promoting transitions in real economy*, *capturing business opportunities*, and *appropriately managing risks*— based on our *Net Zero Transition Plan*.

For "promoting transitions in real economy," we prioritize engagement (constructive dialogue) with clients to support their decarbonization efforts, while considering the diverse transition pathways specific to each region and industry. In FY2024, we formulated a "Grand Design" envisioning an ideal industrial structure in Japan to be able to achieve carbon neutrality in 2050. This Grand Design served as the basic agenda for forward-looking discussions with stakeholders including clients across various industries. As a result of these dialogues and other efforts toward a transition to a decarbonized society, clear progress was observed on medium-term targets in each sector for Mizuho's Scope 3 financed emissions.

With regard to "capturing business opportunities", we are advancing initiatives through various avenues including lending, investment, and asset management. In line with our goal of providing JPY 100 trillion in sustainable finance by FY2030, we have reached a total of JPY 40.3 trillion from FY2019 through FY2024. Mizuho supports clients' efforts to develop innovative technologies and business models that could serve as game-changers, as well as launching and commercializing such technologies, through equity investments. Progress is steadily being made on initiatives in focus areas such as hydrogen and carbon credits, and this report highlights several examples of these initiatives. Mizuho is confident that we are demonstrating our *ability to connect*, which is one of our strengths beyond the financing. It includes facilitating collaboration to create and expand synergies after investments and constructing platforms that bring cross-industry relationship.

In the area of "appropriately managing risks," we continually enhance risk management, such as revising the assessment criteria in our climate risk management framework, which was introduced in FY2020. Steady progress has been made in the status of transition risk responses in various sectors, contributing to further resilience to climate change for Mizuho and our clients.

Accelerating natural capital efforts

Natural capital serves as an important agenda for Mizuho and our clients' business activities, and we are accelerating our efforts in this area. In FY2024, we analyzed our clients' dependencies and impacts on natural capital for seeking business opportunities and effectively managing risks, utilizing a proprietary assessment model developed by a Mizuho Group entity. We are proactively supporting clients' transitions to 'nature positive', as well as fostering collaborations with various partners. Efforts to capture business opportunities include organizing natural capital-related finance and 'Blue Finance' as well as expanding strategic consulting services.

Mizuho is also enhancing initiatives toward achieving a circular economy, which should be addressed in conjunction with climate change and natural capital. Transitioning to a circular economy is essential to address emerging resource shortages and constraints. Our aim is to leverage Mizuho's strength in connecting businesses, regions, and the public and private sectors to drive the creation of circular economy industries, such as leading the way on a pilot program for material recycling programs in collaboration with clients.

Strengthening the capacity for further actions

To translate strategies into concrete actions and maximize positive impacts, Mizuho is also working to strengthen its toolkit and capabilities. For example, in November 2024, we commenced a strategic partnership with Pollination, experts in the fields of climate change and natural capital. This alliance has advanced our overseas service options in response to diverse client needs. And as for enhancing our internal capabilities, we have been working to foster awareness of sustainability among all employees, who are the drivers of action, such as bolstering specialized knowledge in environmental area and technological matters— which are key strengths of Mizuho.

Last year, Mizuho began publishing integrated disclosures on climate and nature. In this second integrated report, we have strived to enhance accessibility for stakeholders by visualizing our progress in responding to both TCFD and TNFD recommendations. Addressing climate change, conserving natural capital, and realizing a circular economy are deeply interconnected. Mizuho remains committed to advancing both initiatives and disclosures, recognizing the importance of these interdependencies.

The environment surrounding sustainability continues to evolve at a rapid pace. In FY2025, Mizuho will continue to view sustainability as an important component of our corporate strategy and advance climate change responses and natural capital initiatives through more effective and strategic actions. In line with Mizuho's purpose — *Proactively innovate together with our clients for a prosperous and sustainable future* — I will take the lead in mobilizing the Group's strengths toward taking on challenges.

M. Kihara

Masahiro Kihara
President & Group CEO
Mizuho Financial Group, Inc

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Progress in FY2024

Shifting to the execution phase from the policy, target, and plan-development phase

2021 | **2022** | **2023** | **2024**

Formulation of policies, targets, and individual strategies

- 2021: Revised environmental policies; Set target for Scope 1 and 2
- 2022: Established the *Net Zero Transition Plan*; Started setting Scope 3 targets
- 2023: Sustainable finance target of JPY 100 trillion; Established sustainable business strategies; Completed setting Scope 3 targets

Reinforcing climate change response

- 2023: Registered as a TNFD Early Adopter

Accelerating natural capital efforts

Reinforcing climate change response

- **Enhancing the effectiveness of engagement**
  - Formulated the **Grand Design** for the ideal Japanese industrial structure
  - Client engagement
    - Dialogues focused on GHG emissions reduction: Approx. 100 clients
    - Dialogues with clients in transition risk sectors: Approx. 550 clients
- **Providing financing for steady transitions**
- **Building the foundation for carbon neutrality**
  - Enhanced initiatives in hydrogen, carbon credits, and other priority areas
- **Enhancing framework on climate-related risk management**
  - Revised evaluation criteria for clients' status of responses to the transition risks

Accelerating natural capital efforts

- **Enhancing dependency and impact analyses**
  - Conducted a quantitative analysis of client business dependencies and impacts
  - Conducted dependencies, impacts and risk analysis at our operational sites
- **Supporting clients' nature-positive transitions**
  - Nature-related and Blue Finance: 14 projects in FY2024
- **Strengthening efforts in the circular economy business**

Strengthening the capability for further actions

- **Capability building**
- **Collaborations and co-creation with stakeholders**

Metrics and Targets Highlights

Sustainable finance amounts

FY2019 to FY2024 (cumulative total)	Amount for environmental and climate-related finance within sustainable finance
JPY 40.3 trillion	JPY 20.5 trillion

League Table*1

Sustainable finance (loans)	Publicly offered SDG bonds
Global No. 1	Japan No. 1 for six consecutive years

GHG emission reductions

Scope1,2 (our own emissions)	Scope 3 (financed emissions)
FY2024: 64% reduction expected (from FY2020 levels)	Steady reductions in sectors with medium-term targets

Capability building

Sustainability management experts	Environmental and energy sector consultants
Approx. 1,850 as of March 2025	Approx. 140 as of March 2025

*1 Calculation Period: April 2024 – March 2025
Sources: Sustainable finance (loans) data from LSEG; SDG bonds data from Capital Eye

Introduction

1. Summary of actions addressing climate change and natural capital (Actions in line with TCFD / TNFD Recommendations)

(Underlined sections indicate enhanced initiatives since our previous disclosure in June 2024)

Governance

Climate Nature

- Mizuho has established a supervisory and business execution governance framework, centered on the Board of Directors. p.10
  - Supervisory: The Board of Directors and the Risk Committee conduct oversight on reported and deliberated matters.
  - Business execution: The Sustainability Promotion Committee, the Risk Management Committee, the Executive Management Committee, and other committees hold deliberations and discussions, which are reported to the Board of Directors.
- The Group Chief Sustainability Officer (CSuO) and the Group Chief Risk Officer (CRO) lead initiatives in their respective areas under the Group CEO's supervision.
- Mizuho has adopted sustainability-related indicators for evaluating executive compensation. p.13
- Mizuho has established a governance framework through a process that verifies respect for human rights in relation to natural capital. p.41

Strategy

Climate

- Mizuho has developed the *Net Zero Transition Plan* (formulated in 2022, revised in 2023) to promote the Group's climate change responses in an integrated manner. p.15
- Recognition of opportunities and initiatives to capture opportunities:
  - We recognize transformations in industrial and business structures toward the transition to a decarbonized society and investments in and implementation of practical applications of new technologies as opportunities p.18
  - Based on sustainable business strategies, we actively support clients' transitions to a decarbonized society and their measures to address climate change.
    - Supporting steady transitions by clients: We promote support for clients' business portfolio restructuring and social implementation of next-generation technologies. We have strengthened our financing capacity toward our sustainable finance target of JPY 100 trillion over the FY2019 to FY2030 period. p.22
    - Assisting future-oriented actions by clients: We have strengthened efforts in the focused areas of hydrogen, carbon credits, and impact, and we have expanded new business domains. We support the establishment of technologies and business models in the development, demonstration, and commercialization stages through the Transition Equity Investment Facility and Value Co-creation Investments. p.24
- Engagement
  - To improve the effectiveness of client engagement, Mizuho formulated the "Grand Design" and enhanced dialogue using GHG emissions as a starting point in Japan. p.19
  - We have enhanced our communications with policy makers and our involvement in international rulemaking, making use of our industrial insight. p.26
- Capability building p.27
  - We are shifting from establishing framework and knowledge accumulation to a stage focused on creation of output.
  - We promote capability-building initiatives both within and outside Mizuho, such as enhancing collaboration and co-creation with stakeholders, raising employee awareness, and consolidating employee capabilities.
- Risk recognition: We comprehensively ascertain the risks associated with climate change by assessing the importance in each risk category. p.28
  - We recognize the importance of credit risk(deterioration of client business performance), especially due to transition risk.
- Scenario analyses and strategy resilience assessments: p.30

	Transition risks	Physical risks
Analysis method	• We analyze the increases in credit costs caused by transition risks based on an outlook for the impact on clients' financial results under the scenarios. (Targeted sectors: Electric utilities, oil and gas, coal, steel, automotive (OEM and suppliers), maritime transportation, aviation, cement, and chemicals).	• Acute risks: We analyze damage to assets, business stagnation, and other impacts associated with changes in natural disasters caused by temperature increases. • Chronic risks: We analyze asset deterioration, labor capacity reductions, and other impacts associated with temperature increases.

Implications	• The cumulative increase in credit costs by 2050 is approximately JPY 1,910 billion under the Net Zero 2050 scenario. This increase may have a certain level of financial impact in the medium to long term, but the impact on Mizuho's short-term financial soundness will be limited.	• The analysis found that if a stress event were to materialize, cyclones and floods would have the largest impact of the disaster types covered in the calculation targets, with additional losses of approximately JPY 90.0 billion in a single year. The analysis confirmed that the impact of other disaster types is less than half of that of cyclones and floods.

Nature

- Mizuho recognizes that the conservation and recovery of natural capital is a field in which we must make efforts both to capture opportunities and to manage risks. Our basic approach is to address our dependencies and impacts on natural capital both through our own direct operations and through our financial activities, including financing and investment. p.35
- We identified sectors (chemicals, automotive, real estate, general wholesale/retail, and oil and gas (extraction)) with high dependencies and impacts on key natural capital (water and biodiversity) for our loan portfolio. p.36
  - We identified sectors with anticipated future business opportunities, such as food, chemicals, and general wholesale and retail, then assessed processes, priority regions, and potential risks within the loan portfolio that have significant dependencies and impacts on water and biodiversity.
  - We conducted a quantitative analysis and assessment of the status of actions related to natural capital within our loan portfolio.
- With respect to Mizuho's own direct operations, we analyzed and assessed the natural capital impacts and risks at our operational sites: p.38

	Quantitative analysis (loan portfolio)	Operational site analysis (direct operations)
Analysis method	• Sectors: Chemicals, automotive, real estate, oil and gas. • By scoring the status of responses by sectors and individual companies with regard to water and biodiversity, we analyzed the level of dependencies and impacts and identified and assessed opportunities and risks.	• Using location data on approximately 2,000 operational sites, we identified sites with high water / biodiversity risks. • Through surveys of operational sites, we assessed the actual state of impacts on nature and nature-related risks.
Implications	• The chemicals, real estate, and oil and gas sectors have high dependencies and impacts on water, while the automotive sector has high dependencies and impacts on biodiversity. • Risk mitigation measures contribute to capturing business opportunities.	• Certain sites in India, Thailand, and the U.S. have high water risks, such as floods and droughts (using the WWF Risk Filter). • From the survey results, we deemed the material risks to be negligible.

- Nature-related opportunities and risks for Mizuho p.41
  - Making use of analyses of natural capital dependencies and impacts, Mizuho works to capture opportunities through client engagement, financing arrangements, provision of consulting services, and exploring the potential for creating new business opportunities within the Group through activities such as the Forest Business Study Group
  - Alongside efforts to identify nature-related risks, we verify potential financing and investment clients and projects based on the *Environmental and Social Management Policy for Financial Activities** and other frameworks.
  - Mizuho is enhancing our business-oriented approaches in relation to the circular economy, which is closely related to natural capital and climate change. We are utilizing the Group's various financing functions and leveraging Mizuho's strengths with the aim of becoming an organizer that helps build the circular economy industries. p.42

Risk management Climate Nature

- As part of the Top Risk Management, where senior management recognizes risks with significant impacts on Mizuho, "*worsening impacts of climate change and inadequate environmental responses*" has been designated as a top risk, and Mizuho strengthened our control measures. p.43
- Based on the *Basic Policy for Climate-related Risk Management*, we recognized and assessed risks. For material climate-related risks, we identify and manage quantitative impacts through scenario analyses and credit risk assessments. p.44
- Risk control in carbon-related sectors: p.45
  - We have established a risk control framework to assess and monitor the degree of risks for each client along two axes — (1) the client's sector and (2) the status of the client's transition risk responses. (We added "GHG emissions reduction performance" and "alignment of targets and results with the 1.5°C pathway" to axis (2).)
  - We control exposure in high-risk areas by promoting transitions through engagement and assistance.
- We have established and operate the *Environmental and Social Management Policy for Financial Activities** (ES Policy). The following aspects of the ES Policy were revised in February 2025: p.50
  - Conduct due diligence when considering financing or investing in regions with high conservation value, and prohibit financing or investing in projects that involve illegal logging (revisions to be implemented in July 2025).

* In 2025, the name was changed from the previous "Environmental and Social Management Policy for Financing and Investment Activity" to " Environmental and Social Management Policy for Financial Activities."

Metrics and targets Climate Nature

Monitoring metrics	Targets	Recent results
Scope 1 and 2 emissions	Carbon neutral by FY2030	FY2023: 64,643 tCO_2
Scope 3 (financed emissions)	Net zero by 2050	(Targets and results disclosed by sector)
- Electric power	FY2030: 138 to 232 $kgCO_2e/MWh$	FY2023: 317 $kgCO_2e/MWh$
- Oil and gas	FY2030: Scope1,2: 4.1 gCO_2e/MJ Scope1,2 and Scope3: –12% to –29% (from FY2019 levels)	FY2023: Scope1,2: 5.4 gCO_2e/MJ Scope1,2 and Scope3: –53% (31.8 $MtCO_2e$)
- Coal mining (thermal coal)	FY2030: Zero balance for OECD countries FY2040: Zero balance for Non-OECD countries	FY2023: 0.5 $MtCO_2e$
- Steel	FY2030: –17% to –23% (from FY2021 levels)	FY2023: –28% (12.5 $MtCO_2e$)
- Automotive	FY2030: Scope1,2: –38% (from FY2021 levels) Scope 3: –31% to –43% (from FY2021 levels)	FY2023: Scope1,2: –23% (719 $ktCO_2e$) Scope 3: –10% (178 gCO_2e/vkm)
- Maritime transportation	FY2030: Portfolio climate alignment score ≤ 0%	FY2023: –7.0%
- Real estate	FY2030: 33 to 42 $kgCO_2e/m^2$	FY2023: 55 $kgCO_2e/m^2$
Sustainable finance	Total for FY2019 to FY2030: JPY 100 trillion of which JPY 50 trillion is earmarked for environment and climate-related finance	FY2019 to FY2024 Total: JPY 40.3 trillion of which JPY 20.5 trillion on environment and climate-related finance
Outstanding credit balance of coal-fired power generation plants[1]	Reduce the outstanding credit balance to 50% of the FY2019 balance by FY2030, and achieve an outstanding credit balance of zero by FY2040	March 31, 2025: JPY 220.5 billion (Down 26.4% from March 31, 2020)
Exposure to high-risk areas in transition risk sectors[2]	Reduce over the medium to long term	March 31, 2025: JPY 1.4 trillion (Down 0.4 trillion JPY from March 31, 2021)
Status of clients' transition risk responses	—	March 31, 2025: Steady progress in the targeted sectors
SX talent - Sustainability management experts - Environment and energy sector consultants	FY2025 - 1,600 experts - 150 consultants	As of March 2025: - Approx. 1,850 experts - Approx. 140 consultants

p.52

Data for disclosure aside from monitoring metrics:
- Sector-by-sector credit exposure in line with the TCFD Recommendations
- Sector-by-sector financial exposure in line with the TNFD Recommendations
- GHG emissions from financing and investment / capital market activities (financed emissions / facilitated emissions)

- Expansion of disclosure metrics
  - The scope of Scope 1 and 2 reduction targets have been expanded from seven of Mizuho's group companies to include all domestic and international consolidated Mizuho subsidiaries. p.53
  - For oil and gas sector of Scope 3 targets, the targeted value chain has been extended to include gas liquefaction and oil refining, in addition to the initial targets for upstream production (extraction, development, and production). p.62

[1] The funds used for the construction or expansion of coal-fired power plants, which is prohibited under the ES policy.
[2] See p.45 "Risk Control in Carbon-related Sectors" for the definition of exposure to high-risk areas.

2. Progress under the FY2024 Action Plan

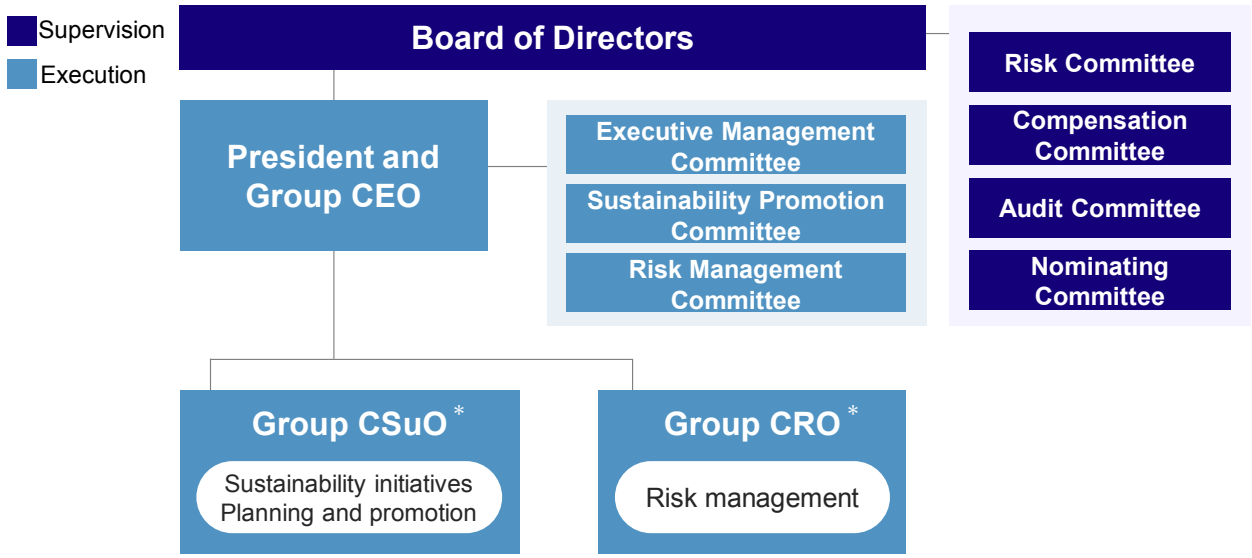
The table below summarizes our progress under the FY2024 Action Plan.

Area		FY2024 Action Plan	Key progress	Page
Action on climate change	Governance	• Strengthen the business execution line's initiatives to implement the Net Zero Transition Plan, and report on those initiatives to the supervisory line • Accelerate preparation to respond to sustainability disclosure regulations	• Regularly reported and discussed initiatives at both business execution and supervisory level, including the Sustainability Promotion Committee, the Executive Management Committee, the Risk Committee, and the Board of Directors. • Discussed policies, plans, and internal frameworks for responding to regulations on sustainability information disclosures (ISSB/SSBJ and CSRD).	p.10
	Strategy	• Establish effective strategic client engagement from the perspectives of opportunities, risks, and real economy transitions	• Strengthened dialogues based on the Grand Design, as well as dialogues in sectors in which Scope 3 targets have been set. Also undertook initiatives to enhance the effectiveness of engagement, such as providing support by departments with expertise.	p.19
		• Engage strategically in policy engagement (communicate opinions and positions to rule-making organizations)	• Contributed to rulemaking within and outside of Japan by continuing to advocate for domestic policies based on our industry insight and by leading working groups engaged in global initiatives.	p.26
		• Examine scenario analysis methods and quantification of the financial impacts of climate change (risks, opportunities, expenses, etc.), based on disclosure regulations	• Examined response policies and methods of scenario analyses based on disclosure regulations.	p.30
	Risk management	• Improve evaluation criteria for clients' responses to transition risk	• Added "Certain GHG emissions reductions have been achieved relative to targets" and "Targets and performance are consistent with the 1.5 degree-aligned pathway" as criteria for evaluating the status of client's transition risk responses.	p.45
		• Update our control policies and exposure planning for carbon-related sectors	• Monitored our exposure in *high risk* and *medium risk* areas identified with two-axis risk evaluations for risk controls in carbon-related sectors.	
		• Revise our financing and investment policies to properly reflect the environmental and social conditions	• Revised to the *Environmental and Social Management Policy for Financial Activities*: Added a policy to conduct due diligence on businesses that have a negative impact on regions with high conservation value across sectors.	p.50
	Metrics and targets	• Financed emissions: Monitor progress in sectors where targets have been set and examine additional measures as needed	• Scope 3 (financed emissions): Enhanced dialogues with approximately 100 clients that account for about 70 to 80 percent of emissions in the sectors where medium-term targets have been set. Conducted progress monitoring based on dialogues with clients as well as target management (such as progress visualization and impact analysis) tailored to sector-specific attributes. To the value chains covered in Scope 3 targets for the oil and gas sector, added gas liquefaction and oil refining to the existing upstream production processes (extraction, development, and production).	p.21 p.62
		• Expand measurements and examine targets for facilitated emissions, and systemize Scope 3 measurements with a view to obtaining assurances	• Conducted internal discussions and trial calculations to expand the measurement of facilitated emissions (sector, asset coverage). Made progress on systemizing Scope 3 measurements.	p.56
Natural capital		• Capture business opportunities and examine appropriate risk management related to natural capital using the results of the LEAP approach analysis • Disclose information in line with TNFD Recommendations	• Conducted an in-depth analysis of natural capital dependencies and impact across our loan portfolio and at our operational sites, while also identifying additional business opportunities and risks. • Prepared data for FY2025 TNFD information disclosures as a TNFD Early Adopter.	p.36

Governance

1. Supervisory and business execution structure

Climate and nature-related initiatives are closely integrated with sustainability efforts, risk management, and other key areas. Aligned with the respective promotion and oversight system, these initiatives are reviewed and discussed by executive bodies, including the Sustainability Promotion Committee, Risk Management Committee, and Executive Management Committee. Outcomes from these discussions are then reported to the Board of Directors and the Risk Committee for supervision.



＊Group CSuO: Group Chief Sustainability Officer, Group CRO: Group Chief Risk Officer

(1) Major reports and deliberations in the supervisory line

Committee	Composition [3]	Roles in relation to climate change and natural capital	Major reports and matters determined
Board of Directors	• Chair: Outside director • Composition: 8 outside directors 2 internal non-executive directors 4 directors who concurrently serve as internal executive officers	• Receives periodic reports on the Group's environmental initiatives from the business execution line and provides supervision • Establishes, amends, and abolishes important policies such as the *Environmental Policy* and the Transition Plan, and passes resolutions on basic matters like business plans	• FY2025 business plan • Expand scope of Scope 1 and 2 reduction targets, and revise Scope 3 targets for the oil and gas sector • Sustainable business strategy and points to be enhanced • Status of initiatives to address climate change and natural capital • Approach to comply with sustainability disclosure regulations • Revision of the *Environmental and Social Management Policy for Financial Activities*
Risk Committee	• Chair: Internal non-executive director • Composition: 2 outside directors 1 internal non-executive director 2 outside experts	• As an advisory body to the Board of Directors, it decides and oversees matters relating to risk governance, and makes recommendations to the Board of Directors regarding the status of risk management	• Makes recommendations to the Board of Directors regarding matters to be resolved or reported
Compensation Committee	• Chair: Outside director • Composition: 3 outside directors	• Determines the basic policy for executive officer compensation and the executive officer compensation system	• Further improvements on transparency of the basis for determining performance-linked compensation, including specifying the components for determining compensation regarding sustainability
Audit Committee	• Chair: Outside director • Composition: 3 outside directors 1 internal non-executive director	• Audit of the status of business execution line's initiatives	• Results of monitoring the status of sustainability-related initiatives of each company / unit based on audit plans

[3] The composition of the Board of Directors' candidates to be proposed at the Annual General Meeting of Shareholders to be held in June 2025.

Status of discussions related to climate change and natural capital at the supervisory line
(Feedback and opinions from outside directors and Risk Committee members who have experience and expertise in sustainability and climate change matters)

- While trends and environmental changes related to sustainability are evolving rapidly, it is essential for Mizuho to maintain its basic policy, gather information, and develop strategies accordingly. At the same time, it is important to carefully explain the direction of initiatives within the company.
- It is necessary to strengthen moves toward transition, including formulating a cross-sector Grand Design and expanding sectors to confirm the status of transition risk responses. The grand design is useful for deepening stakeholder understanding of Mizuho's initiatives, and proactive communication of the Grand Design through various channels is imperative.
- It is important what kind of support employees who deal directly with clients can provide regarding the future directions of companies based on the Grand Design. It is necessary to establish processes that deepen employee understanding and enable that understanding to be used in engagement.
- In addition to decarbonization, natural capital and human rights are also important. Sustainability initiatives are required across all industries, not just high-emission industries. It is important to establish support systems in anticipation of dynamic transformations brought about by the emergence of new industries and start-ups.
- Given the mounting risk of greenwashing, it is necessary to carry out in-depth reviews of clients' GHG emission reduction targets, the progress of their strategies, and challenges or risks in executing those strategies.
- Regarding information disclosure, future requirements will not only focus on the achievement and validity of KPIs but also the level of commitment to strategies to achieve KPIs and the appropriateness of organizational structures. It is necessary to provide a comprehensive explanation of governance, strategies, risk management, and metrics for selected topics.
- With respect to Scope 3 targets, it is important for Mizuho to engage proactively with clients while identifying how to connect these targets to concrete solutions and to drive change together with clients.

Initiatives at the business execution, based on these discussions at the supervisory line, include formulating a cross-sector Grand Design, expanding the sectors targeted for engagement, establishing support systems for sales representatives to strengthen engagement efforts, and enhancing initiatives related to circular economy business.

(2) Major reports and deliberations in the business execution line

Committee	Composition [4]	Roles in relation to climate change and natural capital	Major reports and matters determined
Executive Management Committee	• Chair: President & Group CEO	• Deliberates on policies and plans as well as the setting of metrics and targets relevant to the *Environmental Policy*, the Transition Plan, and other policies • Regularly reports to the Board of Directors on the status of environmental initiatives	• FY2025 business plan • Expand scope of Scope 1 and 2 reduction targets, and revise Scope 3 targets for the oil and gas sector • Status of initiatives to address climate change and natural capital • Approach to comply with sustainability disclosure regulations • Revision of the *Environmental and Social Management Policy for Financial Activities* (ES policy)
Risk Management Committee	• Chair: Group CRO	• Deliberates on and coordinates matters related to risk monitoring and management • Determines top risks	• Monitoring the status of climate-related risk initiatives • Advancement of climate-related risk management initiatives • Status of the management of responsible financing and investment and policy revisions
Sustainability Promotion Committee	• Chair: President & Group CEO • External experts (Invited as necessary)	• Deliberates on and coordinates matters related to climate change and natural capital	• Engagement implementation policy and strategy • Enhancement of the *Net Zero Transition Plan* and Scope 3 performance management • Revision of medium-term targets for the oil and gas sector • Advancement of climate-related risk management and revision of the ES Policy • Sustainability information disclosures • Sustainable business strategies • Natural capital and circular economy initiatives • Responses to recommendations from employee-driven working groups

[4] The composition of the Board of Directors' candidates to be proposed at the Annual General Meeting of Shareholders to be held in June 2025

(3) Invitation of outside experts

External experts are invited to the Risk Committee and Sustainability Promotion Committee to provide recommendations and exchange opinions with directors and executive officers, based on their expertise in sustainability, climate change, and natural capital.
Additionally, Mizuho holds meetings and other engagements to facilitate discussions between external experts and senior management on sustainability-related business strategies, decarbonization efforts and compliance with sustainability disclosure regulations.

Risk Committee	Rintaro Tamaki (standing committee member)	President, Japan Center for International Finance
	Hiroshi Naka (standing committee member)	Professor, School of Policy Studies, Kwansei Gakuin University
Sustainability Promotion Committee	Hirotaka Hideshima (joined the 14th committee meeting)	Counsellor on Global Strategy to President, Norinchukin Bank / the Board of Directors member of the Taskforce on Nature-related Financial Disclosures (TNFD)
	Ashleigh Owens (joined the 20th committee meeting)	Financial Institutions Lead, Shift
Management-level discussions with outside experts	Discussion sessions on the following topics were held. • Compliance with sustainability information disclosure regulations • Human rights issues to watch	

(Titles of external experts on the Sustainability Promotion Committee are given as at the time of the meeting)

2. Compensation for executive officers

Mizuho Group's compensation system consists of Base Compensation, Stock Compensation I, Stock Compensation II, and Short-term Incentive Compensation. Furthermore, Stock Compensation II, which is the performance-linked compensation incorporates the evaluation axes of stakeholders including shareholders, clients, economy and society, and employees. Key evaluation indicators include sustainability-related metrics such as sustainable finance amount, climate-related initiatives, and assessment by ESG rating agencies.

Compensation system

Compensation type	Perform-ance linked	Payment criteria	Payment term	Payment method	Examples of composition of compensation: Executive officers responsible for business execution – Group CEO	Executive officers responsible for business execution – Managing Executive officers	Non-executive officers
Base Compensation	No	Payment in accordance with the roles and responsibilities of each of the officers	Monthly	Cash	36%	49%	85%
Stock Compensation I	No	Payment in accordance with the roles and responsibilities of each of the officers	At time of resignation	Stock	4%	4%	
Stock Compensation II	Yes	Base amount x Corporate performance-linked factor (0 to 150%)*1 Corporate performance-linked factor= Evaluation based on profit*2 and others + Evaluation for which the evaluation axes are stakeholders in the table below	Deferred payment over three years	Stock	32%	24%	
Short-term Incentive Compensation	Yes	Base amount x Corporate performance-linked factor (0 to 150%)*1 Corporate performance-linked factor= Evaluation based on profit*2 and others± individual evaluation	Lump sum payment in the following year*4	Cash	28%	23%	15%

Evaluation axis	Main evaluation indicator	Weight
Shareholders	Consolidated ROE Total shareholder return (TSR)*3	50%
Clients	Customer satisfaction Sustainable finance amount Assessments by ESG rating agencies Climate-change initiatives Staff survey	50%
Economy and society		
Employees		

Subject to malus and clawback*5

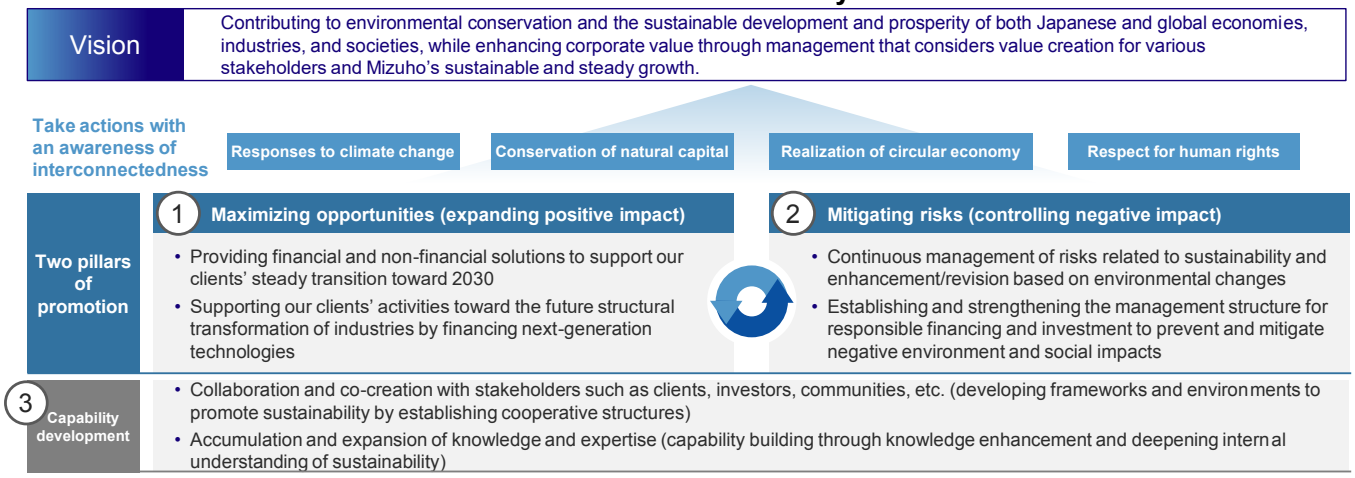
*1. The Compensation Committee makes the final decision based on the business environment and the existence of events that should be reflected individually.
*2. Net income for the period attributable to shareholders of the parent company.
*3. Evaluated based on relative comparison with competitors, etc.
*4. Deferred payments will be paid over three years from the following fiscal year if compensation exceeds a certain level.
*5. A system is adopted which enables forfeiture of compensation remaining unpaid (malus) and request for return of compensation (clawback) by resolution of the Compensation Committee depending on the performance of the Group or the individual.

Strategy

1. Overview of Mizuho's sustainability initiatives

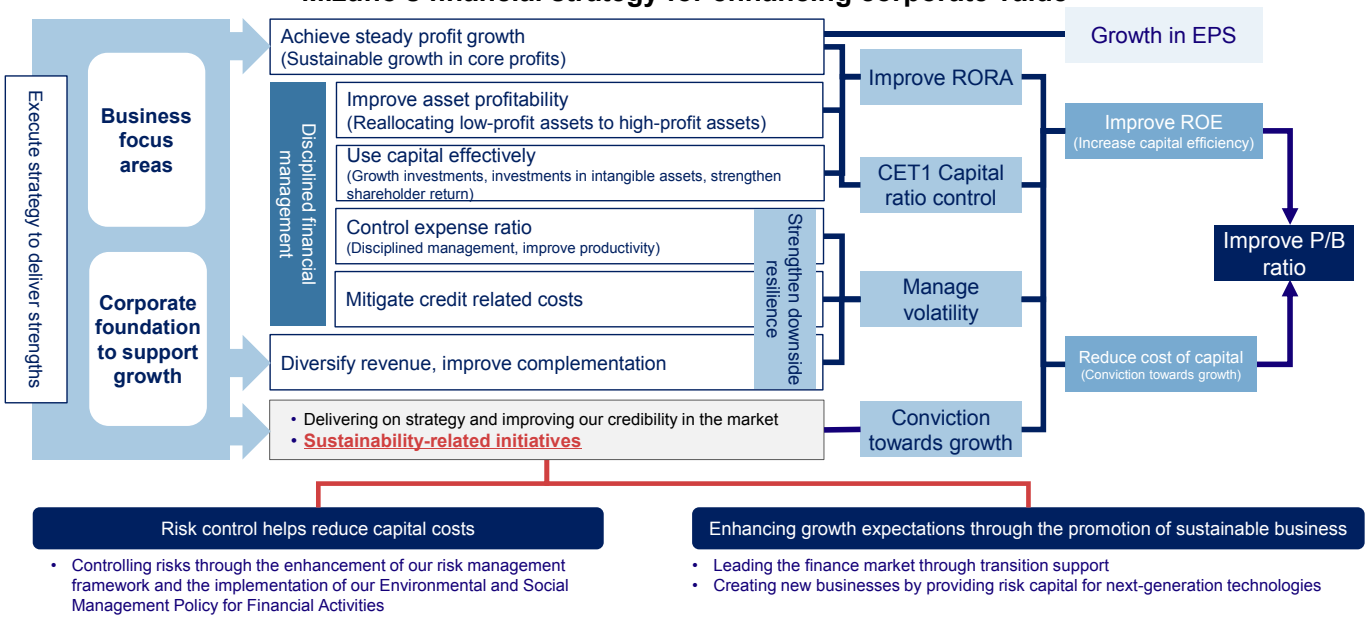
Mizuho has integrated sustainability into its management strategy, and we are driving forward with both (1) maximizing opportunities and (2) mitigating risks, while (3) strengthening our capability to support these initiatives. Challenges such as climate change responses, natural capital conservation, and the realization of a circular economy are closely interconnected. As such, we are promoting integrated initiatives that take into account their mutual interdependencies.
Even amid the significant changes in the international landscape surrounding environmental measures and energy, Mizuho remains committed to advancing these initiatives without altering our fundamental approach to sustainability.

Overview of Mizuho's sustainability initiatives



Mizuho aims to enhance its corporate value by improving ROE and controlling capital costs through steady profit growth in business focus areas and disciplined financial management. In this context, we believe our sustainability initiatives may contribute to lowering capital costs and increasing expected growth. We will continue to aim to reducing uncertainty and enhancing resilience through risk control. We believe that promoting sustainable business contribute to the sustainable growth of our clients and the creation of value across society as a whole, ultimately supporting Mizuho's own growth and fostering expectations for future growth through a virtuous cycle.

Mizuho's financial strategy for enhancing corporate value

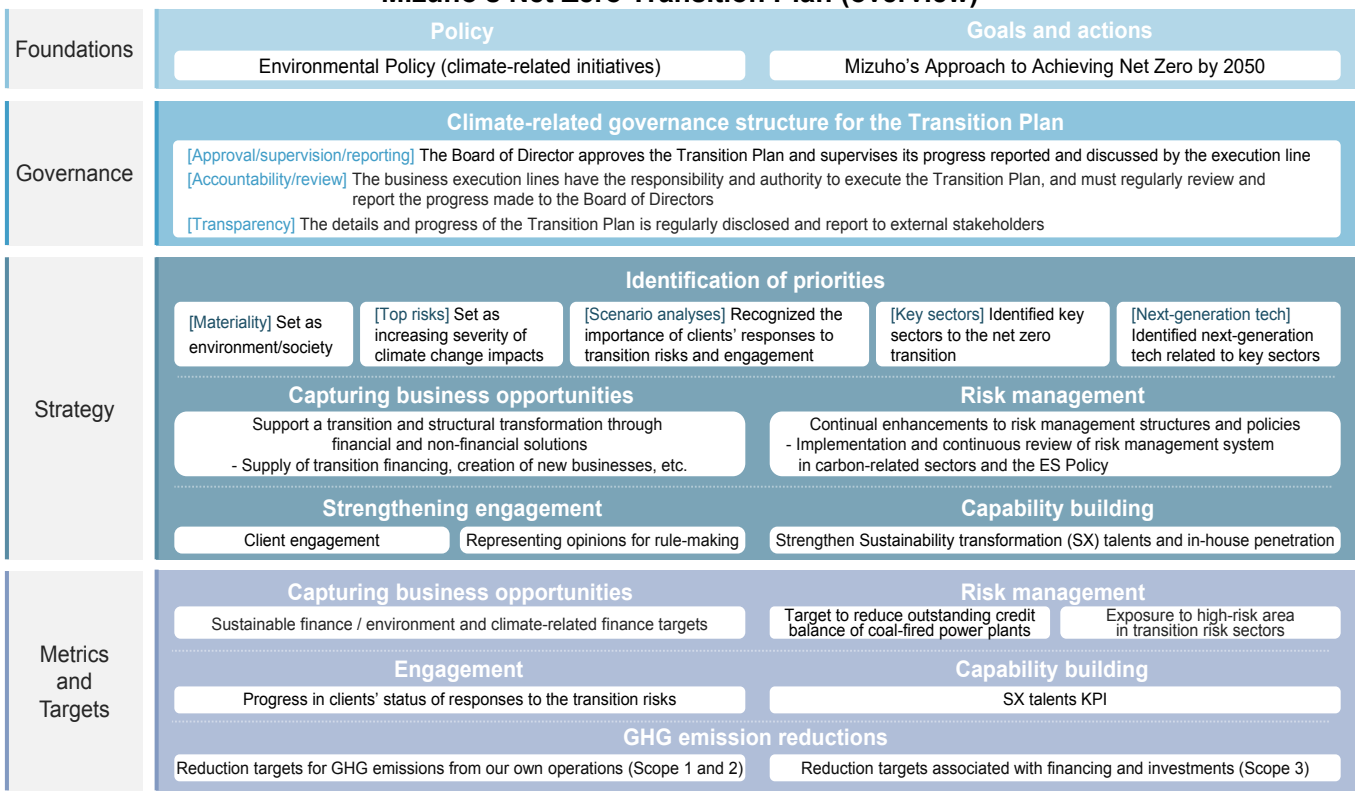


2. Responding to climate change

(1) Net Zero Transition Plan (formulated in 2022, revised in 2023)

From the perspectives of facilitating transition in the real economy, capturing business opportunities, and enhancing risk management, we formulated the *Net Zero Transition Plan* in order to promote a more integrated responses to climate issues across the Group. The plan was formulated in reference to the transition plan frameworks from TCFD, GFANZ, and other organizations and was adopted by the Board of Directors of the Mizuho Financial Group.

Mizuho's Net Zero Transition Plan (overview)



Description of each component in the Net Zero Transition Plan

	Description	Page
Foundations	**Policy**	
	The Environmental Policy clarifies the issue awareness and concrete actions that form the basis of environmental initiatives, including climate change actions and defines our stance on climate change toward achieving a decarbonized society.	p.71
	Goals and Actions	
	In order to make actual progress on the stance outlined above, this component clarifies our goals and actions to achieve a decarbonized society by 2050 as described in *Mizuho's Approach to Achieving Net Zero by 2050*.	p.71
Governance	**Governance structure for the Transition Plan**	
	Approval, supervision, and reporting: The Board of Directors approved the revised *Net Zero Transition Plan* (formulated in April 2022 and revised in April 2023). Regarding the Transition Plan's progress, the Board of Directors supervises information reported after discussions by the business execution line.	p.10
	Accountability and review: The business execution line is accountable and responsible for the execution of the Transition Plan, conducts periodic reviews of the plan's execution status, and reports the review findings to the Board of Directors.	p.10
	Transparency: Transition Plan and the status of related initiatives are regularly disclosed and reported to external stakeholders.	-

Strategy	**Identification of priorities**	
	Materiality: This component identifies *environment and society* as one materiality — a priority issue over the medium to long term for sustainable growth and development of Mizuho and its stakeholders, including clients, employees, and the economy and society	p.72
	Top risks: The component notes that *worsening impacts of climate change and inadequate environmental responses* have been set as one of the top risks for FY2025	p.43
	Scenario Analysis: The component recognizes the importance of the engagement and corporate clients' responses to transition risks, based on considerations of the results of past scenario analyses	p.30
	Key sectors: Based on emission volume (impact on the real economy), Mizuho's opportunities and risks associated with decarbonization and the characteristics of Mizuho's portfolio and client base, the component identifies key sectors to focus on from a decarbonization perspective. - Electric power, energy, steel, chemicals, automotive, maritime transportation, aviation, and real estate sectors	p.72
	Next-generation technologies: The component identifies next-generation technologies associated with decarbonization in the key sectors given above. - Hydrogen, offshore wind farms, CCS, and biomass (SAF)	p.72
	Capturing business opportunities	
	Support clients' transition to decarbonization and business structural transformation based on sustainable business strategy. - Steady transition support toward 2030 - Promote clients' future-oriented actions	p.22
	Risk management	
	Continuous improvements to risk management systems and policies - Enhancing the climate-related risk management framework by revising evaluation criteria for assessing the status of responses to transition risks - Operation of and continuous revisions of the *Environmental and Social Management Policy for Financial Activities* (ES Policy)	 p.45 p.50
	Strengthening engagement	
	• Support clients' transitions by approaching their carbon neutrality strategies, business strategies, and financial and capital strategies through analysis and ideas/concepts, constructive dialogue, and solution provision and business co-creation • Formulating the "Grand Design" for the ideal Japanese industrial structure in 2050 and enhancing dialogues with stakeholders • In transition risk sectors, we confirm the status of clients' responses to transition risk and support their progress in dealing with transition risk and business restructuring through engagement	p.20 p.45
	The component describes initiatives to strengthen involvement in domestic and international rule-making for decarbonization through participation in conferences hosted by government and public organizations, as well as international climate initiatives.	p.26
	Capability building	
	This component describes initiatives to foster and strengthen human resources in relation to sustainability transformation. We are continuously enhancing mechanisms to encourage employee-initiated actions, internal communication, and knowledge acquisition, ensuring employees understand the importance of promoting sustainability and engage proactively in related initiatives.	p.27
Metrics and Targets	(Position of metrics and targets) This component sets the following metrics and targets to measure the progress of initiatives described in the Strategy section above and the contribution to transition of the real economy as a result of the initiatives	
	Capturing business opportunities	
	• Targets for sustainable finance and environment and climate-related finance	p.22
	Risk management	
	• Targets to reduce the outstanding credit balance of coal-fired power generations plants • Exposure to high-risk areas in transition risk sectors	p.52 p.46
	Engagement	
	• Status of client responses to transition risks	p.47
	Capability building	
	• Sustainability transformation talents KPIs (Sustainability management experts, environment & energy sector consultants)	p.27
	GHG emission reductions	
	• Targets to reduce emissions from our own business activities (Scope 1 and 2) • Targets to reduce emissions from financing and investment (Scope 3)	p.53 p.58

Roadmap to Net Zero by 2050

	2023	2024	2025	···	2030	···	2040	···	2050

GHG emissions reduction

Scope1,2: FY2024 64% reduction *1 (compared to FY20) → Carbon neutral

Scope3 (Financed emissions)

Medium-term targets by sector	Metrics	FY23 Result	Compared with base year		
Electric power	Emission intensity	317 kgCO2e /MWh	− 71 kgCO2e /MWh	138~232	
Oil and gas Clients' Scope 1,2	Emission intensity	5.4 gCO2e /MJ	− 1.0 gCO2e /MJ	4.1	
〃 1,2,3	Absolute emissions	31.8 MtCO2e	− 53%	− 12 to − 29% *3	
Coal mining (thermal coal)	Absolute emissions	0.5 MtCO2e	− 4.6 MtCO2e	OECD countries Zero balance	Non-OECD countries Zero balance
Steel	Absolute emissions	12.5 MtCO2e	− 28%	− 17 to − 23% *4	
Automotive Clients' Scope 1,2	Absolute emissions	719 ktCO2e	− 23%	− 38% *4	
〃 3	Emission Intensity	178 gCO2e /vkm	− 10%	− 31 to − 43% *4	
Maritime transportation	Portfolio climate alignment	− 7.0%	− 8.8%	≦0%	
Real estate	Emission intensity	55 kgCO2e/㎡	− 14 kgCO2e/㎡	33~42	

Net Zero

Business opportunities

	(Mar-25)	
Sustainable finance*2 (of which environment and climate-related finance)	JPY 40.3T (JPY 20.5T)	JPY 100T (JPY 50T)

Risk Management

	(Mar-25)		
Outstanding credit balance of coal-fired power generation plants*5	JPY 220.5B	− 50%*3	Zero balance
Exposure to high-risk areas in transition risk sectors*6	JPY 1.4T	Reduction in the medium to long term	

Engagement

Support client transition to decarbonization and addressing transition risk

Capability building

	(Mar-25)	
Sustainability management experts	approx. 1,850	1,600
Environment and energy sector consultants	approx. 140	150

*1: All domestic and international consolidated subsidiaries. In fiscal year 2020, this applied to seven group companies. (See p.53)
*2: cumulative financing volume since FY2019 *3: compared with FY2019 *4: compared with FY2021
*5: The funds are used for the construction or expansion of coal-fired power plants, which is prohibited under the ES policy
*6 :See p.45 "Risk Control in Carbon-related Sectors" for the definition of exposure to high-risk areas

(2) Recognition of and efforts to capture opportunities

i. Recognition of opportunities associated with responses to climate change

To achieve a decarbonized society, it is necessary to expand the adoption of existing technologies, along with the development and commercialization of next-generation technologies and the establishment of new supply chains, on both the energy demand and supply sides. This will require investments of USD 4.5 trillion per year globally until 2030 and JPY 150 trillion over the next 10 years, starting in 2023, in Japan. Mizuho sees business opportunities in industrial and business structural transformations aligned with the transition to a decarbonized society and in the investments in practical applications of new technologies and their social implementation, and we proactively support clients' responses to climate change.

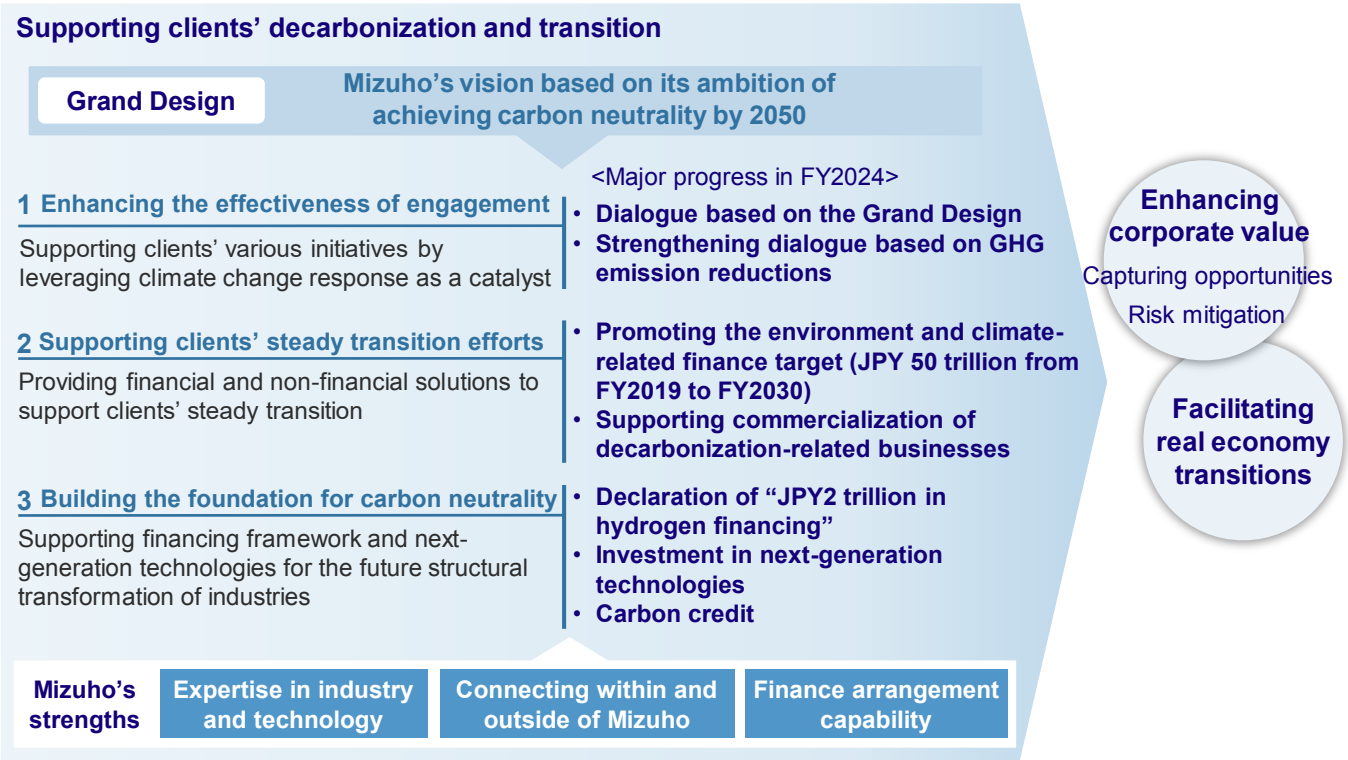
Investment areas in Japan and estimated public-private investment amounts

	Industry / Public-private investment amounts (JPY)									
Manufacturing	Steel	> 3 trillion	Chemicals	> 3 trillion	Pulp and paper	> 1 trillion	Cement	> 1 trillion		
Transportation	Automotive	> 34 trillion	Storage batteries	> 7 trillion	Aircraft	> 4 trillion	SAF	> 1 trillion	Ships	> 3 trillion
Living and related sectors	Daily life	> 14 trillion	Resource circulation	> 2 trillion	Semi-conductors	> 12 trillion				
Energy	Hydrogen	> 7 trillion	Next-generation renewable energy	> 31 trillion	Nuclear energy	> 1 trillion	CCS	> 4 trillion		

Source: Prepared by Mizuho Financial Group based on materials from *Sector-specific Investment Strategies that Specify Investment Promotion Measures to Realize Green Transformation*, METI

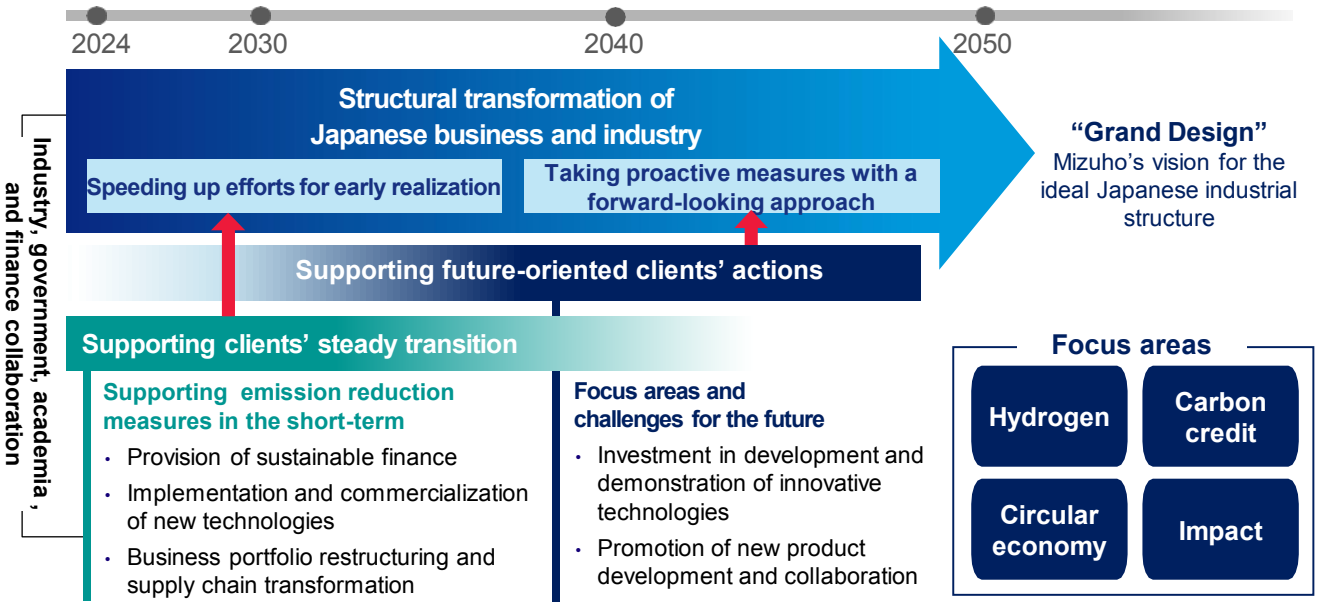
ii. Approach to climate change response

At Mizuho, we developed a "Grand Design" for the ideal industrial structure for Japan and actively support our clients in their choices relating to decarbonization and energy transition. We believe that these initiatives will contribute to enhancing corporate value for both Mizuho and our clients, from both opportunity and risk perspectives and promoting real economy transition.



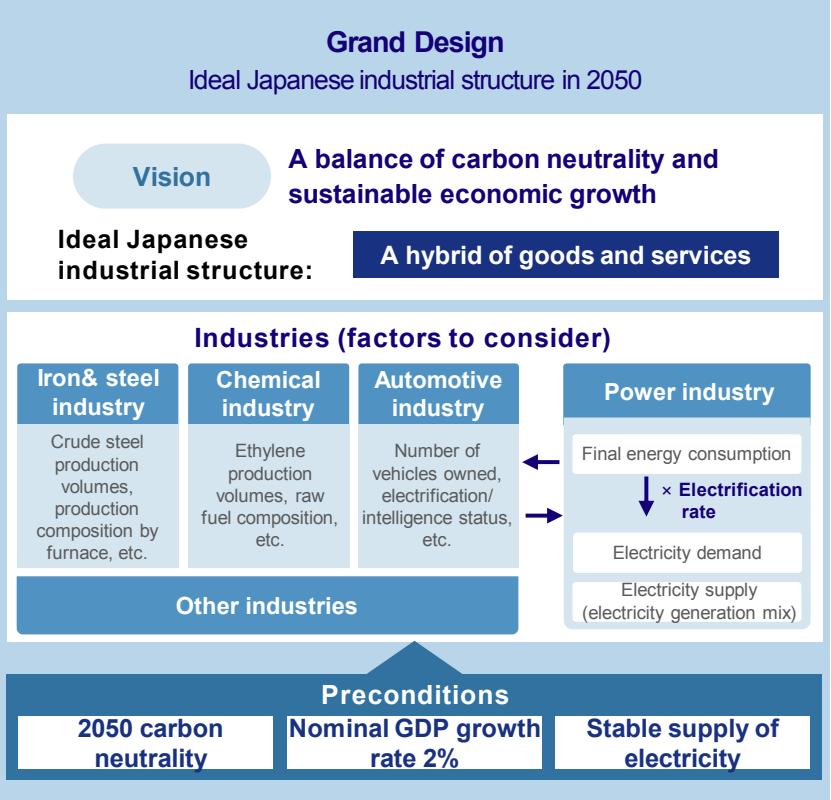
iii. Engagement

In FY2024, to make our engagement with clients even more effective, Mizuho developed the Grand Design for the ideal Japanese industrial structure in 2050. We presented an approach that involves co-creating with various industry clients and engaging in cross-industry collaboration to achieve this vision.
While aiming for the Grand Design, we will not only support steady corporate transitions in the short term but also promote technological innovation and business model transformation. Our goal is to envision the future together from a medium- to long-term perspective, thereby contributing to enhancing our clients' corporate value and expanding their businesses.



a. Grand Design

The Grand Design explores a Japanese industrial structure that balances carbon neutrality with sustainable economic growth. Using the Grand Design as a starting point for dialogue with clients, we facilitate discussions and shared understanding to enhance the effectiveness of engagement. Through this approach, we support our clients in their efforts to decarbonize their business portfolios and advancing corporate actions, including energy transition.



Background of the development

- Addressing social issues requires a comprehensive approach that considers the entire industry. The Grand Design presents a hypothesis on the desired direction for industries, enabling collaboration with clients and various stakeholders to work together toward its realization.

Preconditions of the Grand Design

- The Grand Design assumes achieving 2050 carbon neutrality, a sustainable economic growth and the stable supply of electricity. It is developed based on megatrends such as demographic shifts.

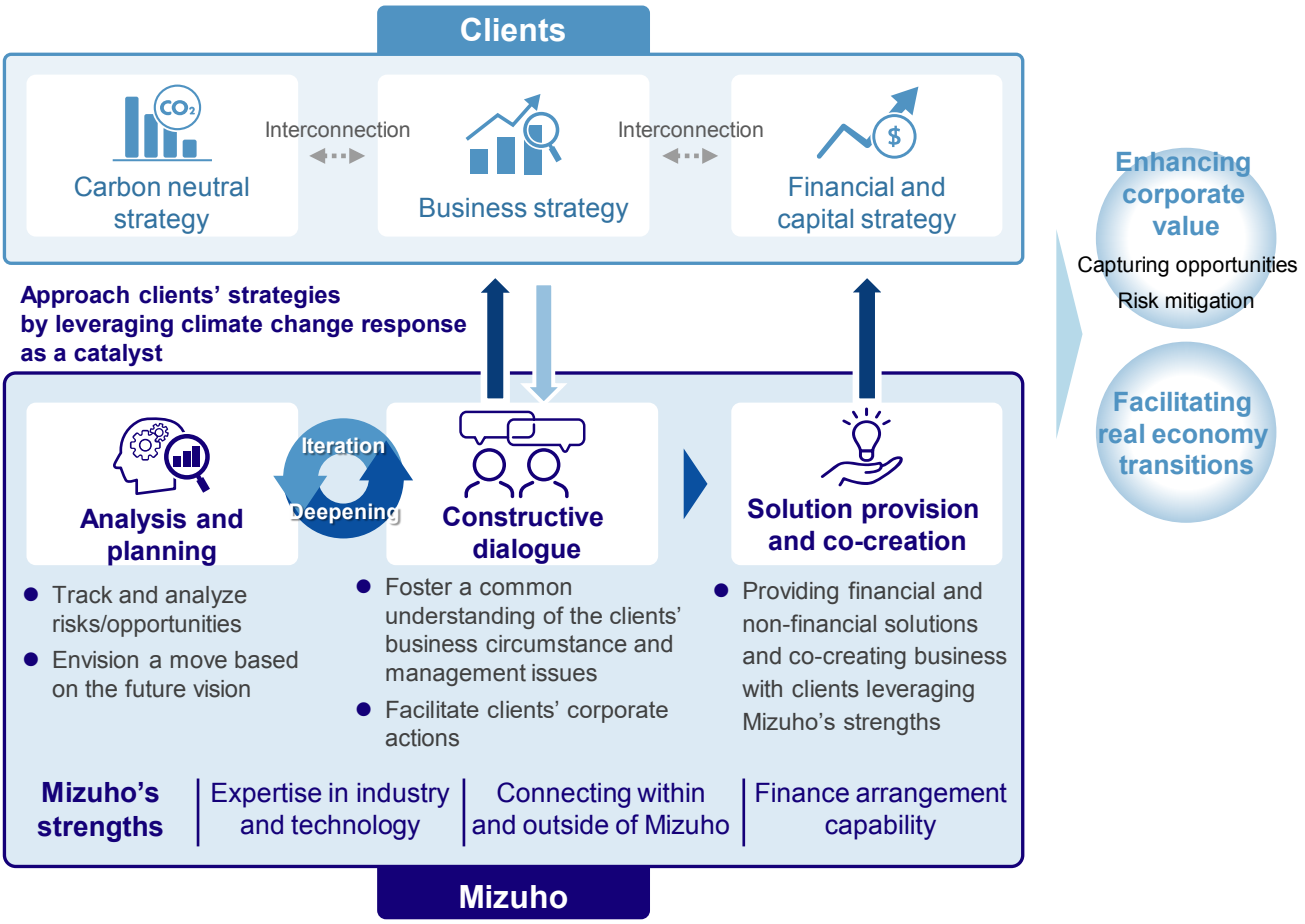
Essence of the Grand Design

- Quantifying the supply and demand dynamics in Japan for the industries, which together account for approximately 70% of the country's GHG emissions. Examining the impacts on each industry and the necessary challenges within the framework of overall optimization.
- Aiming for sustainable growth through a "hybrid of goods and services," strengthening value creation in Japan's core manufacturing industry (goods) while advancing the industrialization of promising areas in the non-manufacturing (services) industry.

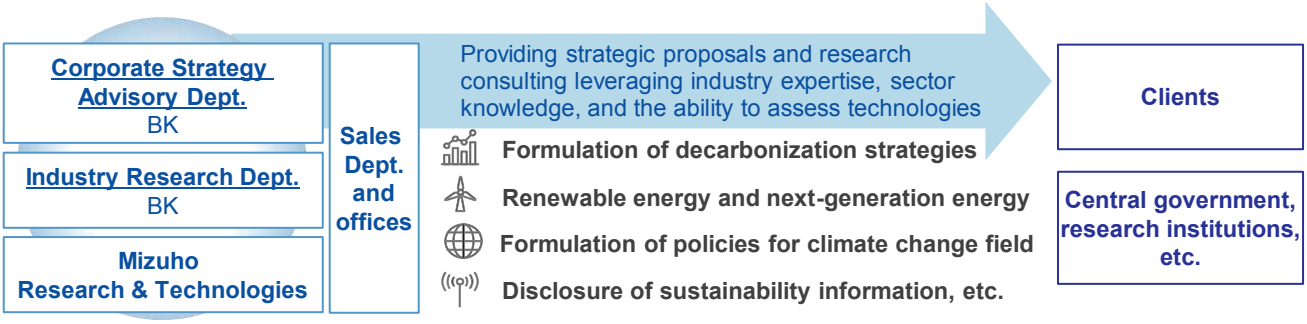
b. Client engagement

Mizuho places great importance on engagement with clients in addressing climate change. We approach our clients' carbon-neutral strategies, business strategies, and financial and capital strategies through *analysis and ideas/concepts*, *constructive dialog*, and *solution provision and business co-creation*. By supporting clients' transitions with engagement as a starting point, we aim to enhance the corporate value of both Mizuho and our clients by reducing transition risks and capturing business opportunities, and thereby contribute to the transition of the real economy and the realization of a decarbonized society.

Overview of client engagement



Mizuho has developed a framework in which sales representatives responsible for engagement work closely with specialized departments equipped with diverse expertise and capabilities, mobilizing the collective strength of the group to support clients. In particular, two of Mizuho's major strengths are our consulting functions and research functions, which make use of our industry and sector insight and technology assessment capabilities. The Corporate Strategy Advisory Department, which provides proposals based on industry expertise such as financial and capital strategies, along with the Industry Research Department and Mizuho Research & Technologies, which possess advanced knowledge in industries, environment, and energy, work closely with sales departments to deeply understand clients' challenges and needs, supporting the formulation of various strategies.



Status of client engagement in FY2024

In FY2024, Mizuho enhanced dialogues based on the Grand Design and dialogues with sectors where Scope 3 targets have been set. We also worked to improve the effectiveness of engagement with initiatives such as the provision of engagement support books.

Status of Engagement in FY2024

Dialogue based on the Grand Design

Discussed to explore the ideal structure of Japan's industries and sectors with **Japanese electric power companies**, **steel companies**, and **relevant government agencies**

Dialogue with Scope 3 target sectors

Engaged in dialogue, with the focus of reducing GHG emissions, with **approximately 100 clients** that account for about 70 to 90 percent of emissions in the target sectors

Dialogue with transition risk sectors

Verified the status of responses to transition risks through dialogue with **approximately 550 clients**

Dialogue topics in Scope 3 target sectors

Electric power
- ✓ Future energy mix and capital investment plans for 2030
- ✓ Energy transition plans based on amendments to Japan's *Strategic Energy Plan*

Oil & gas
- ✓ Efforts to reduce emissions (energy conservation and adoption of renewables, reduction of methane emissions and flaring, CCUS adoption, etc.)
- ✓ Commercialization of decarbonized energy (SAF, hydrogen, etc.)

Steel
- ✓ Efforts to reduce emissions from iron and steel production processes
- ✓ Procurement strategies for renewable energy and cold iron sources
- ✓ Promotion of green steel on the user side

Automotive
- ✓ Strategies for carbon-neutral vehicles, such as battery EVs and rechargeable batteries
- ✓ Renewable energy procurement, such as corporate PPA

Maritime transport
- ✓ Status of responses to IMO fuel-efficiency regulations (CII ratings, etc.)
- ✓ Strategies and challenges for decarbonization of the shipping portfolio

Real estate
- ✓ Decarbonization of new and existing buildings
- ✓ Initiatives toward adopting renewable energy for electric power used by buildings

Provision of support books

We provided industry-specific support books to sales representatives to promote dialogue with clients focused on emission reductions.

Mizuho also continually works on enhancing our services and solutions to support clients' climate change responses and transitions, using engagement as a starting point.

Enhancements to support systems for overseas clients: Strategic partnership with Pollination Global Holdings

To strengthen our capability to deliver services and solutions globally, we established a strategic partnership, including capital investment, with Pollination, a group of experts specializing in climate change and nature-based solutions. Since the launch of our partnership in November 2024, we have initiated supporting multiple clients both within and outside Japan. Through this partnership, we are developing frameworks to assist our clients' effort to implement decarbonization steps.

About Pollination Global Holdings

Climate, Nature and Investment Experts	180+
Major Advisory Clients	> 200
Offices	7
Countries with Pollination Presence	5
Languages spoken	25+

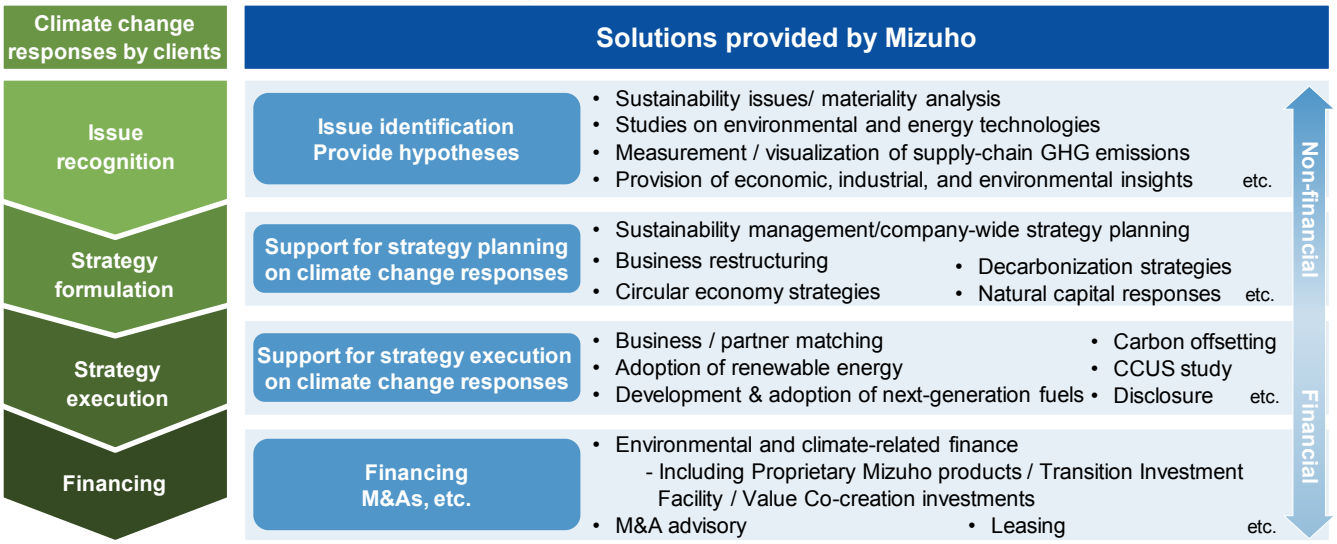
Decarbonization support for SMEs: Development and provision of GHG Visualization Impact Finance

Decarbonization of entire supply chains requires efforts by SMEs as well as large enterprises. To this end, Mizuho Bank, in partnership with e-dash, developed GHG Visualization Impact Finance, a product tailored for SME clients. With this product, we support client decarbonization by facilitating (1) easy and accurate visualization of emissions and the setting of reduction targets with the use of e-dash, a platform for visualizing and reducing GHG emissions, and (2) the proposal and support of reduction strategy through engagement during the financing period.

iv. Support for steady transitions by clients

In order to capture business opportunities associated with the transition to a decarbonized society, Mizuho provides consistent support to our clients from both financial and non-financial perspectives to restructure business portfolios, transform supply chains, and work toward social implementation of next-generation technologies that will lead to future industrial structural transformations. Our support covers from issue recognition, strategy formulation, its embodiment and commercialization, to financing during the execution stage.

Solutions supporting the transition to a decarbonized society

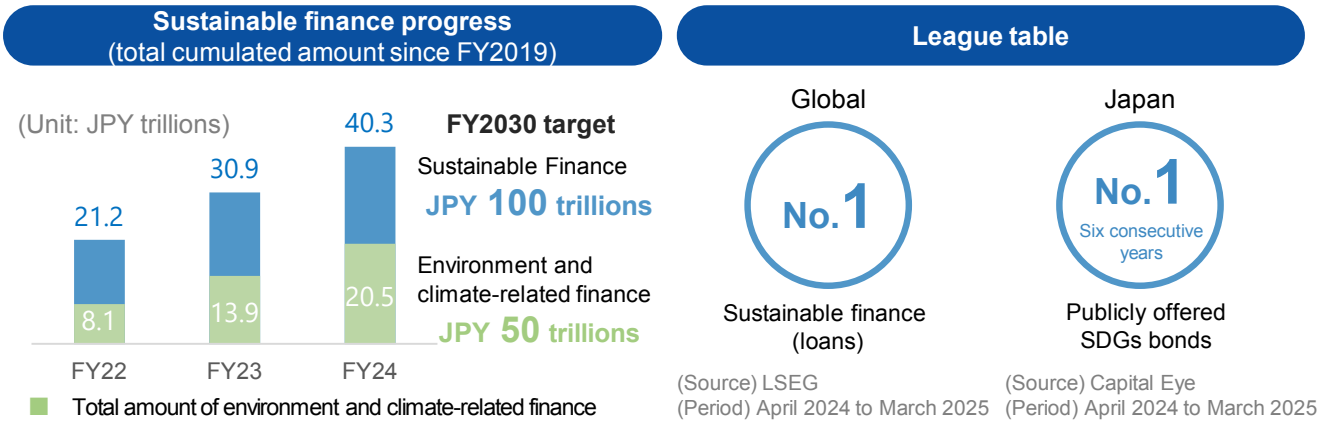


a. Sustainable finance

Mizuho believes that, especially with regard to sustainable finance, it is an important role for financial institutions to generate further money flows to meet the massive demand for climate change financing. Given this, Mizuho has set a sustainable finance target of JPY 100 trillion, of which JPY 50 trillion is earmarked for environment and climate-related finance (cumulative total over the period of FY2019 through to FY2030).

We have steadily built up a track record by assessing our clients' issues and needs accurately – arranging a total of JPY 40.3 trillion for sustainable finance between FY2019 and FY2024 (of which JPY 20.5 trillion was environment and climate-related finance). Mizuho has showed a strong presence in the sustainable finance area, holding the No.1 position for six successive years in league table of domestic publicly offered SDGs bonds. We will continue to proactively provide green/transition financing and risk money for practical applications of technologies to our clients who are taking on the challenge of decarbonization with us.

Sustainable finance targets and results



Breakdown of sustainable finance amounts (results for single fiscal years / in JPY trillions)

Category			Description	FY2023	FY2024
Sustainable finance	Social		Financing compliant with the ICMA's Social Bond Principles, etc, for the purpose of contributing to solve social issues and so on	0.5	0.6
	Sustainability		Financing compliant with LMA and other sustainability-linked loan principles (excluding environment and climate-related finance)	1.7	1.4
	Project financing for infrastructure		Arrangement of project financing for public transportation, public facilities, etc.	0.1	0.4
	Proprietary Mizuho products		Mizuho Human Capital Management Impact Finance and others	0.2	0.2
	Other			1.4	0.2
	Environment and climate-related finance	Green	Financing compliant with the ICMA's Green Bond Principles and financing for applications specified in Mizuho's Green Bond Framework for the purpose of responding to environment and climate change etc.	2.5*1	2.6
		Transition	Financing compliant with the ICMA's Climate Transition Finance Handbook for the purpose of supporting initiatives to reduce GHG emission in order to realize decarbonized society	0.3	0.2
		Sustainability	Financing compliant with LMA and other sustainability-linked loan principles that is earmarked for environment and climate-related finance	0.8	0.8
		Proprietary Mizuho products	Mizuho Eco Finance and others	1.9	2.9
		Other	Other environment and climate-related financing	0.3	0.1
	Subtotal			5.8*1	6.6
Single fiscal year total for sustainable finance amounts				9.7*1	9.4
(Cumulative total of sustainable finance since FY2019)				30.9*1	40.3

*1 Revised based on the refinement of aggregated figures.

Examples of sustainable finance initiatives in FY2024

Release of a new product that supports the adoption of eco-friendly vessels

- **Release of Sustainable Shipping Impact Finance to push decarbonization in the maritime transportation sector**
  - Assess the environmental performance of loan-eligible vessels in terms of CO_2 emissions reductions and provide financing to vessels that meet certain criteria
  - In March 2025, concluded the first loan agreements with Iino Lines (ethanol dual-fuel vessel) and Shunzan Kaiun (LNG dual-fuel vessel)

BK

First-ever issuance of transition-linked bonds by a Japanese city gas company

- **In May 2024, Osaka Gas issued the first-ever transition-linked bonds by a Japanese city gas company, and SC was appointed as the lead manager and structuring agent for the issuance**
  - Osaka Gas has set reduction targets for CO_2 emissions (Scope 1, 2, and 3) for its domestic supply chain as KPIs and SPTs. If the SPTs are not met, it will donate an amount equivalent to 0.1 percent of the bond issuance amount to organizations engaged in environmental conservation activities

SC

Transition bonds that include nuclear power generation in the purpose of funds

- **Appointed as lead manager and structuring agent for transition bonds issued by Kyushu Electric Power (June 2024, total amount: JPY 30 billion) and Hokkaido Electric Power (October 2024, total amount: JPY 60 billion)**
- **Appointed as joint lead manager for transition bonds issued by Kansai Electric Power (July 2024, total amount: JPY 45 billion)**

SC

Establishment of a transition finance framework as an Enabler

- **In September 2024, supported the establishment of a transition finance framework as an Enabler* for the Fuyo Lease Group**
  *Enabler: An entity that secures capital for activities, including investment and financing, that enable the decarbonization transitions by other entities
  - First Enabler support project by SC

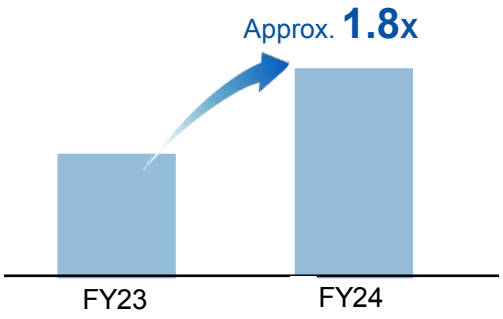
SC

b. Support for the development of technologies and business structures in the demonstration and commercialization stages

We actively provide risk money for establishment of technologies and business models in the development, demonstration, and commercialization phases.

Investment performance of Transition Investment Facility and Value Co-creation Investments

Investment performance of Transition Investment Facility and Value Co-creation Investments
(cumulative investment amounts)



Transition Investment Facility

Targeting projects in the proof-of-concept and start-up stages, the framework aims to develop technologies and business models in areas that contribute to enhance environmental and social sustainability

FY2024: Invested in 5 projects (running total: 9 projects)

Value Co-creation Investments

These investments target startups aiming to address social issues, generate new demand, and realize new business models by commercializing technologies. After investment, we enhance co-creation with the investment recipient, such as running pilot projects using the investment recipient's technology at Mizuho branch offices.

FY2024: Invested in 4 projects (running total: 11 projects)

Investment in chemical recycling technology (September 2024)

- **Invested in R Plus Japan, which is working on the development of technologies for recycling used plastics into resources.**
  - The technology helps reduce CO_2 emissions and limit energy requirements because it can process large amounts of plastics with fewer processing steps that conventional chemical recycling technology involving petrochemical conversion processing

BK

Investment in lithium-ion battery (LiB) recycling technology (March 2025)

- **Invested in Altilium Metals Ltd., a UK company that is constructing a pilot plant to recycle LiBs used in EVs and other devices and manufacture low-carbon, sustainable recycled battery materials**
  - The company aims to construct a large-scale commercial plant in the UK and establish a business model that integrates all steps, from LiB collection to manufacturing of battery materials

BK

Investment in fusion technology (October 2024)

- **Invested in Zap Energy, a U.S. company developing fusion technology**
  - In addition to strengthening existing efforts toward energy transition, there is a need for new strategies from a longer-term perspective. With the understanding that fusion could bring substantial societal impact, we made investment.
  - As a strategic partner connecting Zap Energy with Japanese companies, Mizuho will concentrate its efforts on four key areas: fundraising support, support for technological collaborations with Japanese companies, support for entering the Japanese market, and knowledge sharing and co-creation

Concept design for a pilot plant utilizing Zap Energy's technology

MHIF

Our brand site MIZUHO SX presents specific solution case studies where we have supported sustainable transformations (SX) by clients, such as our investment in Zap Energy. The site features various articles written from the standpoint of our clients and representatives, focusing on the background of the initiatives and their comments on the solutions.

v. Building the foundation for carbon neutrality by 2050

In Japan, realizing a decarbonized society requires both the energy transition of high-emitting industries and the capture and offset of CO2 in sectors where emission reduction is challenging. Mizuho treats both of these areas as a single focus area and promotes initiatives aiming at next-generation technologies and market expansion.

a. Initiatives for energy transition

Mizuho's vision: First-call bank for hydrogen in Japan and Asia

- Hydrogen is recognized as a critical energy source that will contribute to the decarbonization of power, generation, heating, raw material production.
- Mizuho believes the keys to realizing a hydrogen-based society are creating demand, lowering costs, and building supply chains, and we will plan a hydrogen-based society with clients primarily in Japan and Asia and contribute to business creation as a partner in clients' hydrogen-related businesses.

FG **Declaration of JPY 2 trillion in hydrogen financing**

Aims to provide JPY 2 trillion in financing for the hydrogen and related production sectors by 2030 to accelerate the construction of hydrogen supply chains

News release https://www.mizuhogroup.com/news_release/20240516release_eng.html

BK **Consideration of investment in a green ammonia production project**

Signed a memorandum of understanding with six companies, including IHI, to consider investing in a project to produce approximately 400,000 tons of green ammonia per year in India

News release https://www.mizuhobank.co.jp/release/pdf/20250325_2release_jp.pdf

b. Initiatives toward CO2 capture and offset

Mizuho's vision: The top solution provider in Japan

- Carbon credits are a mechanism to supply financing to decarbonization projects, and they are expected to expand efforts to achieve net zero emissions throughout society
- Mizuho is committed to supporting the decarbonization of society and our clients by working toward developing and expanding the emerging carbon credit market

FG **Collaborating with a carbon credit exchange**

Promotes carbon credit trading among Japanese companies in collaboration with Climate Impact X, a Singapore-based carbon credit exchange that we have invested in.

BK **Collaborating on the creation of new credits**

Signed a memorandum of understanding with GenZero, an investment platform established by Temasek, a Singapore government-affiliated fund, to collaborate on transition credits that promote the early phasing out of coal-fired power plants (February 2025)

News release https://www.mizuhogroup.com/binaries/content/assets/pdf/mizuhoglobal/news_release/2025/20250220release_eng.pdf

FG **Creation and development of a technical CDR credit market**

Participating in the NextGen CDR Facility, established by Mitsubishi Corporation and South Pole, and entered a long-term purchase agreement for technical CDR credits. This move will help us gain expertise in the CDR field and promote the creation of CDR markets and trading platforms in Japan. (March 2025)

News release https://www.mizuhogroup.com/binaries/content/assets/pdf/mizuhoglobal/news_release/2025/20250328release_eng.pdf

BK **Initiatives to develop secondary credit markets**

Awarded the Best Market Maker at the Tokyo Stock Exchange's Carbon Credit Market for the second consecutive year (March 2025)

vi. Policy engagement

Recognizing that broad collaboration among industry, government, and financial institutions is all essential for decarbonization, we are actively participating in government- and public institution-led forums as well as international climate initiatives, thereby strengthening our involvement in domestic and global rule-making for decarbonization.

International Conferences:
Articulated the role that financial institutions and finance should play at international conferences attended by a broad range of stakeholders

COP29 (29th Conference of the Parties to the United Nations Framework Convention on Climate Change)

- Articulated the role that financial institutions and finance should play in achieving net zero and supporting countries in meeting their emissions reduction targets
- Promoted Japan's decarbonization efforts globally by participating in seminars hosted by Ministry of Economy, Trade and Industry at the Japan Pavilion

COP16 (16th Conference of the Parties to the Convention on Biological Diversity)

- Participated in a panel discussion hosted by the World Economic Forum on the importance of addressing natural capital through public-private finance collaboration, presenting concrete cases of how addressing natural capital can lead to business opportunities

International Climate Initiatives:
Enhanced our capability for promoting decarbonization and enhancing involvement in domestic and international rule-making through participation in international initiatives

PCAF (Partnership for Carbon Accounting Financials)

Activities as Chair of the PCAF Japan coalition

- Advancing measurement and disclosure of GHG emissions through financial activities in Japan, as Chair of the PCAF Japan Coalition since its establishment in November 2021.

Participation in PCAF Global Core Team/WG

- The only Japanese financial institution participating in the "Core Team," leading the development of measurement standards at PCAF Global
- Serving as a Co-Chair of the "Transition Finance & Green Finance Working Group" established under the Core Team, contributing to the development of new guidance

For more information on collaboration with government and private initiatives other than those mentioned above, please refer to p.75.

vii. Capability building

At Mizuho, we recognize the importance of each individual having sufficient knowledge about sustainability and taking proactive action on their own. Based on this understanding, we are strengthening education and awareness initiatives for executives and employees.

To raise awareness throughout the Group, we offer the training and events with the aim of having employees acquire the knowledge they should have as Mizuho employees. For employees whose work requires a higher level of expertise and specialization, we provide the training and education curricula and encourage them to acquire qualifications so that they can acquire knowledge and skills appropriate to the nature of their work and client segment.

With respect to our FY2025 target of reaching (1) 150 environment and energy sector consultants and (2) 1,600 sustainability management experts, we had reached approximately (1) 140 and (2) 1,850 (early achievement of the target) as of March 31, 2025. In this way, Mizuho is working to further bolster our strengths in expertise in environment and technologies and sustainability transformation (SX) talent.

By business and customer segments

Large corporate business and financing products (M&As, real estate, etc.)

- **Study sessions for sales representatives**
  Nine sessions (for about 2,000 participants)
- **Sustainability officers**
  Sustainability officers assigned to each product department
- **General information center**
- **Sustainable finance study sessions**
  66 sessions (fostering viewpoints by specialized departments)

SMEs business

- **Study sessions for sales representatives**
  17 sessions (for about 2,000 participants)
- **SX manager network**
  SX managers assigned to sales branches
- **SX general information center**

FY2025 target: 1,600

Sustainability management experts: approx. 1,850

Overseas

- **Regional study sessions (Asia)**
- **Training curriculum (Europe)**

Consulting

FY2025 target: 150

Environment and energy sector consultants: approx. 140

Trust Banking

- **Sustainable Business Liaison Committee**

Company-wide

Group SX meetings
Sharing and discussions on Mizuho company-wide and company unit initiatives (monthly)

SX Time!
A roundtable discussion between the CSuO and sustainability managers

Sustainability-related events
Sustainable fashion, food waste, etc.

Mizuho Sustainability Transformation Project
Promote employee-led initiatives

Training for all employees
Training for all domestic and overseas employees (once a year)

(3) Risk recognition

Mizuho assumes various climate-related risks in each financial institution risk category and evaluates the materiality of each. The identified risks include activities in the upstream segment of Mizuho's value chain, such as "fundraising," and those in the downstream segment, such as "financing and investment." We manage high-consequence risks both qualitatively and quantitatively as necessary and take appropriate responses. Recognition of these risks and the situation of the risk management are regularly reported to the Executive Management Committee, the Board of Directors, and other committees.

Definitions of climate-related risks

Climate-related risks	Risks of the company incurring tangible and intangible losses, due to the ripple effect of climate change-induced transition risks and physical risks in each financial institution risk category (such as credit risk, market risk, etc.)
Transition risks	Risks stemming from business landscape changes associated with the transition to a decarbonized society
Physical risks	Risks stemming from changes in physical impacts associated with changes in temperatures and adverse weather events

Recognition of climate-related risks

	Transition risks [Short term, Medium and long term]	Physical risks [Medium and long term]	
	Changes to the external environment caused by decarbonization	Acute risks: Changes caused by adverse weather events	Chronic risks: Changes caused by temperature increases
Credit risk	Deterioration in client business performance associated with business landscape changes	Deterioration in client business performance Decline in the value of collateral assets	Deterioration in client business performance associated with business landscape changes
Market risk	Decline in the value of stock holdings associated with macroeconomic landscape changes Decline in the value of bond holdings associated with macroeconomic landscape changes	Decline in the value of stock holdings associated with macroeconomic landscape changes Decline in the value of bond holdings associated with macroeconomic landscape changes	Decline in the value of stock holdings associated with macroeconomic landscape changes
Liquidity risk	Mizuho's increase in loans and the deterioration of funding conditions due to changes in the business environment	Mizuho's increase in loans and the deterioration of funding conditions	-
Operational risk	Stakeholders filing lawsuits and taking other legal action associated with insufficient compliance with government policies and regulations	Impairment of Mizuho's assets and occurrence of repair costs Interruptions to Mizuho's business	Decline in labor force
Reputational risk	Criticism of Mizuho for inadequate, obsolescent, or non-performing climate change-related strategies		

Materiality of each risk: High | Medium | Low Time bases: Short term: 1 to 3 years, medium and long term: up to 2050

Process for evaluating the materiality of climate-related risks

STEP 01 — Risk identification

Work out the risks that climate change-related fluctuations pose to finance and business operations, assuming four transmission pathways: via clients, via macroeconomic / financial markets, via the operations of financial institutions, and via the reputations of financial institutions

STEP 02 — Impact evaluation

Classify impacts as high, medium, or low, according to evaluations based on financial impacts and qualitative evaluations

STEP 03 — Controllability evaluation

Evaluate the controllability of risks along two axes

1. Whether the time required for control is short or long
2. Whether the controls impact clients or not

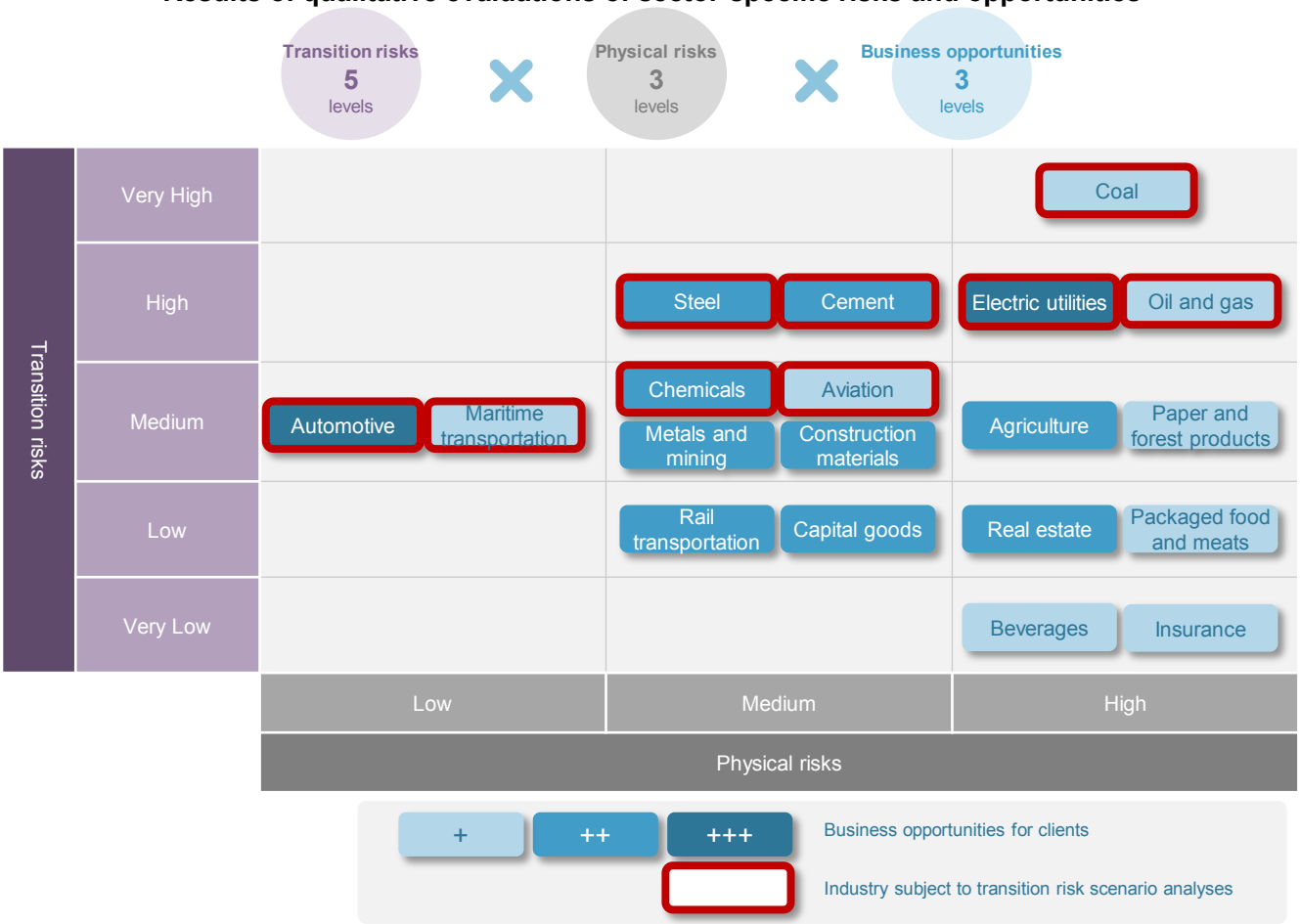
STEP 04 — Management enhancement

Strengthen management of risks that meet any of the following criteria

1. High impact
2. Medium impact, and the time required for control is long or there is an impact on clients

Mizuho also conducts qualitative evaluations of risks and opportunities by sector in order to identify climate-related risks. The evaluations target 19 sectors, in line with the recommended disclosures in the TCFD Recommendations.
Transition risks are evaluated on a five-level scale — Very High, High, Medium, Low, and Very Low — based on sector-specific evaluation criteria such as GHG emissions and carbon efficiencies. The evaluations are referenced when verifying and managing risks appropriate as needed in various risk management frameworks, such as scenario analyses and risk controls for carbon-related sectors. We also rate the extent of physical risks and client business opportunities on a three-level scale and work to raise awareness of climate-related risks.

Results of qualitative evaluations of sector-specific risks and opportunities



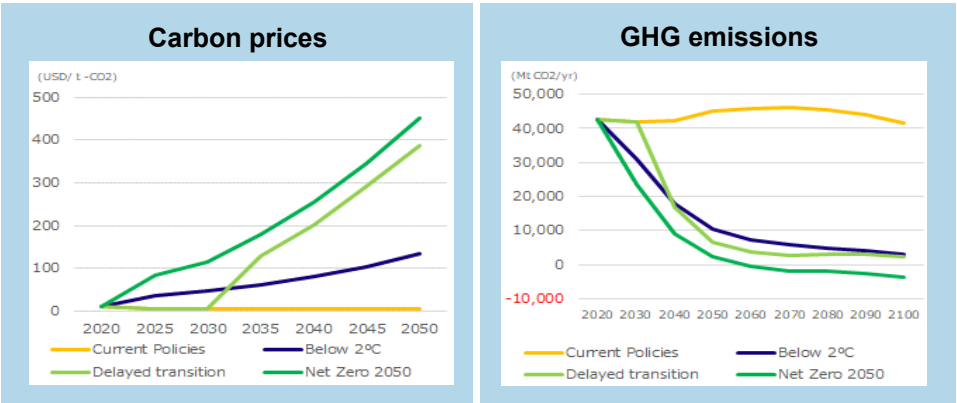
(4) Scenario analyses

Mizuho conducts scenario analyses for both transition risks and physical risks in order to understand the future impact of climate change on our Group's portfolio. The analyses use four NGFS scenarios, including the 1.5°C scenario, to increase the flexibility of plans and the resilience of strategies in anticipation of various future climate change-related outcomes.

i. Scenario assumptions and implications for Mizuho

Scenario		Current Policies	Below 2℃	Delayed Transition	Net Zero 2050
Scenario narrative		This scenario assumes that current policies are maintained.	This scenario assumes that climate-related policies gradually become more stringent and the rise in the average global temperature is limited to below 2°C. Policy responses proceed quickly and smoothly, but technological innovation is gradual.	This scenario assumes that annual emissions do not decline until 2030 and very tough policy responses are needed to keep the temperature increase below 2°C. Rapid progress is made in developing more stringent policy responses and in technological innovation.	This scenario assumes CO_2 emissions reach net zero around 2050 due to smooth and quick policy responses and rapid technological innovation.
Main assumptions	Temperature increase by 2100	+3.0℃	+1.8℃	+1.8℃	+1.5℃
	GHG emissions	Net zero not achieved even in 2100	Net zero not achieved even in 2100	Net zero not achieved even in 2100	Net zero achieved by the 2050s
	Carbon pricing	Levels are nearly zero	Rises from the outset	Rises from 2030 on	Rises rapidly from the outset
	Business structural transformations	Almost none expected	Progress from the outset	Progress made from 2030 on	Rapid progress from the outset
Implications for Mizuho	Transition risks	Low			High
	Physical risks	High			Low
	Opportunities	Low			High
	Summary	The impact of physical risks will be substantial, as the severity of disasters increases along with rapid temperature increases. Although the impact of transition risks will be limited, because almost no business structural transformations are expected, associated demand for financing by clients will be low.	Although the impact of transition risks will be limited, demand for financing associated with next-generation technology and decarbonization measures may be relatively low because clients use their own funds.	Attention must be given to risk management, because the impact of transition risks may cause client business performance to deteriorate. There will be demand for financing from clients from 2030 onward for next-generation technology and decarbonization measures to keep temperature increases to below 1.8°C.	Compared to the other scenarios, the impact of physical risks will be limited, but attention must be given to risk management, because the impact of transition risks may cause client business performance to deteriorate. Demand for financing from clients will increase from current levels for next-generation technology and decarbonization measures to keep temperature increases to below 1.5°C.

NGFS scenario parameters



Source: NGFS Scenarios (Phase III) (all figures on a global basis)

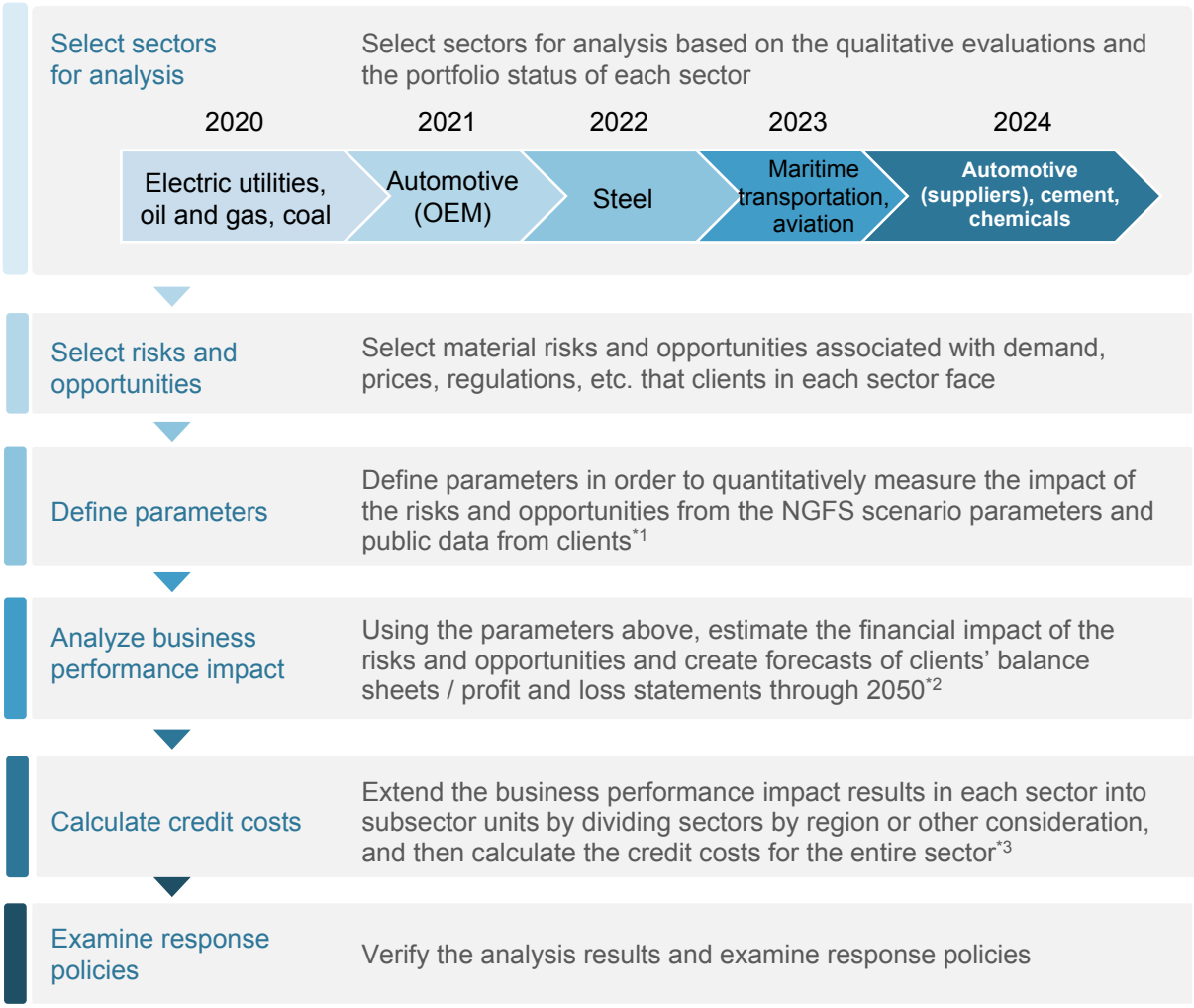
ii. Transition risk scenario analyses

The scenario analyses for transition risks are used to evaluate the impact on client businesses caused by regulatory, technological, market, and other changes and to analyze the increase in credit costs. (This time we are republishing the results of the Climate & Nature-related Report 2024.)

Overview of transition risk analyses

Reported value	Cumulative increase in credit costs through 2050 caused by the impact of transition risks
Scenarios	NGFS Current Policies, Below 2℃, Delayed Transition, and Net Zero 2050 scenarios
Targeted regions	Japan and overseas
Targeted sectors	Electric utilities, oil and gas, coal, steel, automotive (OEM and suppliers), maritime transportation, aviation, cement, and chemical sectors
Analysis scope	Total of loans, foreign exchange, acceptances and guarantees, commitment lines, etc.
Analysis details	Credit costs associated with deteriorating client business performance

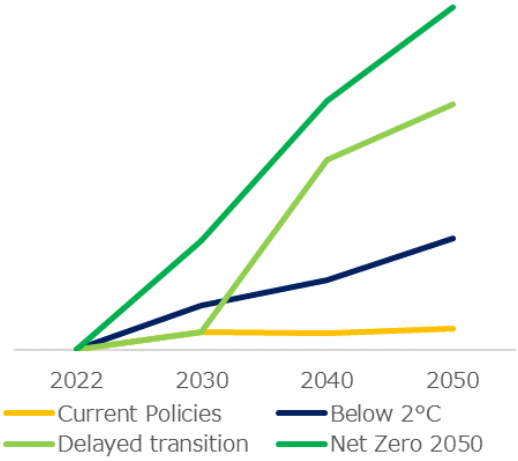
a. Analysis process



*1. The analysis used parameters from the NGFS scenarios (Phase III) and for parameters not accounted for in the NGFS scenarios, we referred to IEA and other references and supplemented the parameters with conservative assumptions.
*2. Please refer to Appendix p.83-86 for sector-specific risks and opportunities, an overview of the analysis, and a synopsis of the scenarios.
*3. Exposure as of March 31, 2024, is assumed to remain constant through 2050.

b. Scenario analysis results

Changes in cumulative credit cost increases by scenario



Scenario	Cumulative increase in credit cost through 2050 (difference from the Current Policies scenario) *
Net Zero 2050	Approx. JPY 1,910.0 billion
Delayed transition	Approx. JPY 1,330.0 billion
Below 2℃	Approx. JPY 530.0 billion

* Republishing the results of the FY2024 report. No significant changes were observed as of the end of March 2025

While Mizuho may experience some financial impact over the medium to long term, any impact on its short-term financial soundness is limited.
Credit costs increase sharply from the outset in the Net Zero 2050 scenario, and after 2030 in the Delayed Transition scenario. A breakdown by sector shows that the main contributors to the increase in credit costs are the steel and oil and gas sectors. According to the NGFS and other parameters, these sectors increase credit costs because of the considerable investments required for their business structural transformations and because of their large carbon costs, as GHG emissions, will still be present even in 2050. In all sectors, not just the steel and oil and gas sectors, credit costs may increase significantly in the phase when carbon prices shoot up while client measures to reduce GHG emissions are not fully implemented. From this, we confirmed the importance of promoting business structural transformations as early as possible, prior to the materialization of medium and long term risks, through in-depth engagement with clients.
In both the Below 2°C scenario, which assumes a quick and smooth response to climate change (an orderly transition), and the Delayed Transition scenario, which assumes an initial delayed response to climate change and a rapid transition from 2030 onward (a disorderly transition), the global average temperature increase is kept below 2°C. However, the credit costs are much smaller in the Below 2°C scenario, which confirms the importance of making an orderly transition.

c. Actions going forward

The results of the scenario analyses confirmed the importance of early business structural transformations by clients and an orderly transition by society as a whole. Consequently, we are working to strengthen the following measures:

- Promote early business structural transformations by clients through in-depth engagement (See p.19 for specific examples)
- By voicing our positions and opinions at rulemaking bodies and through our activities at industry organizations / private sector initiatives, support the formulation and execution of orderly transition policies by governments (See p.26 for specific examples)

Mizuho's scenario analyses quantitatively measure the financial impact of climate-related risks and verify the resilience of strategies. We recognize that scenario analyses are a tool that can be useful for risk management, strategy formulation, and other aspects of Mizuho's business management. To make this possible, we believe it necessary to further improve the accuracy of our scenario analyses by, for example, setting appropriate scenarios. We will continue to engage in improving our analysis methodologies based on discussions with various stakeholders while making use of the Group's industrial expertise.

iii. Physical risk scenario analyses

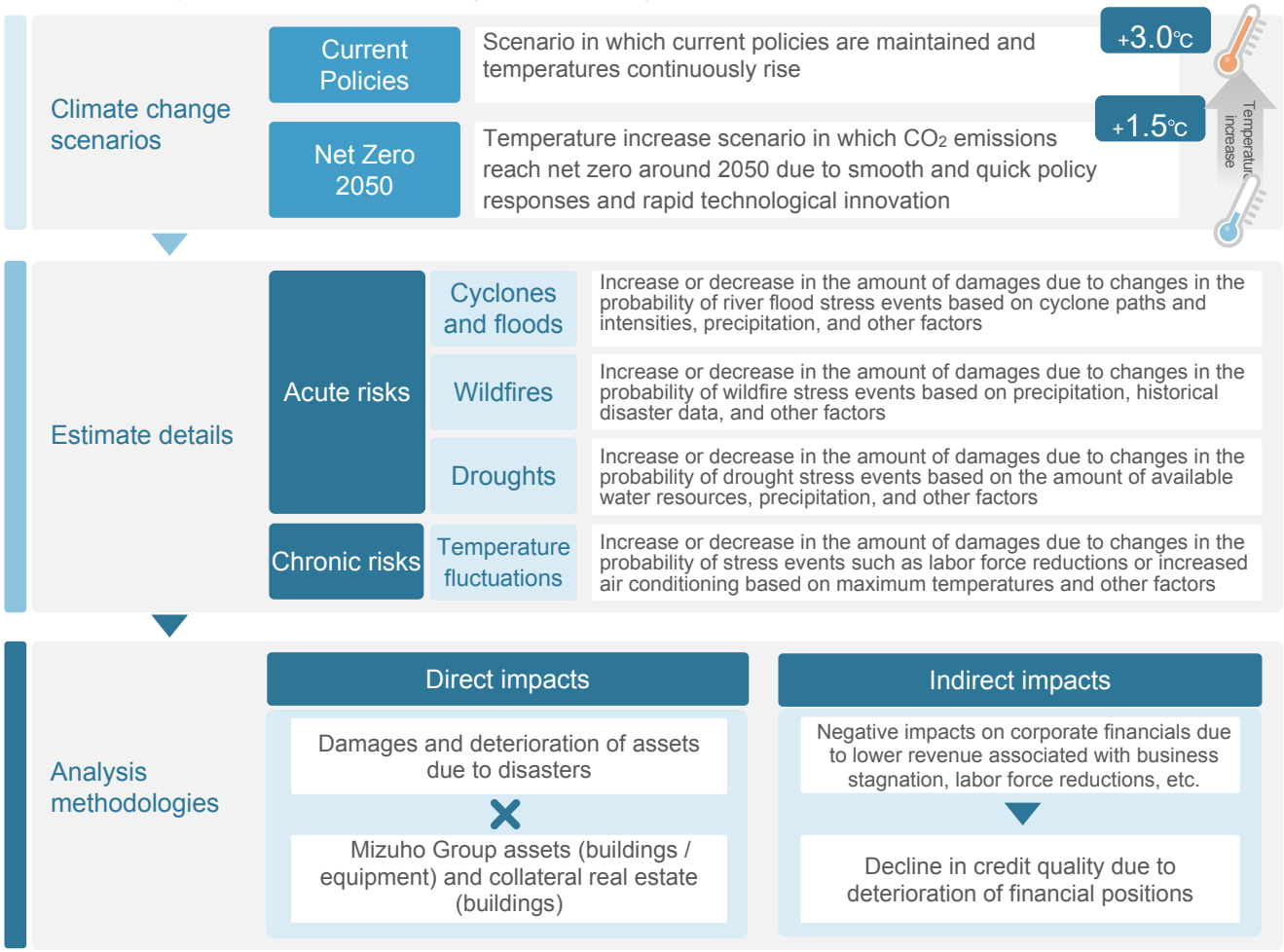
For our scenario analyses of physical risks, we work with data vendors to disclose the amount of impacts associated with climate change. (This time we are republishing the results of the TCFD Report 2023.) Physical risks consist of acute risks and chronic risks. Acute risks cover cyclones and floods, wildfires, and droughts, while chronic risks cover temperature fluctuations. These risks are analyzed using the percentage change in damage amounts from each risk event in each location.

Overview of physical risk analyses

Reported value	Maximum increase amount in a single year when a stress event materialized associated with climate change through 2100
Scenarios	NGFS: Net Zero 2050, Current Policies
Targeted regions	Japan and overseas
Targeted risks	Acute risks: Cyclones and floods, wildfires, and droughts Chronic risks: Temperature fluctuations (labor force declines, factors causing increased air conditioning usage)
Analysis scope	Our Group's assets, loans and collateral real estate (large companies and SMEs)
Analysis details	Direct impact: Damage to Group's assets and credit costs associated with damage to collateral real estate Indirect impact: Credit costs associated with client revenue declines caused by business stagnation or labor force reductions

a. Analysis process

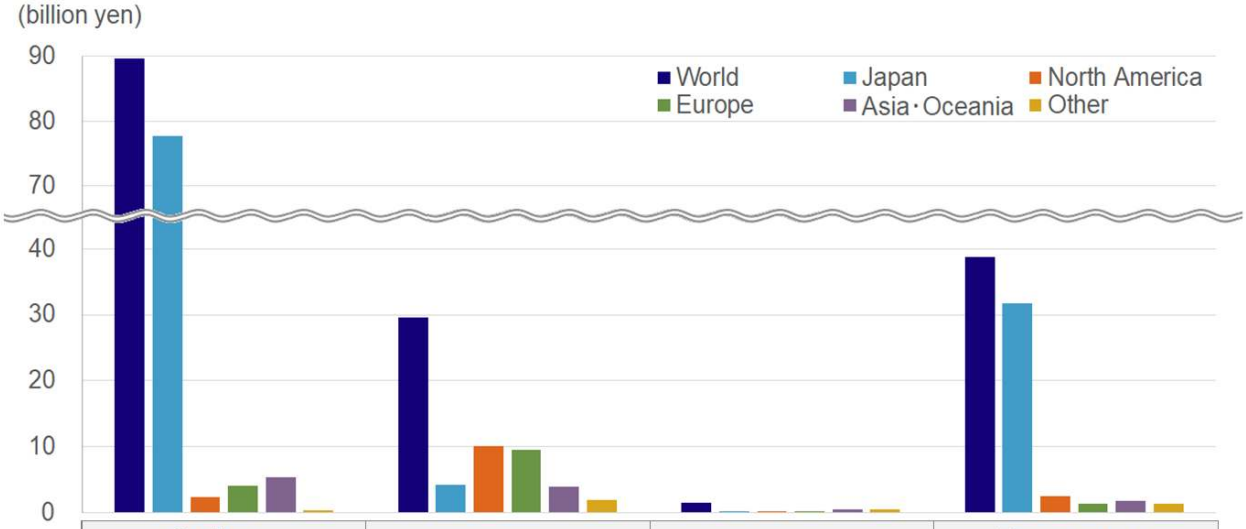
Based on the temperature increase pathways in the NGFS scenarios, we obtained the percentage change in damage amounts from each risk event in each location from data venders, and then we estimated the damage to Group assets and credit costs associated with damage to collateral real estate as well as the credit costs associated with client revenue declines caused by business stagnation or labor force reductions. Estimates use the percentage change of damages to the location of each major property for large corporate clients with identifiable major properties, while using that of damages to the location of the headquarters for all other clients.



b. Scenario analysis results

The results of the physical risk analysis are used to determine impacts on our Group. We confirmed that the potential impact on our Group could be approximately JPY 90 billion in additional losses in a single year if a high-risk cyclones and floods materialized centered on Japan, where a large portion of the Group assets and clients are located. We also confirmed that losses from other types of disasters would be less than half of those from cyclones and floods.

Maximum amount of increase if a stress event materialized (Current Policies, 2100, single year)*



		Cyclones and Floods	Wildfires	Drought	Temperature fluctuations
Total		Approx. JPY 90 billion	Approx. JPY 30 billion	Approx. JPY 1.5 billion	Approx. JPY 40 billion
	Direct impact	Approx. JPY 69 billion	Approx. JPY 0 billion	Approx. JPY 0.1 billion	Approx. JPY 27 billion

* Republishing the results of the FY2023 report. No significant changes were observed as of the end of March 2025

Acute risks

Cyclones and floods: Although temperature rises will increase the frequency and intensity of typhoons, their paths will tend toward the Japan Sea, confirming that the impact from cyclones is limited. On the other hand, damages from river flooding will increase due to more frequent torrential rain and other rainstorms in Japan. These events will dramatically increase losses, especially those recorded as credit costs, due to damages to Group assets, damages to mortgaged real estate, and declines in client revenue because of business stagnation.

Wildfires: Record credit costs associated with declines in client revenue because of business stagnation, especially in areas of low humidity in North America and Europe. The impact on Group assets is limited, as they are concentrated in or near urban centers.

Droughts: Record credit costs associated with declines in client revenue because of business stagnation, especially in areas of Asia and the Middle East where water-resource infrastructure is not well developed. The overall impact, however, is limited.

Chronic risks

Temperature fluctuations: Losses will increase, especially those recorded as credit costs associated with declines in client revenue due to labor force reductions caused by decreases in working hours, as well as damages in the form of deteriorating HVAC (Heating, Ventilation, and Air Conditioning) facilities from increased air conditioning usage at Group assets, brought on by temperature increases.

c. Actions going forward

Regarding physical risks, we will continue to enhance analytical methods, strive to quantify the impact, and implement appropriate management measures from the perspective of ensuring the financial soundness and business continuity of our group. These efforts are intended to contribute to risk reduction.

3. Responding to natural capital

(1) Analysis of dependencies and impacts on natural capital

i. Recognition of the external environment

a. Recent developments regarding natural capital

Natural capital (including biodiversity) is the stock of natural resources — such as plants, animals, air, water, soils, and minerals — that provide benefits to people, economy, and society. While natural capital provides the benefits of ecosystem services, it is also affected by the losses and damages due to company activities. The Kunming-Montreal Global Biodiversity Framework (GBF), which has the clearly stated goal to achieve a nature positive economy by 2030, was adopted at the United Nations Biodiversity Conference (CBD COP15) in 2022. In 2024, a common set of metrics to assess the efforts of member countries was adopted at CBD COP16, and draft frameworks for natural capital transition plans were announced by GFANZ and TNFD. Under these circumstances, natural capital initiatives and disclosures by companies have steadily advanced based on the TNFD Recommendations, which were finalized in September 2023.

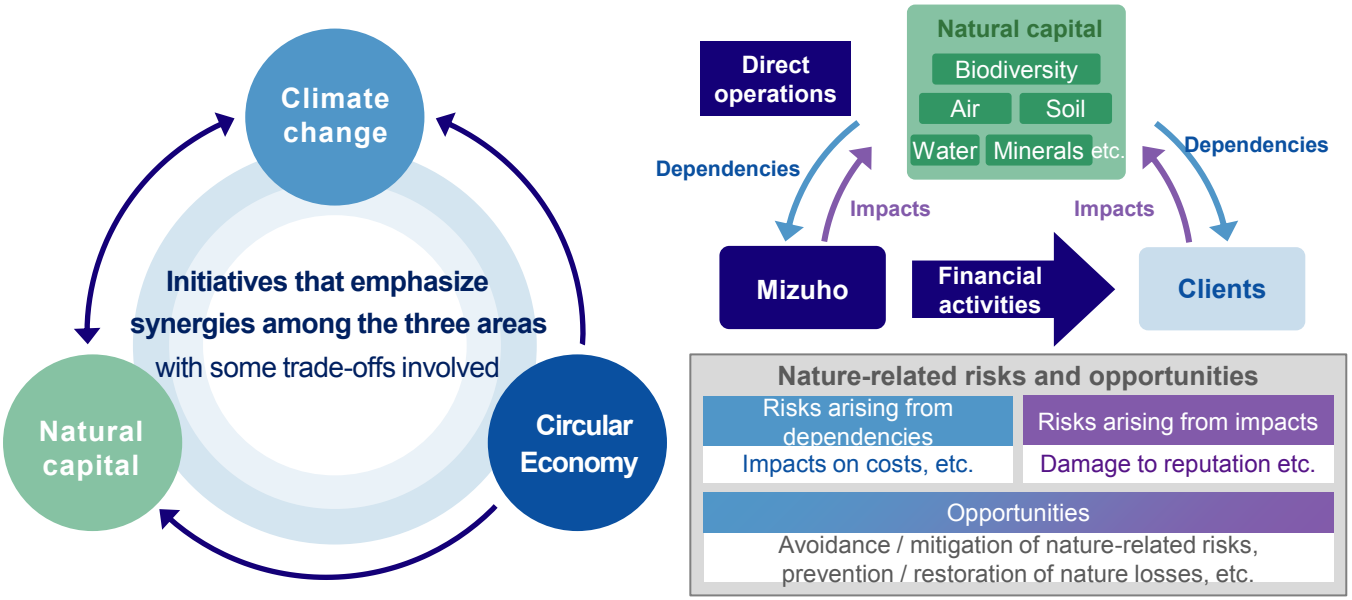
b. Importance of integrated initiatives with climate change and the circular economy

The *National Biodiversity Strategy and Action Plan of Japan 2023-2030*, which was formulated based on the GBF and other international discussions, stresses the importance of integrated initiatives with climate change to address natural capital. Japan's *Transition Strategies toward Nature Positive Economy* also notes it is possible to move ahead with effective initiatives with the understanding of the synergies and trade-offs among nature positive, carbon neutral, and the circular economy.

ii. Mizuho's nature-related dependencies and impacts

Companies depend on and impact natural capital through their own business activities (direct operations) and their entire value chain. Consequently, responses to natural capital must consider both activities.
Mizuho also depends on and impacts natural capital through our own direct operations and through our investments, loans, and other financing activities to clients, exposed to the risks and opportunities arising from these dependencies and impacts. Therefore, responding to natural capital dependencies and impacts is crucial for both capturing opportunities and risk management. In FY2024, Mizuho conducted in-depth analyses of natural capital dependencies and impacts in our loan portfolio and at our operational sites.

Relationship between natural capital and climate change & the circular economy / Mizuho's natural capital dependencies and impacts



Source: Prepared by Mizuho Financial Group based on the Transition Strategies toward Nature Positive Economy, the TNFD guidance, and other materials

iii. Analyses of Mizuho's loan portfolio (LEAP approach)

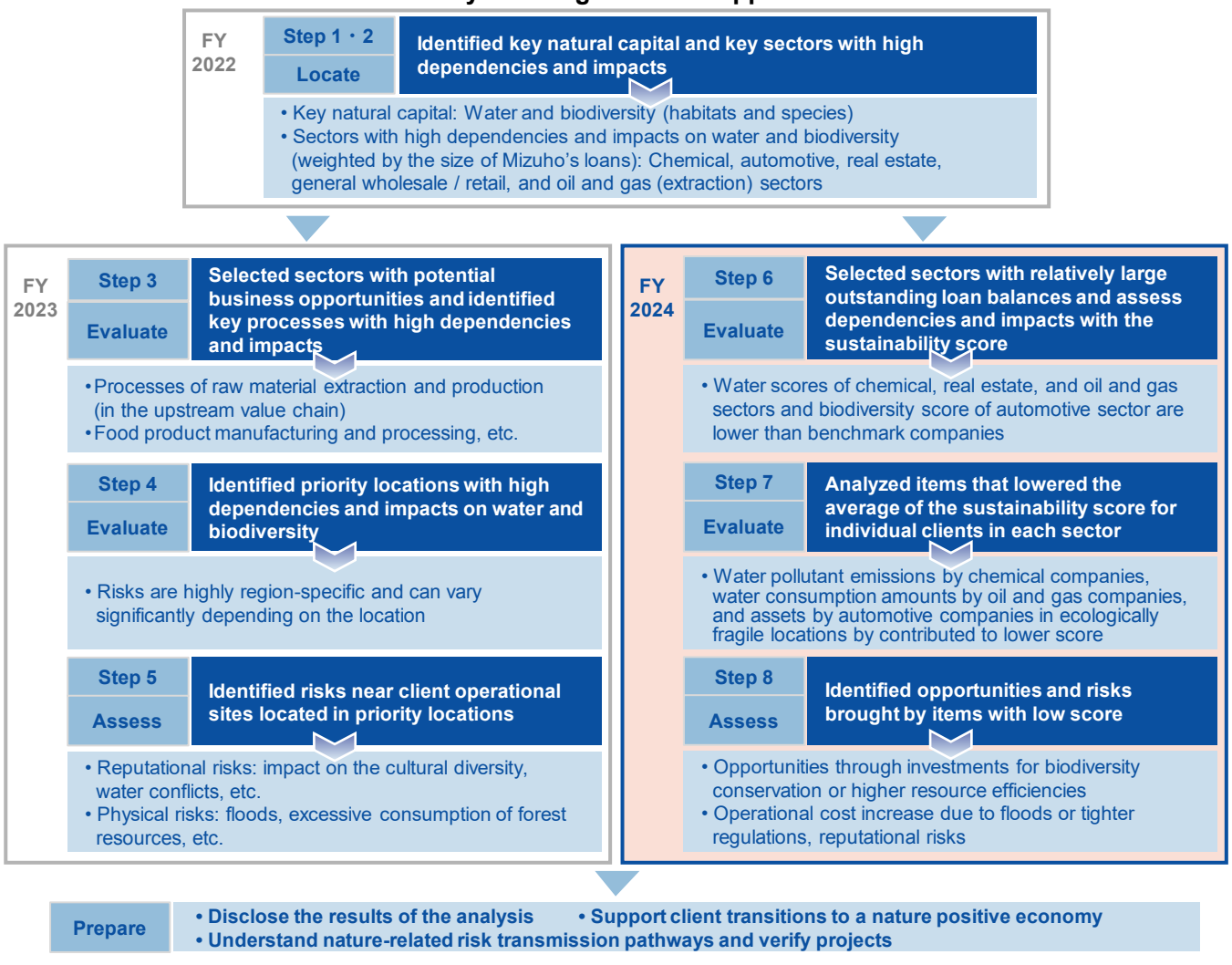
a. Summary of analyses in FY2022 and FY2023

Mizuho, in FY2022, identified the key natural capital and sectors in our loan portfolio using ENCORE (Step 1 and Step 2 in the figure below).
In FY2023, of the key identified sectors from the FY2022 analysis, we analyzed the food, chemical, and general wholesale/retail sectors using the LEAP (Locate, Evaluate, Assess, Prepare) approach presented in the TNFD Recommendation's disclosure framework. From the results, we identified processes in each sector with high natural capital dependencies and impacts (Step 3), identified clients' operational sites located in priority locations with high dependencies and impacts on water and biodiversity, which have high nature-interface risks (Step 4), and identified high risk areas at these client operational sites (Step 5). At the same time, we recognized that although this analytic tool can determine general characteristics, further in-depth analysis is needed to ascertain the unique conditions at each client operational site.
For details of the FY2022 and FY2023 analyses, see pages 57 to 60 and pages 85 to 90 in the Climate & Nature-related Report 2024.

b. FY2024: Quantitative analysis of the clients' responses on natural capital within loan portfolio

In FY2024, Mizuho made use of the sustainability assessment score (hereafter referred to as sustainability score), a proprietary analytic tool developed by Mizuho-DL Financial Technology, to understand in more detail the relationship between our loan portfolio and natural capital. With this tool, we assigned a score to the status of natural capital responses by clients in the chemical, automotive, real estate, and oil and gas sectors and assessed the level of their dependencies and impacts on natural capital (Step 6). Next, we performed a detailed analysis of companies deemed to have larger impacts on the average score in each sector and identified the contributing factors (Step 7). From these factors, we identified cases that could become impact drivers, in consideration of Mizuho's loan portfolio, and assessed the opportunities arising from client activities and Mizuho's supports for clients' nature-positive transitions, as well as the risks that may occur (Step 8).

Analysis using the LEAP approach



Step 6 — Quantitative analysis by sector: Among the sectors with high dependencies and impacts on water and biodiversity as identified in Step 2, we selected chemical, automotive, real estate, and oil and gas sectors as these sectors have relatively large outstanding loan balances. Then, we rated the natural capital initiatives by major companies in each sector using the sustainability score and conducted an analysis reflecting Mizuho's loan balance.

Step 7 — Quantitative analysis by company: We next performed analysis of 7 individual clients that lowered the average score in each sector — clients with large outstanding loan balances and low sustainability scores. We identified items that contributed to the low score for each client and recognized them as having particularly high dependencies and impacts on natural capital for Mizuho's loan portfolio.

Process of the quantitative analysis

Analysis process by Mizuho FT

- Selected chemical, automotive, real estate, and oil and gas sectors from the sectors with high dependencies and impacts on Water, Biodiversity
- Selected Mizuho's clients with substantial data coverage and large outstanding loan balances
- Assessed responses to natural capital by the companies with sustainability scores
- Took into account the outstanding loan balances of the clients
- Created a benchmark company cohort for comparison to the average of Mizuho's clients
- Performed detailed analyses of sectors and items that lowered the average scores of the companies

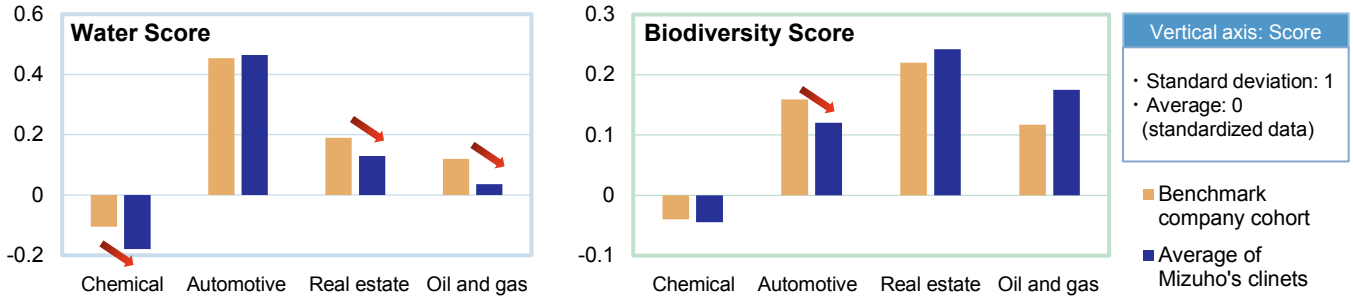
Sustainability score

- A quantitative model for assessing the status of responses based on disclosed sustainability information from companies
  - ➢Points are given to each item with progress in responses, raising the score
- This analysis scoped water and biodiversity among sustainability disclosed information
  - ➢Items were selected in reference to the core global metrics in the TNFD Recommendations as well

Benchmark company cohort

- Select companies with large market capitalization, which is generally equivalent to the companies for this analysis in terms of sectors and regional distributions

Results of the quantitative analysis for major sectors (Step 6)



Characteristics of the average score of Mizuho's clients

Comparison between sectors	➢ Chemical sector: Low score on both Water, Biodiversity
Comparison to the benchmark company cohort	➢ Chemical sector / Real estate sector / Oil and gas sector: Low score on Water ➢ Automotive sector: Low score on Biodiversity

Companies that lowered average sector scores and the areas that lower scores (Step 7)

Company	Value chain	Natural capital	Low score item
Chemical company A	Diversified chemicals	Water	Total emissions of water pollutants
Chemical company B	Basic chemicals	Biodiversity	Businesses with hazardous emissions or hazardous waste
Automotive company C	Automotive manufacturer	Biodiversity	Assets in ecologically fragile locations
Automotive company D	Auto parts manufacturer	Biodiversity	Recycling and reduction of e-waste
Real estate company E	Real estate development	Water	Presence of programs to monitor and reduce water usage
Oil and gas company F	Oil mining	Water	Total water usage
Oil and gas company G	Oil refinery	Water	Total amount of wastewater and water usage

Step 8 — Verification of risks and opportunities: We organized the risks and opportunities associated with the items with particularly low sustainability score in Step 7 with reference to the TNFD sector-specific guidelines and other materials. Investments for biodiversity conservation or higher resource efficiencies boost client reputations and promote sustainable revenue. Conversely, increases in client operational costs caused by flooding or tighter regulations, as well as legal actions or reputation risks, have the potential to bring about revenue declines or losses for clients. We also confirmed that client responses to mitigate risks can lead to their capturing opportunities.

Opportunities and risks by sector and impact driver

Impact driver	Opportunity category		Risk category	
Chemical sector x Water pollution				
Water pollution	Sustainability performance	Ecosystem conservation / recovery /regeneration	Transition	Technology
	Investments in biodiversity conservation and sustainable land use plan increase valuation of sustainability responses and reputation		Companies using old, hazardous methods lose competitiveness	
Automotive sector x Biodiversity				
Waste	Corporate performance	Resource efficiency	Transition	Policies, technology
	Reducing and recycling waste improve resource efficiencies		Costs increase in responding to demands to reduce hazardous chemical emissions, plastic pollution, and e-waste	
Real estate sector x Water (general)				
Depletion of water resources	Corporate performance	Resource efficiency	Transition	Policies, markets
	Technologies are applied that maintain plants while reducing water usage		Costs increase to respond to demands to reduce water usage and due to limits on usage in locations with water shortages	
Water supply	Corporate performance	Resource efficiency	Physical	Chronic
	Cut costs with measures for facilities through high water usage efficiencies		Water supply turns limited due to climate change, delaying construction	
Oil and gas sector x Water usage				
Water supply / water usage	Corporate performance	Resource efficiency	Physical	Chronic
	Productivity increases by reusing fresh water and fresh water usage is reduces further		Management costs increase due to a decline in water supply from organizational activities and climate change	
Changes in fresh water usage	Sustainable performance	Ecosystem conservation / recovery /regeneration	Transition	Reputation
	Investments in satellite technologies for early detection of environmental changes boost corporate reputation and reduce costs for the responses		Increase in awareness of the negative environmental impact by oil and gas and loss of support from investors cause stock prices to fall	

Source: Prepared by Mizuho Financial Group based on the *Transition Strategies toward Nature Positive Economy*, the TNFD guidance, and other materials

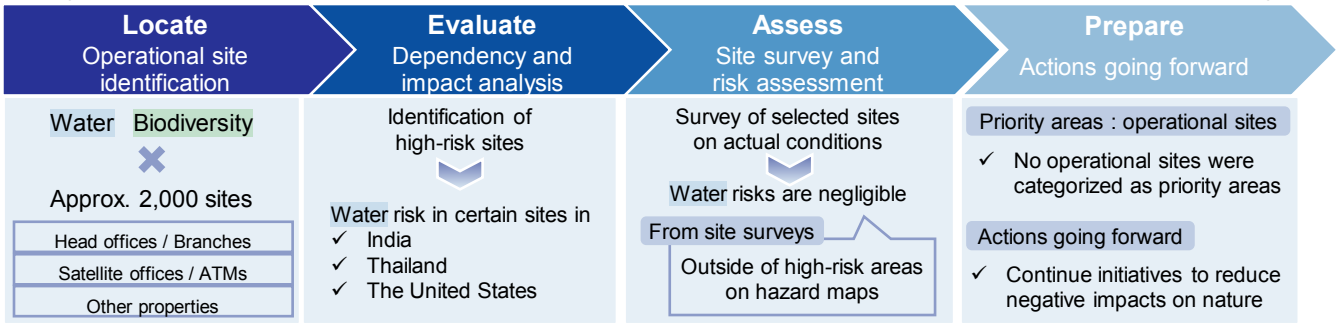
vi. Natural capital dependencies and impacts in Mizuho's direct operations

Mizuho analyzed the natural capital dependencies and impacts at our directly operational sites in FY2024, as recommended for disclosure in the TNFD Recommendations. We analyzed interactions with nature at operational sites in and outside Japan (approximately 2,000 sites including head offices, branches, satellite offices and ATMs, and other properties), scoping "Water" and "Biodiversity", which have been identified as key natural capital for Mizuho's loan portfolio. Using the WWF Risk Filter, we identified operational sites located in regions with high water and biodiversity risks. As a result, certain sites in India, Thailand, and the U.S. were found to have high "Water" risk such as floods and droughts.

In consideration of the possibility of gaps between the results of the desktop research above and actual on-site conditions, we conducted a survey of the selected operational sites on measures to address water risks. The survey found that the actual "Water" risks are negligible, as the sites are outside high-risk zones on hazard maps. Consequently, no operational sites were categorized as "priority areas" for high-risk interactions with nature. Nevertheless, we will continue to promote initiatives at our operational sites to mitigate impacts on nature. See p.74 in the Appendix for details about the analysis.

Mizuho monitors resource usage at our operational sites and discloses data on the consumption and reduction of water and paper. KPIs have been set for some metrics to drive these initiatives forward. See Environmental, Social & Governance Data Book 2024 for more details.

Analysis of natural capital dependencies and impacts at Mizuho's operational sites (LEAP analysis)



(2) Recognition of opportunities and risks and related initiatives

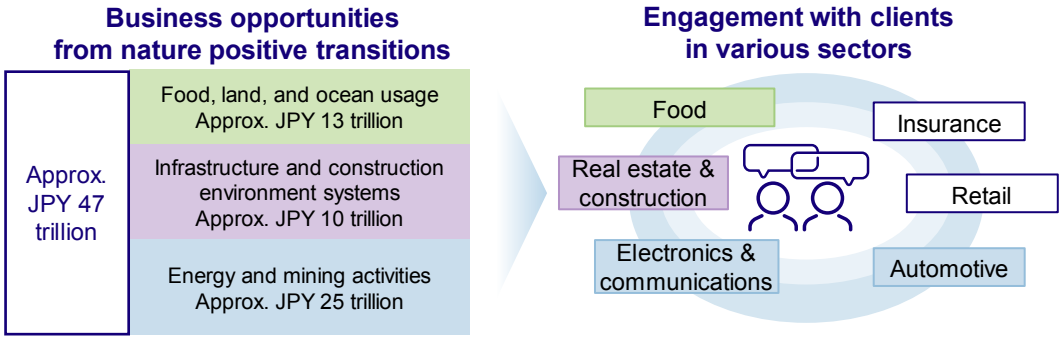
i. Nature-related opportunities for Mizuho

The *Transition Strategies toward Nature Positive Economy* estimates that the business opportunities from nature positive transitions in Japan in 2030 will be worth approximately JPY 47 trillion. Mizuho regards client responses to natural capital as business opportunities for us and recognizes that the transition to a nature positive economy is closely connected to climate change responses and the circular economy. Mizuho will continue to actively pursue the realization of a sustainable society while coordinating our initiatives in these areas.

a. Engagement with clients

In FY2024, we engaged with clients across a wide range of sectors, including food, real estate and construction, electronics and communications, insurance, retail, and automotive, which are taking proactive initiatives related to natural capital. Through these engagements, we discovered that clients' natural capital initiatives were various even in the same sector. Additionally, we identified the various needs for companies aiming to enhance TNFD disclosures, such as in-depth analyses of dependencies and impacts on natural capital including their value chains from upstream to downstream. Mizuho will continue dialogue with clients, aiming to identify and concretize business opportunities by leveraging the results of dependency and impact analyses on natural capital, including exploring collaboration with leading companies.

Nature-related opportunities and engagement by Mizuho



Source: Prepared by Mizuho Financial Group based on materials from the Japan Ministry of the Environment

b. Support for client transitions to a nature positive economy

Mizuho provides support in the form of financing arrangements and consulting services to clients with high natural capital dependencies and impacts, while making use of analyses of the natural capital dependencies and impacts in our loan portfolio. We are also undertaking global initiatives, such as the development of "Mizuho Natural Capital Impact Finance" through a business alliance with the United Nations Development Programme (UNDP) and the enhancement of our natural capital-related service and solution functions through a strategic partnership including a capital alliance with Pollination.

Mizuho's support for client transitions to a nature positive economy

Natural capital-related financing — Fundraising for business activities that contribute to a nature positive economy

Nature-related and Blue Finance arrangements Arranged financing for 14 deals in FY2024

BK Executed "Mizuho Natural Capital Impact Finance" (Tokyu Fudosan Holdings, Oji Holdings)

Executed a blue loan for a project for self-sufficiency in drinking water through seawater desalination (Hoshino Resorts REIT, Inc.)

SC Supported the establishment of a sustainability finance framework (Taisei Corporation)

Foreign-currency green/blue bonds for individual investors / Administrative lead manager
Green/blue bonds / Lead manager (Tokyo Metropolis)

Blue bonds / Joint book runner (Hainan Province, China)

Natural capital-related consulting — Visualization / disclosure / survey of risks and opportunities

Support for TNFD disclosures / nature-related surveys

RT Provides natural capital-related consulting services in a broad range of sectors including automotive, food and beverage, construction and real estate, electric power and gas, and steel and non-ferrous metals

Conducted availability survey of underutilized resources for NEDO's Project to Promote a Biomanufacturing Revolution

Major nature-related consulting services

- Support for TNFD disclosures
- Support for determining actual conditions (analysis and visualization using satellite images)
- Quantification of natural capital and biodiversity risks and opportunities
- Quantification of impacts on nature throughout lifecycles
- Support for setting targets, establishing strategies, and executing initiatives (sustainable production and procurement, biodiversity conservation activities, technological development that contributes to conservation)

Product development and function enhancement in nature-related fields
— Collaborations with other companies and contributions to the transition to a nature positive economy

Effective use of external expertise

FG First Japanese financial institution to enter into a business alliance with the United Nations Development Programme (UNDP), to offer advisory and training services for the development of impact-driven investment frameworks

BK Formed strategic partnerships, including a capital investment, with Pollination, a group of experts with strong capabilities in the fields of climate change and nature, to strengthen provision of services and solutions overseas

Development of new products

BK RT

Developed "Mizuho Natural Capital Impact Finance" in partnership with the UNDP to assess initiatives related to nature positive economy

Mizuho Leasing

Signed a basic agreement on collaboration to realize a nature positive economy with Green Elm, which has over 30 years of experience in forest development in Japan and overseas, to develop and implement services that give easy access to natural capital by combining forest development and finance, and pilot projects are currently underway

c. Participation in initiatives

Mizuho, through participation in various initiatives, engages in assistance for businesses contributing to the conservation of natural capital. In February 2025, we newly began participating in the "Nature Positive Economy Platform". And in May, we became the only Japanese member for the launch of "Green Fuel Forward", an initiative that aims to expand demand for SAF in the Asia-Pacific region.

Keidanren Initiative for Biodiversity Conservation	Nature Positive Economy Platform	TNFD Forum
FG / Mizuho Leasing	FG	FG / RT / AM-One
Cross Sector Biodiversity Initiative	**Circular Partners**	**Green Fuel Forward**
BK	FG / RT / Mizuho Leasing	FG

d. Study group for forest business (within Mizuho Group)

Forests, which account for two-thirds of Japan's land area, serve as vital natural capital for companies doing business in Japan and are closely related to many industries from the perspective of climate change responses. Mizuho held regular meetings on forest business to enhance our knowledge of forests and to explore the potential of nature-based solutions (NbS) from a new perspective. Multiple related departments from FG and BK participated in the study group and examined the feasibility of forest business through collaborations among Mizuho Group. The outcome of the study group will be included in the preparation of "*The Forest Business Book,*" and internal resource for our employees that compiles the social issues and background of our initiatives related to forests as well as the solutions that Mizuho can provide to address forest challenges. Going forward, Mizuho will continue to promote examination of, and initiatives toward creating business opportunities related to natural capital.

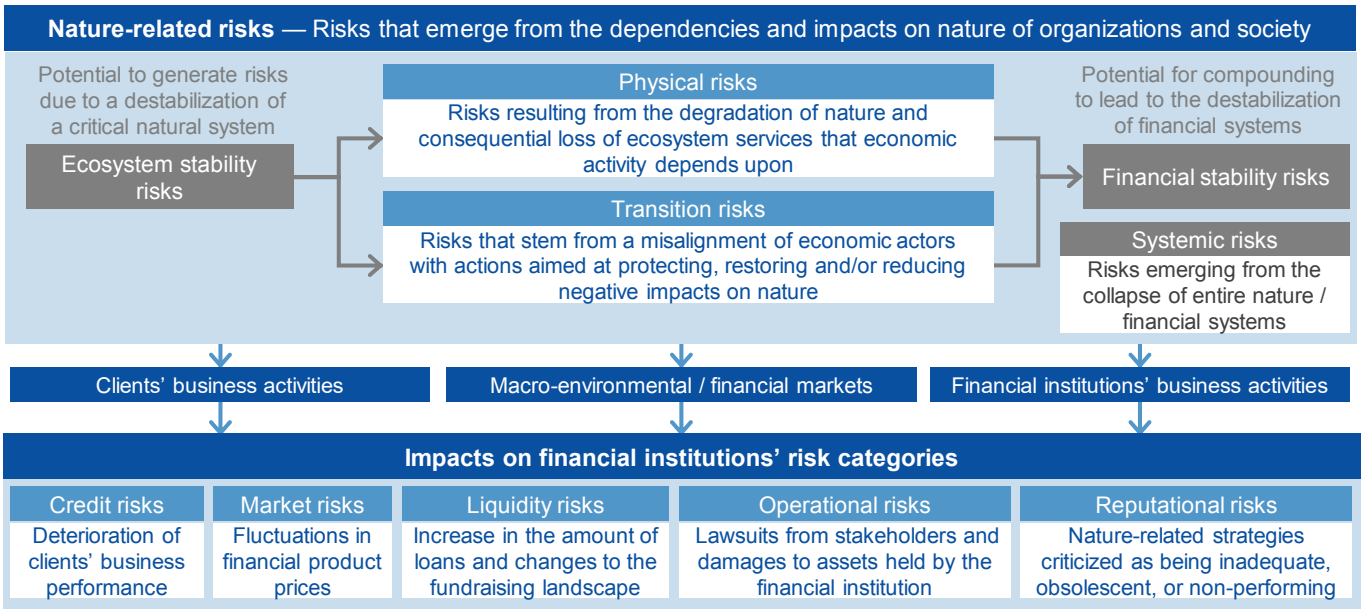
ii. Recognition of nature-related risks for Mizuho

When companies respond to natural capital, it is imperative to first prioritize on examining ways to avoid and reduce negative impacts on nature, in line with the mitigation hierarchy[5] approach. Mizuho is working on preventing and mitigating negative impacts on natural capital that occur through our direct operations and financing and investment activities, within our management framework for environmental and societal risk.

a. Transmission pathways of nature-related risks

Nature-related risks for a financial institution occur through not only the institution's direct operations but also its financial activities such as financing and investment and market transactions, having ripple effects on credit risks and other forms of risks. Mizuho is working on a more detailed understanding of nature-related risks.

Examples of transmission pathways of nature-related risks



b. Mizuho's risk management initiatives

Mizuho has established the Environmental Policy and the Environmental and Social Management Policy for Financial Activities (ES Policy), applied the Equator Principles and, under these respective frameworks, has been working toward preventing and mitigating negative impacts on the environment and society, including natural capital (See p.50).

Under the ES Policy, we have constructed a process to prevent or mitigate negative impacts on nature that verifies whether a client or project we are considering for financing or investment will have a material negative impact on the surrounding natural environment or ecosystems. It also considers whether the prospective client or project respects the rights of indigenous peoples and/or local communities. Moreover, we do not provide financing or investment to projects with outsized impacts on the natural environment. The policy was revised in February 2025 to include provisions for conducting due diligence on projects that may have negative impacts on regions with high conservation value for nature as a cross-sectoral policy. The revisions also clarified policies on financial activities with sectors such as large plantations that involve illegal logging.

Under the Equator Principles, we work collaboratively with clients to identify, assess, and manage environmental and social risks and impacts associated with large-scale development and construction projects, aiming to prevent or mitigate negative effects on the natural environment and local communities.

[5] The mitigation hierarchy is the sequence of actions to anticipate and avoid, and, where avoidance is not possible, minimize, when impacts occur, and restore areas where significant residual impacts remain to offset for biodiversity-related risks and impacts on affected communities and the environment.

(3) Circular economy initiatives

i. Recognition of the external environment

Amid continued global economic growth, interest in the circular economy is increasing as resource shortages and constraints begin to emerge. The circular economy concept focuses on preserving and maintaining the value of products and materials for as long as possible while minimizing waste generation. This approach is highly compatible with efforts to address climate change and conserve natural capital, requiring coordinated promotion of these initiatives.

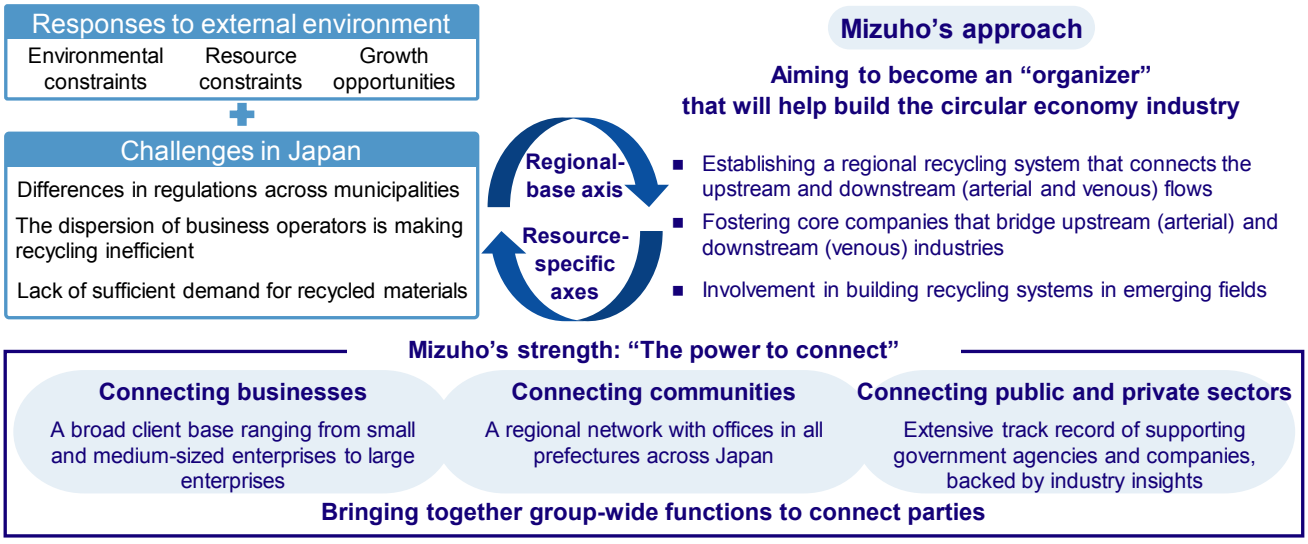
In Japan, recycling systems differ depending on the products, parts, or materials. Regional recycling systems have been established to a certain extent for products and materials governed by individual recycling laws and regulations, making a unified national approach not always possible. Additionally, new recycling systems are required for items such as solar panels, SAF, and storage batteries. Japan is still in the early stages of transitioning to circular economy supply chains that connect arterial industries, which manufacture products, with venous industries, which recycle and properly dispose of waste.

ii. Mizuho's approach to realizing the circular economy

In addition to efforts to make use of our Group's finance functions and to build platforms through our public-private-academic and regional networks, Mizuho is advancing initiatives in this area through two approaches. The first is the regional-based axis, which involves establishment of a regional recycling system that connects arterial and venous industries and fostering of core companies that bridge these industries. The second is resource-specific axis, which focuses on building recycling systems for emerging fields such as SAF and storage batteries.

Leveraging our strengths — including a broad customer base, a regional network with offices in every prefecture in Japan, extensive track records of supporting government agencies and companies based on our industry expertise, and our Group-wide capability for cross-organizational coordination through its finance and consulting functions — Mizuho aims to serve as an organizer that connects businesses, communities, and public and private sectors, fostering the creation of circular economy industries.

Mizuho's approach to realizing the circular economy



Mizuho's circular economy initiatives

Group-wide financing functions

- Provision of sustainable finance to support resource circulation
- Provision of risk capital such as investments in venture companies in the circular economy field
- Provision of investment opportunities and investment trusts that target companies where the transition to the circular economy is a business growth driver

Initiatives toward supply chain transformation

Mizuho Leasing	**Entered into a capital and business alliance with TRE Holdings, which owns a major recycling company** (Aug 2023) Established a joint venture to engage in the demolition of buildings and waste disposal (Aug 2024)
RT	Supporting **circular economy policy development for government ministries and agencies** throughout the years Providing a wide range of customer-oriented solutions in the private sector, such as developing quantitative analysis models for building circular supply chain to realize the circular economy
FG	**Joined "Green Fuel Forward,"** an initiative launched by GenZero, a decarbonization investment platform under Temasek, and the World Economic Forum, aimed at expanding demand for SAF (May 2025)

Risk Management

Mizuho recognizes that risk control appropriate to the characteristics of operations and risks is one of the highest priority management issues. We engage in risk management to ensure the soundness and stability of our management while increasing our corporate value. In this regard, we approach climate change and the loss of nature as global issues that threaten the environment, society, people's lifestyles, and business activities and that have the potential to impact the stability of financial markets. Accordingly, we work to maintain an appropriate risk management framework address these issues.

Overall structure of climate and nature-related risk management

1. Top risk management	Recognize and designate risks with potential material impact on our Group (P. 43)		Climate, Nature
2. Risk management framework	Introduced a risk appetite framework (RAF) and constructed a comprehensive risk management framework (P. 44)	(1) Climate-related risk management framework (P. 44)	Climate
		(2) Risk controls for carbon-related sectors (P. 45-47)	Climate
		(3) Sector-specific exposure (P. 48-49)	Climate, Nature
3. Responsible financing and investment management framework	Established the *Environmental and Social Management Policy for Financial Activities* to prevent and mitigate negative impacts on the environment and society (P. 50-51)		Climate, Nature

1. Top risk management

Mizuho has a top risk management system in place that designates as top risks those risks perceived to have a major impact on the Group.
The top risk designation process begins with collecting a broad range of risks that may harm our corporate value, based on changes in internal and external circumstances and in light of our company's particular vulnerabilities and business strategies. Critical risk events are then narrowed down based on evaluations of the risks' transmission pathways, probabilities, and impacts. Finally, the top risks are designated after discussions by executive management with consideration of the difficulty of controlling the risks.
In recent years, growing concerns over climate change, human rights violations, and the loss of nature have heightened the need for continued efforts by financial institutions. Of these issues, recognizing the need to address the increasing climate-related risks caused by the loss of nature, our Group has designated "*worsening impacts of climate change and inadequate environmental responses*" as an existential top risk that the Group must recognize and address. While closely monitoring external developments related to the loss of nature, which is closely linked to climate change, we are exploring measures to strengthen risk controls, including prevention and post-event strategies.

FY2025 top risks

- The waning of Japan's economy and businesses
- Sharp and rapid slowdown of the U.S. economy
- Emergence of sovereign risks in various countries
- Intensified trade wars and conflict risks
- **Worsening impacts of climate change and inadequate environmental responses**
- Cyber attacks
- IT System failures
- Money laundering / Financing of terrorism
- Improper acts and omissions by executive officers / employees
- Stagnation of sustainable growth due to talent shortages
- Insufficient responses to AI and other technologies
- Occurrence of natural disasters that could cause to business disruptions

Top Risk

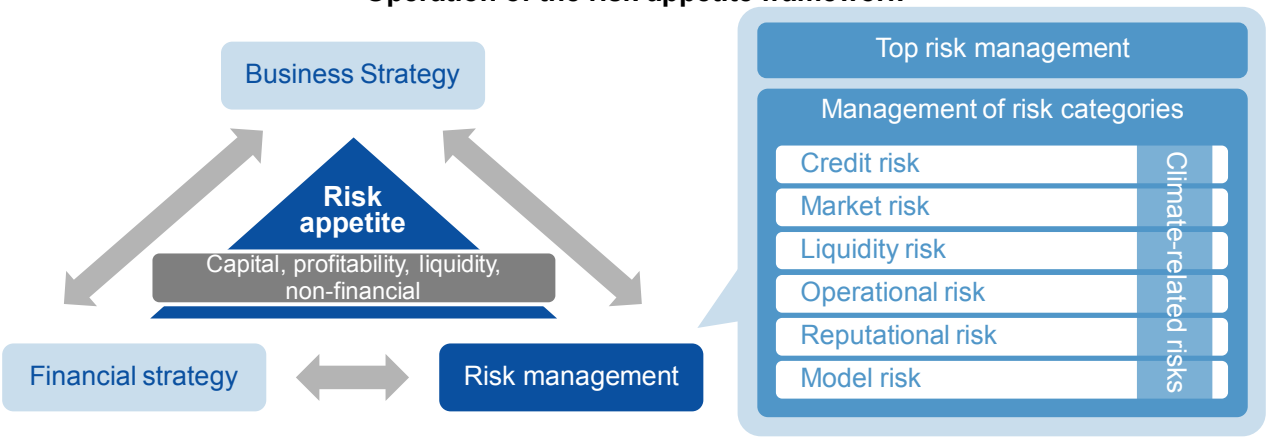
Worsening impacts of climate change and inadequate environmental responses

- A reversal in the ESG movement and difficulties in achieving international consensus on climate action can lead to uneven and delayed transitions across societies, exacerbating the impacts of climate change.
- Despite being continually required to address environmental considerations and manage transition and physical risks, financial institutions lack adequate responses due to business impacts, energy security concerns, and data and technology constraints.

2. Risk management framework

Mizuho introduced a risk appetite framework (RAF) from the perspective of increasing our corporate value to integrate our business strategy, finance strategy, and risk management operations. Specific matters related to the RAF and specific risk appetites were documented in a risk appetite statement (RAS), which was approved by the Board of Directors. Based on our RAF operations, we classify the risks that emerge from our Group's business by risk factors into credit risks, market risks, liquidity risks, operational risks, among others and then manage each risk according to its characteristics. In addition to management by risk category, we have constructed a comprehensive risk management framework, which ascertains and evaluates all risks and limits risks with a scope tolerable from a management perspective that is within our risk capacity scope.
Regarding climate-related risks, we confirm the status of current risks in carbon-related sectors through RAF operations as well as Mizuho's resilience to climate-related risks based on scenario analyses of future risks that account for the impact of climate change, and we report these findings to the Executive Management Committee, the Board of Directors, and other committees.

Operation of the risk appetite framework



(1) Risk management framework for climate-related risks

Mizuho ascribes climate-related risks to appropriate risk categories within the following risk management framework and identifies critical climate-related risks in the execution of our business plans. In this way, we control risks in line with the characteristics of each risk category and our business strategies.

Climate-related risk management framework

Basic Policy for Climate-related Risk Management

From the perspective of establishing an effective management system based on the characteristics of climate-related risks, we instituted a basic policy and carry out risk management based on the policy

Basic approach

- Mizuho works to continually improve the predictability of various changes related to climate change, pays close attention to the potential impact of climate change, and manages climate-related risks from both short term and medium to long term perspectives.
- In order to meet the high expectations and demands of a wide range of stakeholders, Mizuho practices effective risk management, based on the Mizuho Code of Conduct, our Environmental Policy, and our Basic Policy on Sustainability Initiatives.

Recognition of climate-related risks and materiality evaluations (See p. 28-29)

Based on the Basic Policy for Climate-related Risk Management, we conduct materiality evaluations based on the impact and probability of climate-related risks in order to select critical risks for which management systems should be strengthened on a priority basis

Manage high-priority climate-related risks both qualitatively and quantitatively as needed and take appropriate responses

Determine and manage quantitative impacts with scenario analyses
(See p. 30-34)

Risk controls in carbon-related sectors
(See p. 45-47)

Credit risk evaluations
Where climate-related risks may impact specific credit risks, this framework reflects these risks in qualitative evaluations in combination with other risk factors

(2) Risk controls in carbon-related sectors

i. Overview of the risk control framework for carbon-related sectors

Mizuho controls risks through engagement for the purposes described below in sectors recognized in qualitative evaluations to have high transition risks (carbon-related sectors). We evaluate the degree of risk for each client along two axes: the client's sector (vertical axis) and the status of the client's responses to transition risks (horizontal axis). From these evaluations, we provide appropriate support for the client's transition.
The state of risk controls in carbon-related sectors is reported to the Risk Management Committee each quarter. From time to time, we improve our risk control frameworks for carbon-related sectors through quantitative identification of climate-related risks and make revision to evaluations of client responses to transition risks in light of the external business landscape. In FY2024, we added two criteria for evaluations of client responses to transition risks: Achievement of a certain amount of GHG emission reductions with respect to targets and Targets and performance are consistent with the 1.5°C pathway.

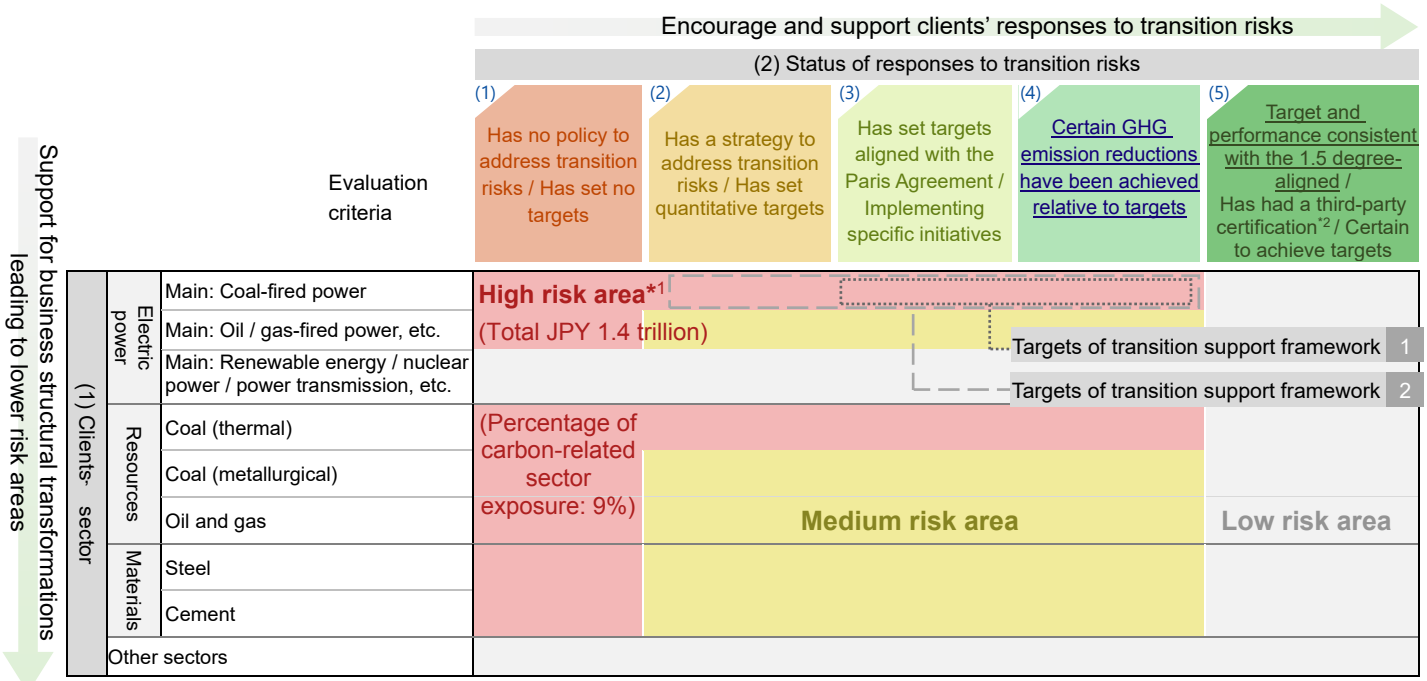
Purposes

- Support client transitions and control Mizuho's transition risk through engagement.
- Identify areas with high transition risks to help construct an appropriate Mizuho portfolio that accounts for climate-related risks.
- Support client transitions to facilitate transition in the real economy and gradually aligns Mizuho's portfolio with the Paris Agreement.

Two-axis risk evaluations and support

Axis	Client's sector (vertical axis)	Status of transition risk responses (horizontal axis)
Risk evaluation criteria	Company's business segment with the highest sales or energy mix	● Willingness to take measures against transition risk ● Presence of a transition strategy and quantitative targets ● Target level, tangible means to achieve the target, status of initiatives, track record, and objectivity
Transition support	Support for business structural transformations leading to lower risk areas and sectors	Encourage and support clients' responses to transition risks

Risk control framework for carbon-related sectors



Transition support frameworks Frameworks to support the efforts toward business structural transformation of clients in the high risk area

1 Support clients where we have confirmed the reliability and transparency of their transition strategies

2 Support for projects where we have confirmed that it is a green project using renewable energy or other methods

*1. Amount of exposure as of March 31, 2025. High risk areas include exposure to project finance (PF) for coal-fired power plants
*2. Science Based Targets, etc.

ii. Risk control policy for carbon-related sectors

For high risk and medium risk areas identified with our two-axis risk evaluations, we support our clients' progress in addressing transition risks and business structural transformations through engagement as well as monitor our own exposure. For high-risk areas, we control risks on the basis of the following exposure control policy. We will continue to clarify and upgrade our high-risk area scope and approach along with our requirements on providing support for business structural transformations.

Exposure control policy for high-risk areas

- We pursue greater engagement with clients to support them in formulating effective strategies for transition risks, in disclosing their progress, and in embarking at an early stage on business structural transformations in order to move into a lower risk sector.
- In order to facilitate a client's business structural transformations, we provide necessary transition support after verifying that the client fulfills requirements advocated for in international standards in the transition support frameworks.
- We carefully consider whether to continue business with a client in the event that the client is not willing to address transition risks and has not formulated a transition strategy even one year after our initial engagement.
- In the ways described above, we reduce our exposure over the medium to long term.

Transition support frameworks

- We actively provide financing to clients for business structural transformations even if they are in the high-risk area, provided that their transition strategies and projects are aligned with our verification standpoints
- In general, it is possible that our exposure to high-risk area will increase, but by facilitating the client's planning and execution of transition strategies, we can appropriately manage the transition risks and lower our medium and long-term transition risks

1 Support clients where we have confirmed the reliability and transparency of their transition strategies

Confirmation criteria
We confirm the following criteria, determined with reference in part to the recommended disclosure elements in the International Capital Market Association (ICMA)'s Climate Transition Finance Handbook

Strategies and materiality	Satisfies the required elements as a transition strategy (business strategies that aid transitions)
Governance structures	Has appropriate governance structures related to strategies and target setting
Scientific basis	The targets are science based and are consistent with the Paris Agreement
Disclosure status	Progress is being made toward the targets with no transparency issues regarding strategies or targets
Forecasts for the development and adoption of decarbonization technologies	Has forecasts for the adoption of technologies based on a strategy as well as cashflow forecasts

2 Support for projects where we have confirmed that it is a green project using renewable energy or other methods

Confirmation criteria
We confirm the following criteria, determined with reference to the recommended elements in the Green Loan Principles, established by the Loan Market Association (LMA) and others.

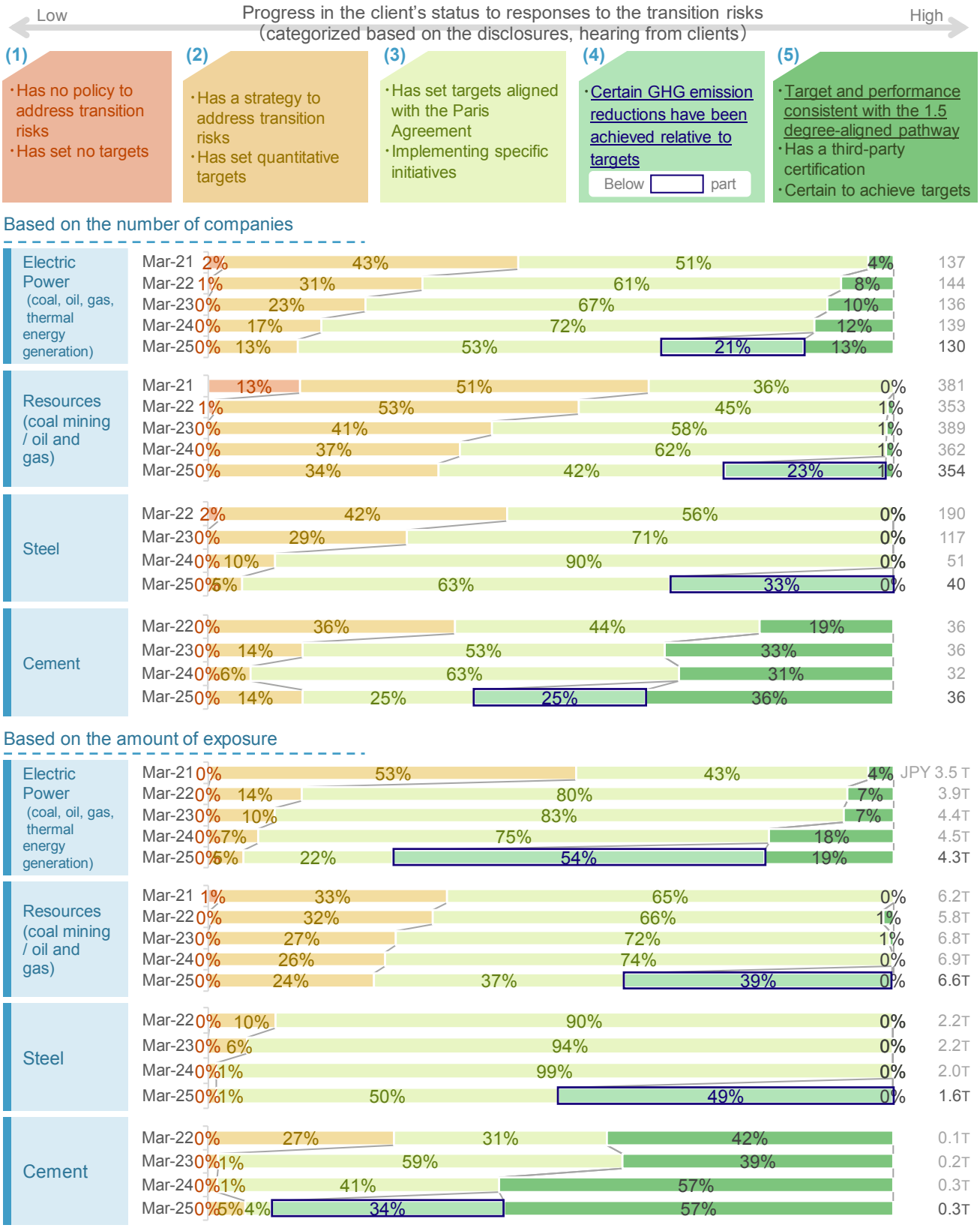
Application of funds	Funds are used for green projects
Project evaluation and selection process	There is a process for determining environmental targets and appropriate projects
Management of funds	Funds are tracked with an appropriate mechanism
Reporting	Transparency of the application of the funds and their allocation status is assured
Client's stance on initiatives	The client is cognizant of developing responses to transition risks and making business structural transformations in order to move toward lower risk areas

Exposure in high-risk areas

- JPY 1.4 trillion as of March 31, 2025 (down JPY 0.1 trillion in exposure from March 31, 2024, and down JPY 0.4 trillion from March 31, 2021, when we began disclosing this exposure total as a monitoring metric)
- We confirmed that of the JPY 1.4 trillion in exposure in high-risk areas as of March 31, 2025, JPY 800 billion meets the confirmation criteria in the transition support frameworks.

iii. Client progress on transition risk responses

Mizuho confirms the status of client transition risk responses through engagement and supports transition responses in a phased manner. We saw steady progress by clients in all sectors on responding to transition risks compared to the previous year.
We will continue to practice engagement and provide financial and non-financial solutions to facilitate our clients' progress on decarbonization initiatives and on responding to transition risks. In this way, we will improve climate change resilience for both Mizuho and our clients.



* Third-party certifications include Science-Based Targets and others. The number of companies in the steel sector for FY2023 decreased due to the revision of industry classifications

(3) Sector-specific exposure

i. Sector-specific exposure based on recommended disclosures under the TCFD Recommendations[6]

The following table summarizes the status of our credit exposure in the sectors that underwent the qualitative evaluations described in p. 29.

Credit exposure by sector based on recommended disclosures under the TCFD Recommendations (criteria as of March 31, 2025)

Sector (**colored text** indicates carbon-related sectors)	Exposure (JPY trillions)	YoY change	Percentage of total	YoY change
Electric utilities	10.2	-0.0	3.5%	-0.1%
Power generation (coal-fired)	**1.4**	-0.2	**0.5%**	-0.1%
Power generation (oil, gas, and others)	**3.9**	-0.0	**1.4%**	-0.0%
Power generation (renewable energy / nuclear power)	3.4	-0.0	1.2%	-0.0%
Power transmission	1.5	+0.2	0.5%	+0.0%
Coal	**0.1**	-0.0	**0.0%**	-0.0%
Thermal coal	**0.0**	-0.0	**0.0%**	-0.0%
Metallurgical coal	**0.1**	-0.0	**0.0%**	-0.0%
Oil and gas	**8.2**	-0.3	**2.8%**	-0.2%
Subtotal for energy	18.5	-0.4	6.4%	-0.3%
Air passengers and cargo	1.1	-0.1	0.4%	-0.0%
Maritime transportation	2.1	+0.0	0.7%	-0.0%
Rail transportation	1.9	-0.1	0.7%	-0.0%
Automotive	6.5	-0.7	2.2%	-0.3%
Subtotal for transportation	11.6	-0.8	4.0%	-0.4%
Metals and mining	2.0	+0.0	0.7%	-0.0%
Steel	**2.4**	-0.2	**0.8%**	-0.1%
Construction materials	0.3	-0.0	0.1%	-0.0%
Cement	**0.4**	+0.1	**0.1%**	+0.0%
Chemicals	7.0	-0.4	2.4%	-0.2%
Buildings and other capital goods	10.6	-0.1	3.7%	-0.1%
Real estate management and development	20.6	+1.3	7.1%	+0.3%
Subtotal for materials and buildings	43.4	+0.7	15.0%	-0.1%
Beverages	0.8	-0.0	0.3%	-0.0%
Agriculture	0.1	-0.1	0.0%	-0.0%
Packaged foods and meats	2.5	-0.2	0.9%	-0.1%
Paper and forest products	0.9	+0.0	0.3%	+0.0%
Subtotal for agriculture, food, and forest products	4.3	-0.3	1.5%	-0.1%
Insurance	2.3	+0.3	0.8%	+0.1%
Total for sectors listed above	80.0	-0.4	27.6%	-0.8%
Total for all sectors	289.5	+6.5	100.0%	+0.0%

[6] We added the insurance sector, which was identified in our qualitative evaluations as facing high physical risks, to the 18 sectors recommended for disclosure in the TCFD Recommendations. Mizuho's sector classification method has been established based on the classifications in the *Industry Classification Table* formulated by the Bank of Japan. Figures represent the total exposure in the form of loans, foreign exchange, acceptances and guarantees, commitment lines, etc. (combined figures for Mizuho Bank and Mizuho Trust & Banking and excluding an internal management basis and retail customers). Due to data changes following the finalization of Basel III, last year's EXP was re-aggregated using the newly defined criteria. Exposures denominated in foreign currencies are converted into Japanese yen at the exchange rate (TTM) at fiscal yearend and include changes due to exchange rate fluctuations (Reference: The USD/JPY TTM was 151. 4 on March 31, 2024, and 149.53 on March 31, 2025).

ii. Sector-specific exposure based on recommended disclosures under the TNFD Recommendations

The additional guidance for financial institutions in the TNFD Recommendations states that financial institutions should disclose their financial exposure (for banks, the absolute amount or percentage of lending volume) to 12 sectors considered to have material nature-related dependencies and impacts, as a core sector disclosure metric. The table below provides the state of Mizuho's financial exposure[7] to 12 sectors, based on the recommended disclosure items in the TNFD Recommendations.

We strive to determine risks associated with our financial exposure, in accordance with the development of nature-related databases and scenarios, standardization of analysis methodologies, and the promotion of initiatives and information disclosures by corporate clients.

Sector-specific financial exposure based on recommended disclosures under the TNFD Recommendations (referred to March 31, 2025)

Sector	Exposure (JPY trillions)	YoY change	Percentage of total	YoY change
Energy	3.0	-0.1	3.4%	-0.2%
Materials	5.8	-0.1	6.7%	-0.3%
Transportation	3.8	-0.1	4.3%	-0.2%
Automobiles & Components	2.7	-0.4	3.1%	-0.6%
Consumer durables & Apparel	1.0	-0.1	1.1%	-0.1%
Consumer services	1.7	+0.1	1.9%	+0.0%
Food & Beverage	1.4	-0.2	1.6%	-0.3%
Household & Personal products	0.2	+0.0	0.2%	+0.0%
Pharmaceuticals & Biotechnology	0.5	-0.3	0.5%	-0.3%
Semiconductors & Semiconductor equipment	0.2	-0.1	0.2%	-0.1%
Utilities	5.8	-0.2	6.6%	-0.4%
Real estate management & development	5.1	+0.4	5.9%	+0.3%
Total for the sectors above	31.1	-1.1	35.6%	-2.1%
Total for all sectors	87.4	+2.1	100%	+0.0%

[7] Figures represent the total exposure in the form of loans for both Mizuho Bank (including main local subsidiaries) and Mizuho Trust & Banking (excluding an internal management basis and retail customers). Due to data changes following the finalization of Basel III, last year's EXP was re-aggregated using the newly defined criteria. Mizuho's sector classification method has been established based on Annex 1 of the additional guidance for financial institutions in the TNFD Recommendations. Exposures denominated in foreign currencies are converted into Japanese yen at the exchange rate (TTM) at fiscal yearend.

3. Management frameworks for responsible financing and investment

(1) Overview of the Environmental and Social Management Policy for Financial Activities

Mizuho is committed to acting in an environmentally responsible manner and respecting internationally recognized human rights under our *Mizuho Code of Conduct*, *Environmental Policy*, and *Human Rights Policy*. Based on this commitment, we also established *the Environmental and Social Management Policy for Financial Activities* (ES Policy) for the purpose of preventing and mitigating adverse impacts on the environment and society. The ES Policy identifies issues and sectors that have a high likelihood of contributing to such adverse impacts through financing and investment activities. See our website[8] for more details on the ES Policy.

Overview of the ES Policy

ES Policy	The ES Policy identifies issues and sectors that have a high likelihood of contributing to adverse impacts on the environment and society through financing and investment activities and specifies uniform, Group-wide policies[9] to address issues and sectors based on the specific risks they pose. **Targeted business operations (financing and investment activities)** The following operations conducted by core Group companies[10] • Lending (including corporate finance and project finance) • Underwriting (including bond and equity underwriting) • Proprietary investments in individual stocks • Trust services (excluding trust service related to asset management)
Cross-sectional policies	Specifies cross-sector projects that are prohibited or that require additional due diligence with regard to activities that contravene international treaties and especially serious violations of human rights
Policy on human rights issues	With regard to human rights issues, specifies policies for conducting human rights due diligence and guidelines on addressing processes and verification results
Policy on transition risk sectors	Specifies policies and processes for engagement with clients in sectors with high climate-related transition risks **Targeted companies** Companies whose primary business[11] is in coal-fired, oil-fired, or gas-fired power generation, coal mining,[12] oil, gas, steel, or cement
Sector-specific policies	Specifies projects that are prohibited or that require additional due diligence in sectors that have a high likelihood of contributing to adverse impacts on the environment and society through financing and investment activities **Specific sectors** Weapons and arms; Coal-fired power generation; Thermal coal mining; Oil and gas Mining; Large-scale hydroelectric power generation; Woody biomass power generation; Large plantations Palm oil; Lumber and pulp; Fisheries and aquaculture

(2) Operations based on the Equator Principles

In addition to the *Environmental and Social Management Policy for Financial Activities*, we apply the Equator Principles to the financing of large-scale development or construction projects, and we work with clients to identify, assess, and manage environmental and social risks and impacts. Mizuho Bank became the first financial institution in Asia to adopt the Equator Principles in 2003.

[8] https://www.mizuhogroup.com/binaries/content/assets/pdf/mizuhoglobal/sustainability/business-activities/investment/environment.pdf
[9] This policy is applied in compliance with the laws and regulations of each region.
[10] Our core group companies are Mizuho Bank, Mizuho Trust & Banking, Mizuho Securities, and Mizuho Americas and the subsidiaries of these four companies including local subsidiaries worldwide.
[11] Primary business refers to any of the following states: (1) the target business accounts for more than 50% of total sales or total power generation (2) Although not falling under (1), the target business accounts for the largest proportion in total sales or total power generation.
[12] Includes both thermal coal and metallurgical coal.

(3) Implementation of the Environmental and Social Management Policy for Financial Activities

The core Group companies implement the ES Policy in line with the characteristics of their particular businesses and have constructed verification processes for the transaction examination stage and throughout transaction terms. On the governance side, the Executive Management Committee and other committees regularly review the appropriateness and sufficiency of the ES Policy, in view of its implementation performance and changes in the external business landscape. In response to the reviews, the ES Policy is revised and business processes are improved for more appropriate implementation of the ES Policy, and training and awareness about the ES Policy are provided to employees and executive officers.

Implementation of the ES Policy

Verification process when examining a potential transaction	● When a prospective client or project for financing or investment belongs to one of the issues or sectors specified in the ES Policy, we are taking the following actions. - If the potential transaction is subject to "prohibitions": We will not provide financing and investment. - If the potential transaction is subject to "other policies": We will make transactional decisions after taking action based on the characteristics of the services being provided by core Group companies, such as confirming the client's progress on responses to prevent or mitigate adverse impacts. **Examples of Verification Items** ・ Has the client faced sharp criticism and strong disapproval from the society or face massive protests? ・ Does the client faithfully respect the rights of indigenous people and local communities? ・ Are efforts being made to reduce GHG emissions from the project? ・ Does the project have significant adverse impacts on the surrounding natural environment or ecosystems? ・ Has the client developed strategies or policies that address environmental and social issues, or carried out an assessment? ・ Has the client obtained all certifications required by Mizuho?
Verification process during the transaction term	● A frontline office engages in constructive dialogues with the client at least once a year. - For clients in specific industrial sectors, verify the status of the client's measures to prevent or mitigate negative impacts on the environment and society and report findings to the head office (Number of engagements: Approximately 780 companies) - For clients in transition risk sectors, develop a shared understanding of medium and long term issues with respect to climate change risks and opportunities and verify the client's progress on transition risk responses. ● Mizuho will urge the client to take immediate remedial measures if any act that violates the ES Policy is discovered during the transaction term.
Governance	● Our business execution and supervisory lines regularly review the appropriateness and sufficiency of the ES Policy, with consideration of its implementation performance and the external business landscape, and revise the ES Policy and improve business processes for more appropriate implementation of the ES Policy. (See p.10-12 for details on governance.)
Education and training	● We provide training via e-learning and other methods to executive officers and employees to ensure they can undertake effective risk management. ● We have established manuals on verification items and provide support for engagement by frontline offices.
Stakeholder communications	● Mizuho places importance on engagement with a wide array of stakeholders to ensure our initiatives are in alignment with the expectations of stakeholders.

Metrics and Targets

1. Overview of metrics and targets

Transition plan item	Monitoring metrics	Targets	Recent results	Details
GHG emissions reduction	Scope1,2 emissions[13]	Carbon neutral by FY2030 (Carbon neutrality to be maintained thereafter)	FY2023: 64,643 tCO_2	p.53, ESG Data book
	Scope1,2 energy consumption [13]		FY2023: 416,832 MWh	
	Scope 3 (financed emissions)	Net zero by 2050	(Targets and results disclosed by sector)	p.58
	- Electric power sector	FY2030: 138 to 232 $kgCO_2e/MWh$	FY2023: 317 $kgCO_2e/MWh$	
	- Oil and gas sector	FY2030: Scope 1,2: 4.1 gCO_2e/MJ Scope1,2 and Scope3: –12 to –29% (Compared to FY2019 levels)	FY2023: Scope1,2: 5.4 gCO_2e/MJ Scope1,2 and Scope3: –53% (31.8 $MtCO_2e$)	
	- Coal mining (thermal coal) sector	FY2030: Zero balance for OECD countries FY2040: Zero balance for Non-OECD countries	FY2023: 0.5 $MtCO_2e$	
	- Steel sector	FY2030: –17% to –23% (Compared to FY2021 levels)	FY2023: –28% (12.5$MtCO_2e$)	
	- Automotive sector	FY2030: Scope 1,2: –38% Scope 3: –31% to –43% (Compared to FY2021 levels)	FY2023: Scope1,2: –23% (719 $ktCO_2e$) Scope3: –10% (178gCO_2e/vkm)	
	- Maritime transportation sector	FY2030: Portfolio climate alignment score ≦0%	FY2023: –7.0%	
	- Real estate sector	FY2030: 33 to 42 $kgCO_2e/m^2$	FY2023: 55 $kgCO_2e/m^2$	
Capturing business opportunities	Sustainable finance	Total for FY2019 to FY2030: JPY 100 trillion (Of which JPY 50 trillion: earmarked for environment and climate-related finance)	Total for FY2019 to FY2024: JPY 40.3 trillion (Of which JPY 20.5 trillion: environment and climate-related finance)	p.22
Risk management	Outstanding credit balance of coal-fired power generation plants [14]	Reduce the FY2019 amount by 50% by FY2030, and achieve an outstanding credit balance of zero by FY2040	March 31, 2025: JPY 220.5 billion (Down 26.4% from March 31, 2020)	p.52
	Exposure to high-risk areas in transition risk sectors [15]	Reduce over the medium to long term	March 31, 2025: JPY 1.4 trillion (Down –0.4 trillion JPY from March 31, 2021)	p.46
Engagement	Status of clients' transition risk responses	n/a	March 31, 2025: Steady progress in the targeted sectors	p.47
Capability building	SX talents - Sustainability management experts - Environment and energy sector consultants	FY2025 - 1,600 experts - 150 consultants	As of March 2025: - Approx. 1,850 experts - Approx. 140 consultants	p.27

■ Other disclosure items aside from the monitored metrics

-Sector-by-sector credit exposure in line with the TCFD Recommendations	p.48
-Sector-by-sector financial exposure in line with the TNFD Recommendations	p.49
-Financed emissions and facilitated emissions based on PCAF methodology	p.54-57
-Water and paper usage, green purchasing ratio for paper, and waste recycling rate at group company sites	ESG Databook

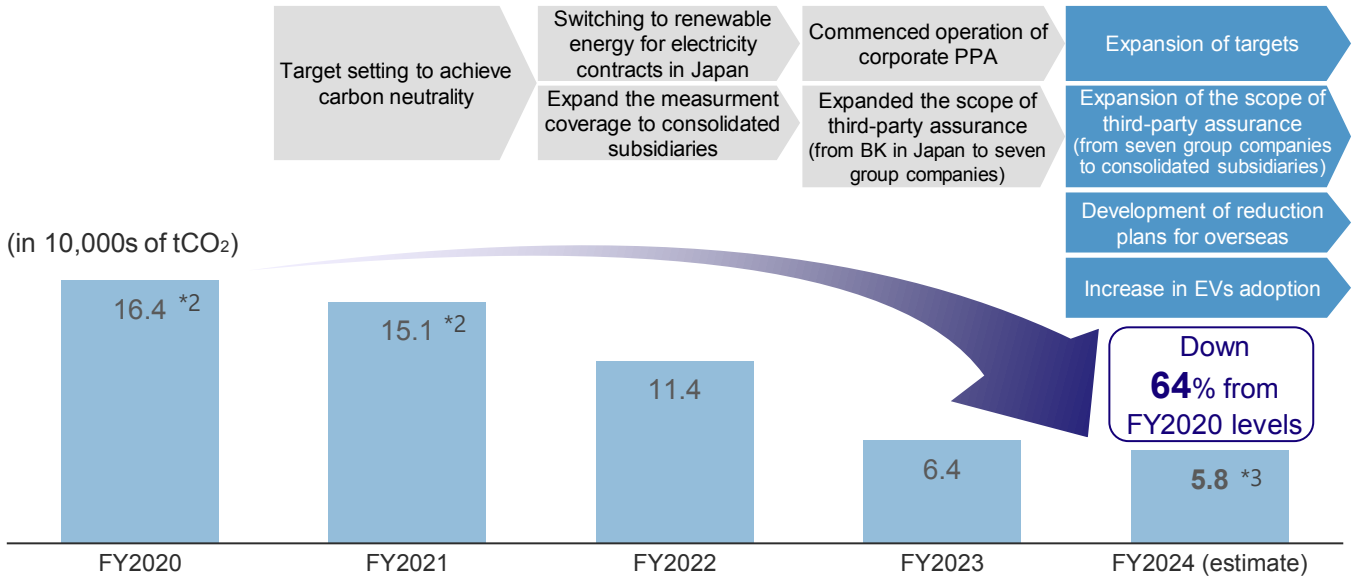
[13] Scope of coverage: All domestic and international consolidated subsidiaries, adjusted emission factors and market standards.
[14] The funds used for the construction or expansion of coal-fired power plants, which is prohibited under the ES policy.
[15] See p.45 "Risk Control in Carbon-related Sectors" for the definition of exposure to high-risk areas.

2. Scope 1 and 2 (GHG emissions from our own business activities)

Regarding our own GHG emissions (Scope 1 and 2), Mizuho has set a target of becoming carbon neutral by FY2030 and pursues various initiatives to achieve this target. In view of addressing legally mandated disclosures, we expanded the scope of measurements in FY2023 to include all domestic and overseas consolidated subsidiaries, and in FY2024 we obtained third-party certification of our measurements on a consolidated basis. In March 2025, we expanded the scope of our targets to all consolidated subsidiaries.

FY2024 estimated emissions totaled approximately 58,000 tons of CO2, representing a reduction of 64% from FY2020. We are, additionally, moving ahead with initiatives to further reduce the environmental impact of our own operations.

Scope 1 and 2 GHG emission results*1 and progress on reduction initiatives



*1. Target / scope of data collections: All domestic and overseas consolidated subsidiaries. No use of credits
*2. Previous scope: Seven group companies (Mizuho Financial Group, Mizuho Bank, Mizuho Trust & Banking, Mizuho Securities, Mizuho Research & Technologies, Asset Management One, and Mizuho Americas)
*3. Tentative estimated value

Efforts to reduce Scope 1 and 2 emissions

- Expansion of the scope of carbon neutrality target to the consolidated group (previously limited to seven group companies)
- Expansion of the scope of third-party assurance to consolidated companies and globally
- Introduction of EVs at sales offices (approximately 100 vehicles across 10 branches). Further rollouts are planned

- Development of reduction plans for high-emitting overseas sites
- Purchasing high-quality credits with a view towards FY2030 and beyond

Reduction of environmental impact

- Launched zero-waste initiatives at the Otemachi Head Office building
  - In collaboration with Tokyo Tatemono , we aim to improve our recycling rate by enhancing employee awareness of waste separation, reviewing recycling methods, and utilizing new technologies
- At the Otemachi and Marunouchi head office buildings, which have large employee cafeterias and generate large amounts of food waste, we are converting food waste into animal feed
- Used cooking oil from cafeterias at major offices is recycled into soap, ink and paint materials, and fats and oils for animal feed

Purchasing high-quality carbon credits to become carbon neutral by 2030

Mizuho participated in the NextGen CDR Facility as a buyer, becoming the first Japanese bank to conclude a long-term purchase contract for technology-based CDR credits. Although Mizuho has set reduction targets for our own emissions (Scope 1 and 2) and is making efforts to reduce these emissions, it is necessary to offset the residual emissions in our own emissions that we have no means to reduce, by making use of high-quality credits such as technology-based CDRs. We will continue to consider the future purchase of high-quality credits that we deem can be used beyond 2030.

Carbon credits are a mechanism to allocate funds to technologies and projects that reduce or eliminate CO_2 emissions without damaging the economy by accurately evaluating decarbonization initiatives and fairly distributing the costs of such initiatives across regions. Mizuho is working on the business side of carbon credits to expand the market, which is still in its infancy (p. 25).

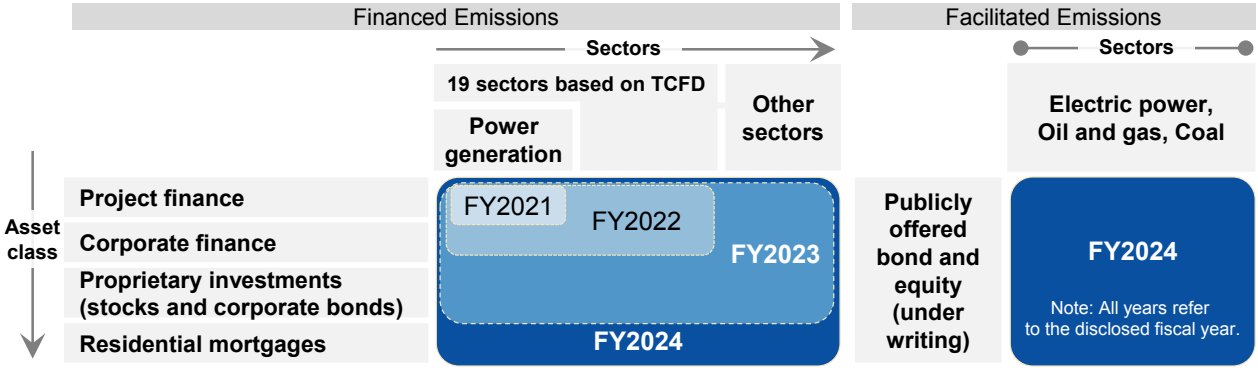
STRATOS, the world's largest direct air capture (DAC) facility
Photo courtesy of 1PointFive, a U.S. company

3. Scope 3 (emissions from financing and investment)

(1) Measurement of financed emissions and facilitated emissions based on PCAF standards

Since FY2021, Mizuho has been measuring financed emissions (emissions from financing and investment) and has expanded the scope of assets and sectors covered, as outlined below. Additionally, in FY2024, Mizuho began trial measurements of facilitated emissions (emissions from capital market activities).

Expanded scope of financed emissions and facilitated emissions



i. Measurements of financed emissions (emissions from financing and investment)

a. Overview of measurements

Targeted assets	(1) Loans (corporate finance and project finance)[16] (2) Proprietary investments (stocks and corporate bonds)[17] (3) Residential mortgages[18]
Targeted sectors	The 19 sectors based on the TCFD Recommendations + other sectors Note: Sector classifications are the same as those in qualitative evaluations of sector-specific risks and opportunities (p. 29) and exposure by sector (p. 48).
Basic formulas	Financed Emissions = $\sum$ (1) Attribution factor × (2) Company emissions (1) Attribution factor = Outstanding loans / investments from Mizuho to clients / Client's corporate value (total equity + debt or EVIC for listed companies) (2) Company emissions = Scope 1, 2, and 3 emissions disclosed by clients. Estimated values used when disclosures not available. Note: For residential mortgages, financed emissions are calculated with (1) Outstanding loans for the targeted buildings / Property value of buildings at origination and (2) Building Emissions (estimated value).
Target year	FY2023 - Mizuho's loan and investment balance: Amount as of March 31, 2024[19] - Client financial and emissions data: Principally, the latest FY data available as of March 31, 2024
Sources of emissions data	*Disclosed values* (Figures in parentheses are the equivalent data quality scores (score[20])) - We used data from data vendors, client disclosures, and interviews with clients (score 1 or 2) *Estimated values* — Used when disclosed values cannot be obtained - We estimated emissions using data vendors (score 3 to 5) or emission factors taken from the PCAF database (score 4) - [Project finance for power generation projects only] Project's annual power generation volume x Emissions factor taken from the IEA World Energy Outlook and other sources (score 3) - [Residential mortgages only] Floor area per building unit x Emissions factor based on national statistics (score 4)

[16] Combined figures for the loan balances of Mizuho Bank and Mizuho Trust & Banking. Available credit under committed lines of credit, securities, derivatives, and similar are not included. Loans to special purpose vehicles for securitization, trade finance, and sovereign loans are outside the scope of this measurement at the present time, as it is not possible to calculate attribution factors for these types of loans.
[17] Combined investment balance for Mizuho Bank and Mizuho Trust & Banking. Covers directly held portions of individual company bonds (publicly offered bonds and privately placed bonds) and stocks. Indirect holdings through fund investments and investments in sovereign bonds are excluded at the present time.
[18] Outstanding balance of domestic residential mortgages at Mizuho Bank.
[19] For subsidiaries of Mizuho Bank with a fiscal year ending in December, the loan and investment balances as of December 31, 2023, are used.
[20] A score of 1 is most certain (values disclosed by company with third-party certification), and a score of 5 is least certain (based on estimated data and asset balances)

b. Measurement results

	【Loan】Financed Emissions									【Investment】Financed Emissions			【Loan】Financed Emissions			
	FY2020		FY2021		FY2022		FY2023			FY2023			FY2023			
	Scope 1,2 ($MtCO_2e$)	Scope 3 ($MtCO_2e$)	Scope 1,2 ($MtCO_2e$)	Scope 3 ($MtCO_2e$)	Scope 1,2 ($MtCO_2e$)	Scope 3 ($MtCO_2e$)	Loan balance (Bn $)	Scope 1,2 ($MtCO_2e$)	Scope 3 ($MtCO_2e$)	Invest-ment balance (Bn $)	Scope 1,2 ($MtCO_2e$)	Scope 3 ($MtCO_2e$)	Data Quality Score Scope 1,2	Data Quality Score Scope 3	Number of companies & projects*1	Measure-ment coverage rate*2
Power Utilities[*3]	51.6	26.5	46.6	20.8	45.6	20.1	35.1	**34.6**	**18.0**	1.2	0.8	0.7	2.5	2.5	529	95%
Oil & gas[*3]	44.1	76.6	13.9	76.4	13.0	56.6	19.7	**9.9**	**55.8**	0.3	0.1	1.5	2.7	2.9	239	84%
Coal[*3]	1.1	1.3	0.2	1.4	0.2	0.6	0.1	**0.1**	**0.5**	0.0	0.0	0.0	3.1	3.0	9	100%
Steel[*3]	23.4	13.9	21.1	13.9	15.3	8.5	10.1	**13.8**	**7.8**	0.9	1.2	0.6	2.0	2.1	203	99%
Automotive[*3]	1.9	61.7	2.1	37.0	2.2	78.0	34.7	**1.7**	**69.9**	2.0	0.1	3.4	2.3	2.4	1,147	98%
Maritime transport[*3]	5.7	4.1	1.8	9.4	3.7	3.7	5.0	**3.3**	**3.3**	0.5	0.3	0.2	3.1	3.3	173	69%
Real estate[*3]	0.2	0.9	0.4	2.4	0.4	2.8	66.3	**0.3**	**2.9**	3.2	0.0	0.1	2.9	3.0	3,262	91%
Capital goods	2.4	60.9	2.4	102.8	1.7	96.1	29.7	**1.2**	**47.2**	4.9	0.2	5.4	2.0	2.1	2,269	88%
Chemicals	8.6	32.0	8.0	20.8	8.0	23.5	22.9	**6.0**	**18.9**	1.6	0.5	1.7	2.0	2.1	918	92%
Metals and mining	2.1	12.1	2.1	12.4	1.5	10.2	7.6	**1.4**	**8.7**	0.4	0.1	0.2	2.4	2.5	681	97%
Packaged food and meats	3.8	6.4	2.3	4.0	3.2	9.3	9.0	**2.9**	**5.0**	1.3	0.2	0.8	2.8	3.1	777	97%
Paper and forest products	2.2	2.2	2.2	2.6	2.2	2.2	3.6	**1.8**	**2.3**	0.2	0.1	0.2	2.1	2.2	236	99%
Cement	3.3	2.2	3.0	0.4	3.0	0.7	1.1	**2.3**	**0.6**	0.1	0.2	0.0	2.1	2.1	67	73%
Aviation	1.2	1.3	1.2	0.8	1.1	0.4	2.4	**1.2**	**0.5**	0.0	0.0	0.0	1.8	1.9	26	85%
Construction materials	2.0	1.7	1.2	1.3	1.4	1.2	1.4	**0.8**	**0.7**	0.1	0.0	0.1	2.1	2.3	87	91%
Agriculture	0.4	1.7	0.3	0.5	0.5	0.8	0.5	**0.5**	**0.7**	0.0	0.0	0.0	3.3	4.0	14	94%
Rail transportation	0.4	0.5	0.4	1.2	0.4	0.5	8.1	**0.4**	**0.6**	2.3	0.1	0.1	1.9	2.6	89	100%
Beverages	0.2	0.6	0.2	0.5	0.2	0.6	2.4	**0.2**	**0.6**	0.2	0.0	0.1	2.7	2.7	100	100%
Insurance	0.1	0.2	0.0	0.0	0.0	0.1	3.7	**0.0**	**0.1**	0.7	0.0	0.0	2.4	2.4	41	90%
19 sectors total	154.9	306.7	109.5	308.6	103.6	315.9	263.3	**82.3**	**244.1**	20.0	3.9	15.1	2.4	2.6	10,867	92%
Others[*4]	-	-	7.0	47.1	6.9	66.2	144.3	**4.5**	**50.4**	10.1	0.3	4.7	2.5	2.5	10,500	79%
Total	-	-	116.5	355.8	110.4	382.0	407.6	**86.8**	**294.5**	30.1	4.2	19.8	2.5	2.6	21,367	87%
Residential mortgages	-	-	-	-	0.4	-	40.2	**0.4**	**-**	-	-	-	4.0	-	314,248	84%

*1. Number of companies & projects: Excludes clients and projects without a loan balance as of the base date and clients without measured financed emissions.
*2. Measurement coverage rate: The percentage of financed emissions that we were able to measure from the targeted loan amounts in each sector.
*3. Regarding sectors for which Mizuho has set Scope 3 medium-term targets, the measured financed emissions above cover entire value chains, whereas the medium-term targets cover only part of value chains. (See p.59 for details on the value chain covered by the medium-term targets)
*4. Other sectors: Represents the total for sectors that do not fall under the 19 sectors, such as telecommunications, finance, retail, and services.

Column: Measurements of CO_2 avoided emissions in our power sector portfolio (project finance)

Since FY2019, Mizuho Bank has disclosed financed emissions and CO_2 avoided emissions for project finance in the power generation sector based on the PCAF concept.
CO_2 avoided emissions are calculated based on the concept of Avoided Emissions outlined in the PCAF guidance. It measures the reductions in CO_2 emission achieved when power generation shifts from fossil fuels to renewable energy through the renewable power projects financed by Mizuho. This calculation is based on the emission factor of the fossil fuel that has the largest impact on the power generation mix in the project region.

	FY2019	FY2020	FY2021	FY2022	FY2023
Financed Emissions ($ktCO_2$)	8,901	8,627	8,765	10,308	10,151
CO_2 Avoided Emissions ($ktCO_2$)	4,349	4,688	4,871	6,390	7,002

Reference — Cumulative avoided emissions from FY2019 to FY2023: 27,300

(See our webpage for the details: https://www.mizuhogroup.com/sustainability/environment/activity/carbon)

In October 2024, six Mizuho Group companies published the *Mizuho Avoided Emissions Focus Report*. The report provides an explanation of Mizuho's initiatives and results on avoided emissions, in addition to global trends and future possibilities in avoided emissions, with the objective of further promoting and advancing the use of avoided emissions in financing and corporate evaluations.

ii. Measurement of facilitated emissions (emissions from capital market activities)

Facilitated emissions are GHG emissions from capital market activities, including securities underwriting by financial institutions. In December 2023, methods of measuring and disclosing facilitated emissions were published in the PCAF standards. In conjunction with this, Mizuho is conducting trial measurements of facilitated emissions in three sectors based on the PCAF standards.

a. Overview of measurements

Targeted assets	Publicly offered bond and equity underwriting deals (excluding deals with unlisted companies outside Japan)[21]
Targeted sectors	The trial measurements targeted the following three sectors, which have particularly large GHG emissions Electric utilities / Oil and gas / Coal
Basic formulas	Facilitated Emissions $= \sum$ (1)Attribution factor × (2)Annual emissions ×(3)Weighting factor (1) Attribution factor $= \dfrac{\text{Amount underwritten by Mizuho from issuers}}{\text{Corporate value of issuers (Total equity + debt or EVIC for listed companies)}}$ (2) Annual emissions = Scope 1, 2, and 3 emissions disclosed by issuers. Estimated values used when disclosures not available. (3) Weighting factor = Impact of capital market activities of a financial institution compared to its investment and loan activities (A uniform 33% rate is used based on PCAF standards)
Target year	Base year: FY2023 - Mizuho's amount underwritten: Cumulative total from April 1, 2023, to March 31, 2024 - Client financial and emissions data: Principally, the latest FY data available as of March 31, 2024
Sources of emissions data	- We used data from data vendors (equivalent to a data quality score of 1 or 2) - When the sources above were not available, we used estimated data from data vendors (equivalent to score 5 depending on the estimation methodology)

b. Measurement results

	Facilitated Emissions ($MtCO_2e$)				Data Quality Score[22]	
	FY2022		**FY2023**		**FY2023**	
	Scope 1,2	Scope 3	**Scope 1,2**	**Scope 3**	**Scope 1,2**	**Scope 3**
Electric utilities	3.2	1.6	**1.5**	**1.0**	**2.5**	**2.6**
Oil and gas	0.2	1.1	**0.5**	**1.7**	**2.4**	**2.5**
Coal	No deals		No deals		No deals	

[21] Amount underwritten by Mizuho Securities
[22] A score of 1 is most certain (values disclosed by company with third-party certification), and a score of 5 is least certain (based on estimated data and asset balances)

iii. Considerations regarding the measurement results for financed emissions and facilitated emissions

Mizuho has undertaken measurements of financed emissions since FY2021, and since FY2024, we have been conducting a trial measurement of facilitated emissions. We acknowledge, however, that there are issues with data availability and accuracy for both financed / facilitated emissions, and we believe efforts are needed over the medium and long term to construct more robust and efficient measurement processes. With regard to the measurement results in this disclosure, caution must be exercised in the following specific areas.

a. Measurement result accuracy and potential for changes

- Caution must be exercised when comparing these results with those of previous years, as financed / facilitated emissions results may have increased due to broader scopes of emissions calculated and disclosed by clients (for example, moving from a non-consolidated to a consolidated basis or expanding Scope 3 measurement scopes).
- We used emission factors from the IEA World Energy Outlook and other sources to estimate financed emissions from project finance for power generation, and we used emission factors per unit of revenue from the PCAF database to estimate emissions from corporate finance. However, as these emission factors are subject to change over the course of future refinements or elaborations, the measurement results may change significantly moving forward.
- If major changes occur to the measurement results disclosed in this report, we will disclose the changes as necessary on our website.

b. Double counting

- By definition, Scope 1, 2, and 3 measurements allow for the same emissions to be accounted for across multiple sectors and companies. For example, emissions from heavy industry manufacturers account for a large share of emissions in the capital goods sector, but around 70% of Scope 3 emissions from major heavy industry manufacturers come from the usage emissions of the thermal power generation plants they manufacture and sell. These emissions, however, overlap with Scope 1 emissions in the power utility sector.
- When a financial institution is financing and investing in oil and gas exploration companies, heavy industry manufacturers, electric power companies, or manufacturing companies that use electricity, the overlap is counted multiple times as financed / facilitated emissions without offsetting.

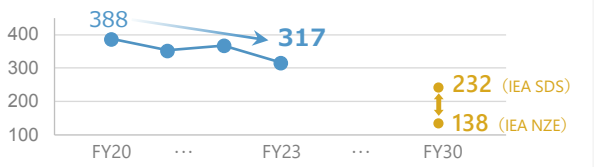
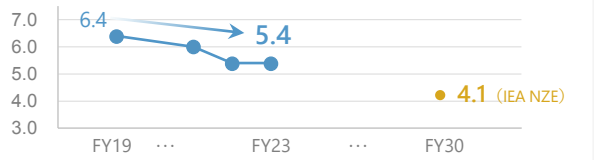
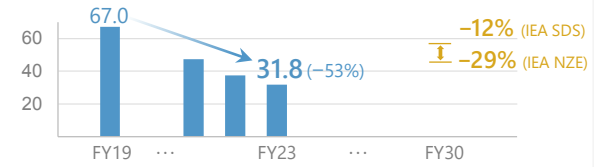
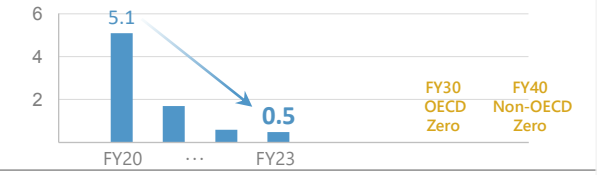
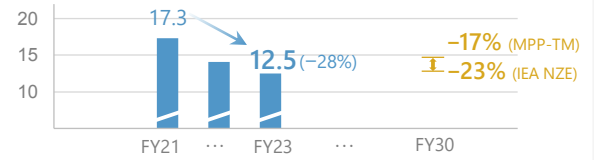
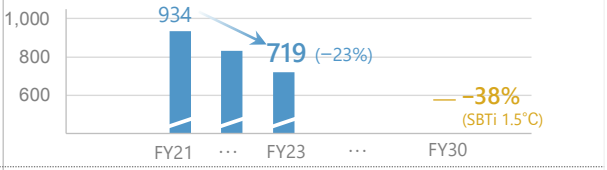
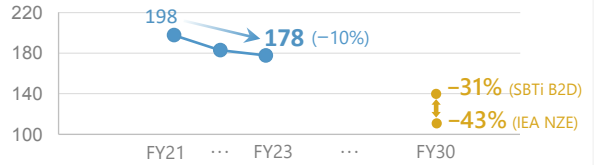
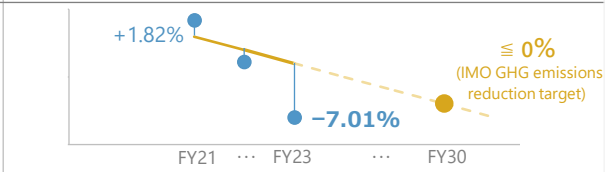
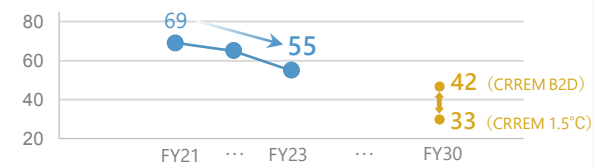
c. Facilitated emissions measurement results

- In addition to considerations above, the facilitated emissions results disclosed in this report are at the trial measurement stage and are limited in scope. Facilitated emissions may increase in the future as Mizuho expands its measurement scope and sophistication of its measurement methods, or as the scope of emissions measurements and disclosures by clients expands.

(2) Medium-term target by sector

In order to reduce Scope 3 emissions (emissions from financing and investment), Mizuho has set medium-term targets for the following seven sectors.
In FY2024, the targets for the oil and gas sector were revised to include "gas liquefaction" in upstream production (development and extraction) and to add "oil refining" to the scope of the targets.

Summary of Scope 3 medium-term targets and progress by sector

Sector	Target value chain	Target scope	Metrics	Target and progress
Electric Power	Companies / projects whose primary business is power generation	Scope1	Emission intensity (kg CO_2e/MWh)	
Oil and gas Underlined：added in Oct 2024	Companies / projects whose primary business is in upstream production (extraction, development, production, and liquefaction; including integrated oil and gas companies)	Scope1,2	Emission intensity (g CO_2e/MJ)	
	Companies / projects whose primary business is in upstream production (extraction, development, and production; including integrated oil and gas companies)	Scope3 Cat.11	Absolute emissions (Mt CO_2e)	
	Companies / projects whose primary business is oil refining	Scope1,2		
Coal mining (Thermal coal)	Companies / projects whose primary business is thermal coal mining	Scope1,2 ・Scope3 Cat.11	Absolute emissions (Mt CO_2e)	
Steel	Companies and projects whose primary business is steelmaking	Scope1,2	Absolute emissions (Mt CO_2e)	
Automotive	Companies whose primary business is (finished) passenger vehicle production	Scope1,2	Absolute emissions (kt CO_2e)	
		Scope3 Cat.11	Emission intensity (g CO_2e/vkm)	
Maritime transportation	Vessels of 5,000 gross tonnage and above, excluding domestic shipping vessels	Scope1	Portfolio climate alignment score (%)	
Real estate	Companies, REITs and SPCs in Japan whose primary business is real estate leasing	Scope1,2 ・Scope3 Cat.13	Emission intensity (kg CO_2e/㎡)	

Approach to value chains in target sectors

The scope of Mizuho's Scope 3 targets

Electric power	Value chain emissions percentage	Resource Procurement 14%	**Power generation 79%**	Transmission 7%	Usage 0%
	Businesses	Resource businesses	**Power generation businesses**	Transmission businesses	Electric power consumers
	Scope seen from the target businesses	Scope3 Cat.1	**Scope1**	Scope3	–

Oil and gas	Value chain emissions percentage	**Development and extraction 17%**	**Liquefaction and refining 7%** (Added in Oct 2024)	Transportation and processing 3%	**Usage 72%**
	Businesses	**Upstream production ／Liquefaction and refining businesses**		Transportation and processing businesses	Energy consumers
	Scope seen from the target businesses	**Scope1,2**		Scope3 Cat.9	**Scope3 Cat.11** (Upstream only)

Coal mining (thermal coal)	Value chain emissions percentage	**Development and mining 16%**	**Usage 84%**
	Businesses	**Thermal coal mining businesses**	Power generation businesses
	Scope seen from the target businesses	**Scope1,2**	**Scope3 Cat.11**

Steel	Value chain emissions percentage	Upstream	**Steelmaking 97%**	Down-stream
	Businesses	Raw material suppliers	**Iron and steel producers**	Steel users
	Scope seen from the target businesses	Scope3	**Scope1,2**	Scope3

Automotive	Value chain emissions percentage	Materials and parts manufacturing 13%	**Completed vehicle manufacturing 2 %**	**Automotive usage 85%**
	Businesses	Materials and parts suppliers	**Passenger vehicle manufacturers**	Automotive users
	Scope seen from the target businesses	Scope3 Cat.1	**Scope1,2**	**Scope3 Cat.11**

Maritime transportation	Value chain emissions percentage	Shipbuilding 2%	**Shipping operations 98%**
	Businesses	Shipbuilders	**Shipping** (Set financing for shipping as the target)
	Scope seen from the target businesses	Scope3 Cat.1	**Scope1**

Real estate	Value chain emissions percentage	Material 22%	Construction 2%	**Property usage 76%**	Demolition, etc. 0%
	Businesses	Material businesses	Construction businesses	**Real estate lessors**	Demolition businesses, etc.
	Scope seen from the target businesses	Scope3 Cat.1,2		**Scope1,2** (Leasing property: Scope3 Cat.13)	Scope3 Cat.12

Source: Created by Mizuho FG based on the publications from IEA (electric power, oil and gas, coal, steel), CDP (automotive), Ministry of the Environment, Japan (Maritime transportation), World Business Council for Sustainable Development (real estate)

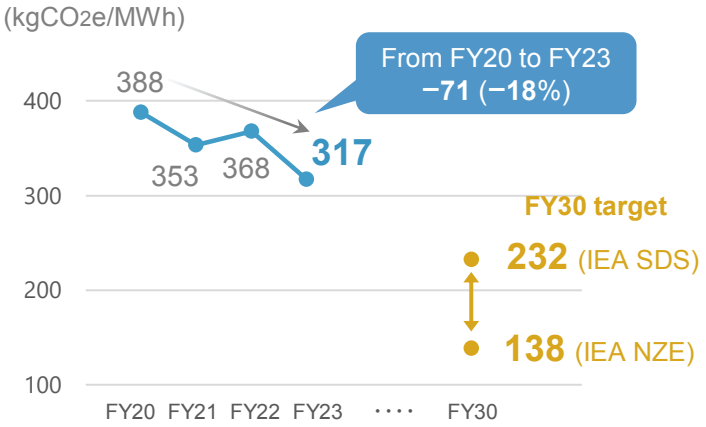
4. Status by sector

(1) Electric power sector

i. Overview and progress on Scope 3 medium-term targets

The electric power sector's emission intensity in FY2023 was 317 kgCO_2e/MWh, a 14% reduction from the previous fiscal year and an 18% decline from the base year's results. Decarbonization by domestic clients has progressed on the back of the resumption of operations at nuclear power plants and expanded adoption of renewable energy. In addition, an increase in outstanding loans for renewable energy both in Japan and abroad contributed to lower emissions through Mizuho's financing and investment activities. On the other hand, we have seen the materialization of such challenges as increasing energy demands driven by AI and data center expansion and soaring costs associated with renewable energy and power grid infrastructure construction. Consequently, it is more important than ever to carry out an orderly transition that balances the stable supply of energy with the decarbonization of electric power sources.

Targeted value chain	Companies / projects whose primary business is power generation
Targeted emissions	Scope 1 (Emissions from power generation businesses)
Metric	Emission intensity (kgCO_2e/MWh) Note: Emissions per volume of power generation
Base year result	FY2020 **388** kgCO_2e/MWh
Latest result	FY2023 **317** kgCO_2e/MWh (Down **14%** year on year, Down **18%** from base year)
Numerical target (Benchmark scenario)	FY2030 **138** to **232** kgCO_2e/MWh (IEA NZE to IEA SDS)



〈Reference〉 Absolute emissions from FY20 to FY23
Scope1: 50.8 MtCO2e → 31.4 MtCO2e

ii. Major transition initiatives in the electric power sector

Support for client transitions

In FY2024, Mizuho engaged in discussions and dialogue with clients about the use of transitional electric power sources, such as ammonia and hydrogen co-firing energy and LNG thermal energy, and the use of nuclear power generation as well as medium- and long-term investment plans, based on the amendments to Japan's *Strategic Energy Plan*. We also provided proactive support, such as the arrangement of transition bonds, for the execution of clients' transition strategies.

To advance decarbonization in the electric power sector, it is essential to ensure investment predictability for power generation development and decarbonization technologies, as well as to foster collaboration across regions and sectors. Mizuho will continue to work closely with clients and actively participate in rule-making by sharing opinions and engaging in related initiatives.

- Status of client engagement and dialogue topics for the electric power sector (p.21)
- Example of support for client transitions:
  - Issuance of transition bonds that include nuclear power generation in the purpose of funds (p.23)

Arrangement of requirements when examining support for transitional technologies

Mizuho has arranged requirements to be verified when considering support for transitional technologies such as ammonia co-firing technology.

Mizuho's approach to financing ammonia co-firing for coal-fired power generation

To support transitions based on the energy situation and industry characteristics of each country and region, financing will be considered in light of the criteria of "alignment with the 2050 Net Zero and transition strategies (roadmaps) of each country," "establishment of appropriate transition strategies by the relevant operators," "use of low-carbon ammonia in all lifecycle stages," "ammonia co-firing ratio of 20% or more", and not falling under new construction or expansion prohibited by Mizuho's ES policy.

Verifications when initiating transactions

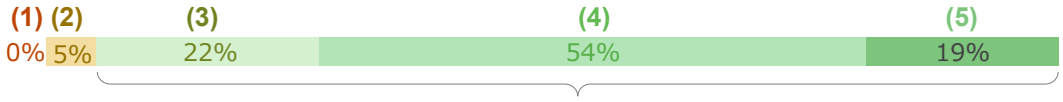
Taking into account our medium-term GHG emissions reduction targets for financed emissions, we have strengthened our operational systems that verify the impact on our targets for financing transactions that exceed certain loan amounts or loan periods, from the following viewpoints.

- **Primary check**
  - Scope 1 emission intensity (emissions through power generation)
- **Secondary check**
  - Consistency with government policies on stable energy supplies and decarbonization
  - The client's transition strategy and progress on transition measures (transition plans for transforming its power supply mix and emissions reduction targets)

Confirmation of responses to transition risk

For companies in Japan and overseas that are operating electric power business (excluding companies whose primary business is renewable energy, nuclear power, or transmission and distribution), we assess the status of their transition risk responses. Based on this assessment, we promote transition risk responses and support business restructuring to lower risk areas.

Electric power sector (coal, oil, and gas-fired power generation): Status of client responses to transition risk



Over 90% fall into the category (3): **"Has set targets aligned with the Paris Agreement and is implementing specific initiatives"** or higher

(Exposure amount basis as of March 31, 2025. (1) low ⇔(5) high. Details on p.47)

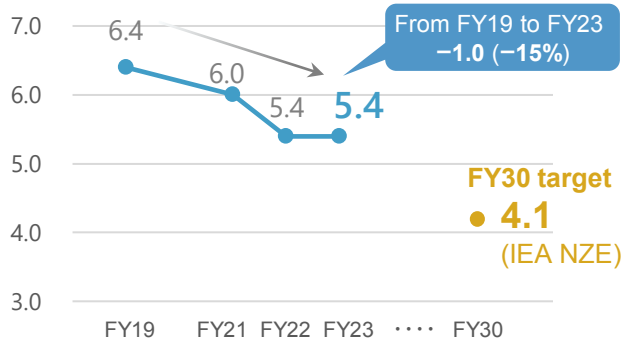
(2) Oil and gas sector

i. Overview and progress on Scope 3 medium-term targets

The oil and gas sector's emission intensity in FY2023 was 5.4 gCO2e/MJ, a 1% reduction from the previous fiscal year and a 15% decline from the base year results. Absolute emissions by the sector were 31.8 Mt CO2e, a 15% reduction from the previous year and a decline of 53% from the base year results.
In addition to progress on loan repayments from clients and projects with high emissions, the reduction in Mizuho's financed emissions was driven by factors such as clients' energy-saving initiatives and efforts to reduce flaring and methane emissions.

Targeted value chain and scope	Companies and projects whose primary business is upstream production (extraction, development, production, and gas liquefaction) (including integrated oil and gas companies) / Scope1,2 (Direct emissions from oil and gas production)
Metric	Emission intensity (gCO_2e/MJ) Note: Emissions per unit of production
Base year results	FY2019 **6.4** gCO_2e/MJ
Latest results	FY2023 **5.4** gCO_2e/MJ (Down **1%** year on year, Down **15%** from base year)
Numerical target (Benchmark scenario)	FY2030 **4.1** gCO_2e/MJ (IEA NZE)

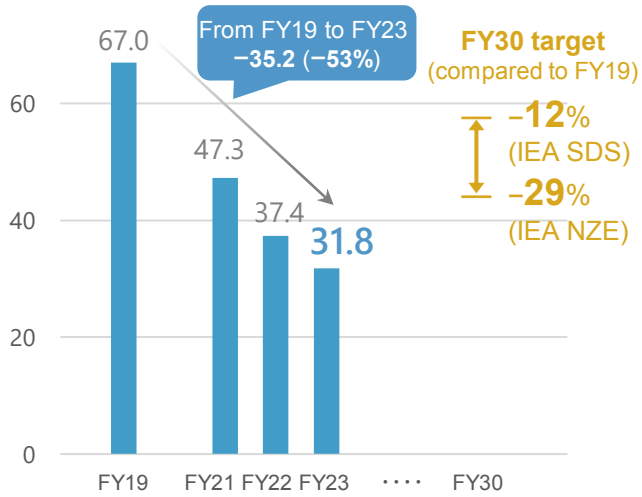
Emission intensity target (gCO_2e /MJ)



〈Reference〉 Absolute emissions from FY19 to FY23
Scope1: 6.0 → 2.5 $MtCO_2e$、Scope2: 0.5 → 0.3 $MtCO_2e$

Targeted value chain and scope	• Companies and projects whose primary business is upstream production (extraction, development, production) (including integrated oil and gas companies) / Scope3 Category 11 (Indirect emissions from oil and gas production) • Companies and projects whose primary business is oil refining / Scope1,2 (Direct emissions from oil refining)
Metric	Absolute emissions ($MtCO_2e$)
Base year results	FY2019 **67.0** $MtCO_2e$
Latest results	FY2023 **31.8** $MtCO_2e$ (Down **15%** year on year, Down **53%** from base year)
Numerical target (Benchmark scenario)	FY2030 Compared to FY2019 **−12** to **−29%** (IEA NZE to IEA SDS)

Absolute emissions target ($MtCO_2e$)



ii. Revision of Scope 3 medium-term targets (October 2024)

Mizuho initially set Scope 3 medium-term targets for the oil and gas sector in December 2022. In October 2024, these targets were revised to include companies and projects whose primary business is gas liquefaction under the emissions intensity target and those whose primary business is oil refining under the absolute emissions target. From the perspective of target coverage within the oil and gas sector's value chain, the addition of gas liquefaction and oil refining to the previously covered areas of development, extraction, and usage—where GHG emissions are particularly concentrated—allows the targets to address nearly all major sources of emissions within the value chain. See p.59 and p.78 for details.

Metrics	Targeted businesses (primary business)	Targeted scope	Base year result	Medium-term target
Emission intensity (gCO_2e/MJ)	Upstream production (extraction, development, and production) (including integrated oil and gas companies) **Gas liquefaction (added)**	Scope 1 and 2	**6.4** (Before revision: 6.6)	**4.1** (Before revision: 4.2)
Absolute emissions ($MtCO_2e$)	Upstream production (extraction, development, and production) (including integrated oil and gas companies)	Scope 3 (Category 11)	**67.0** (Before revision: 60.6)	**Reduce by 12% to 29%** from FY2019 level (Before revision: Same as above)
	Oil refinery (added)	Scope 1 and 2		

iii. Major transition initiatives in the oil and gas sector

Support for client transitions

Mizuho carries on constructive discussions with clients on various topics, including achieving both decarbonization / low-carbon emissions and stable energy supplies as well as business structural transformation. We also work to support business portfolio restructuring, the construction of value chains for decarbonized energy (such as hydrogen and ammonia), and financing for decarbonization strategies and emissions reduction initiatives.

- ■ Status of client engagement and dialogue topics for the oil and gas sector (p.21)
- ■ Example of support for client transitions:
  - ・First-ever issuance of transition-linked bonds by a Japanese city gas company (p.23)

Verifications when initiating transactions

Taking into account our medium-term GHG emissions reduction targets for financed emissions, we have constructed operational systems that verify the impact on our targets for financing projects that will use funds for new oil and gas extraction from the following viewpoints.

- ➢ **Primary check**
  - − Forecasts of Scope 1 and 2 GHG emission intensities and the presence of sufficient GHG emission reduction measures
  - − Forecasts of Scope 3 emissions (production volumes)
- ➢ **Secondary check**
  - − Consistency with government policies of each country on stable energy supplies and decarbonization
  - − The client's transition strategy and progress on transition measures (such as transition plans for business structural transformation, including reductions in the overall share of the oil and gas business, and the details of GHG emission reduction targets (including reduction targets for methane emissions) etc.)

Confirmation of responses to transition risk

We target companies whose primary business is oil and gas in Japan and overseas. We promote transition risk responses and support business structural transformation to lower risk areas among these clients transition, upon confirming the status of client responses to transition risk.

Resources sector (coal mining, oil and gas): Status of client responses to transition risk

(Exposure amount basis as of March 31, 2025. (1) low ⇔(5) high. Details on p.47)

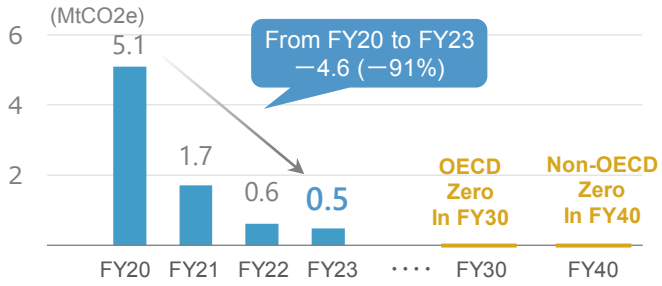
(3) Coal mining (thermal coal) sector

i. Overview and progress on Scope 3 medium-term targets

The coal mining (thermal coal) sector's absolute emissions in FY2023 were 0.5 MtCO2e, a 25% reduction from the previous fiscal year and a 91% decline from the base year results. The outstanding balance of loans in the sector have steadily decreased, and Mizuho's financed emissions for the sector have also fallen.

Targeted value chain	Companies / projects whose primary business is thermal coal mining
Targeted emissions	Scope 1, 2 and Scope 3 Category 11
Metric	Absolute emissions ($MtCO_2e$)
Base year results	FY2020 **5.1** $MtCO_2e$
Latest results	FY2023 **0.5** $MtCO_2e$ (Down **25%** year on year, Down **91%** from the base year)
Numerical targets (Benchmark scenario)	**FY2030: Zero balance for OECD countries;** **FY2040: Zero balance for Non-OECD countries** (Complies with IEA NZE)

Scope1,2, and 3 Absolute emissions



Reference: Breakdown by Scope 1, 2, and 3

	FY20	FY21	FY22	FY23
Scope1	0.4	0.2	0.02	0.01
Scope2	0.009	0.003	0.0007	0.0005
Scope3	4.7	1.4	0.6	0.5
Total	5.1	1.7	0.6	0.5

ii. Trends in financing for coal mining (thermal coal)

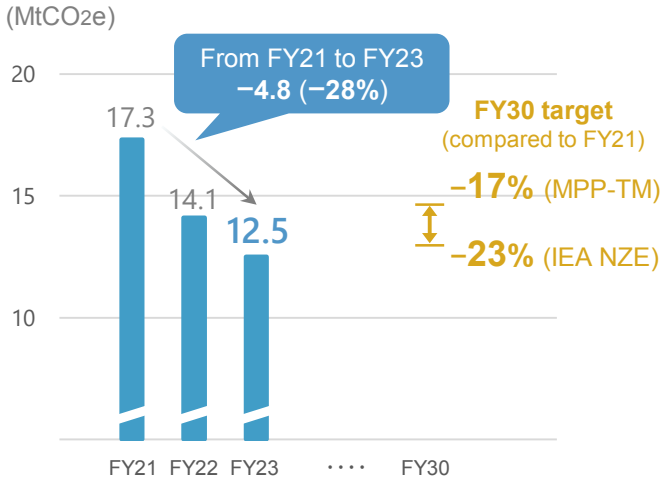
Mizuho's outstanding balance of loans (corporate finance and project finance) to companies / projects whose primary business is thermal coal mining has been declining from JPY 22.6 billion on March 31, 2022, JPY 10.6 billion on March 31, 2023, and JPY 7.0 billion on March 31, 2024, to JPY 2.0 billion on March 31, 2025.

(4) Steel sector

i. Overview and progress on Scope 3 medium-term targets

The steel sector's absolute emissions in FY2023 were 12.5 MtCO2e, an 11% reduction from the previous fiscal year and a 28% decline from the base year's results.
Clients have made steady progress on emission reduction efforts, such as conserving energy in steel production processes and closing down blast furnaces, and GHG emissions by clients fell year-on-year in tandem with the decrease in crude steel production mainly in Japan. Moreover, the increase in client market capitalization has lowered attribution factor, and consequently Mizuho's financed emissions for the sector have also fallen.

Targeted value chain	Companies and projects whose primary business is steelmaking (production involving blast furnace or electric furnace, continuous casting and rolling)
Targeted emissions	Scope 1, 2 (GHG emissions from steel production operations)
Metric	Absolute emissions ($MtCO_2e$)
Base year result	FY2021 **17.3** $MtCO_2e$
Latest result	FY2023 **12.5** MtCO2e (Down **11%** year on year, Down **28%** from the base year)
Numerical target (Benchmark scenario)	FY2030 Compared to FY2021 **−17** to **−23%** (MPP-TM to IEA NZE)



ii. Major transition initiatives in the steel sector

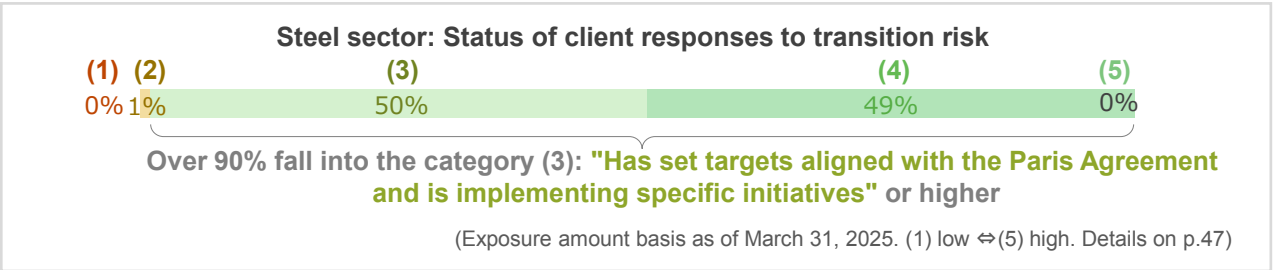
Support for client transitions

Starting with constructive dialogue with clients, we work to support financing of investments to reduce emissions from iron and steel production processes and the establishment of strategies to procure renewable energy and to acquire cool iron sources. Mizuho will continue to work alongside our clients and actively participate in rule-making by sharing opinions, for the assurance of predictability for investments in decarbonization technologies and the establishment of a competitive landscape.

■ Status of client engagement and dialogue topics for the steel sector (p.21)

Confirmation of responses to transition risk

For companies operating ironmaking and steelmaking businesses in Japan and overseas, we assess the status of their transition risk responses. Based on this assessment, we promote transition risk responses and support business restructuring to lower risk areas.

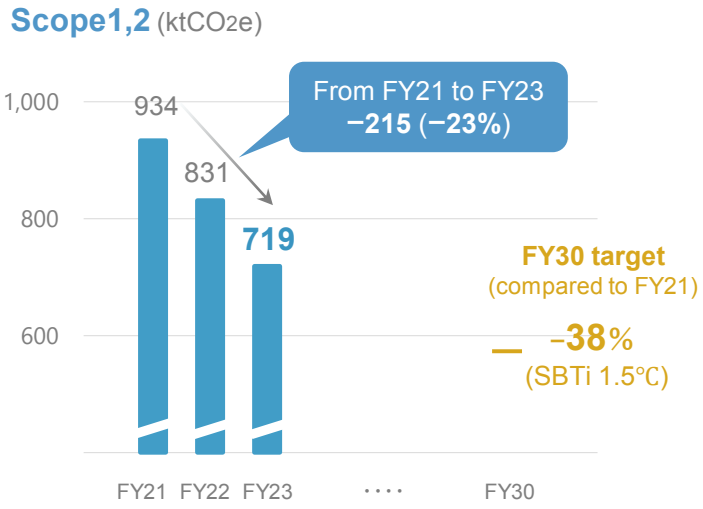


(5) Automotive sector

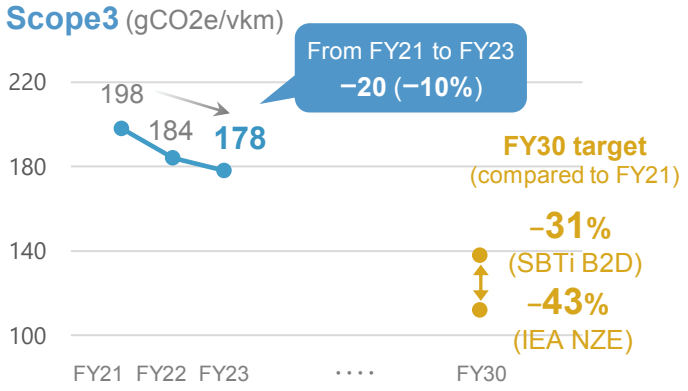
i. Overview and progress on Scope 3 medium-term targets

The automotive sector's Scope 1 and 2 emissions in FY2023 were 719 ktCO2e, a 13% reduction from the previous fiscal year and a 23% decline from the base year's results. The Scope 3 emission intensity was 178 gCO2e/vkm, a 3% reduction from the previous fiscal year and a 10% decline from the base year's results. Client Scope 1 and 2 GHG emissions fell year-on-year due to progress on the electrification of production processes and efforts to expand the adoption of renewable energy, despite an increase in production volumes by major clients. The reduction in Scope 3 emissions, which indicate emissions per unit of distance travelled, was driven by the increased use of electric vehicles (battery EVs and hybrid vehicles) as well as the improved fuel efficiency of automobiles. Mizuho's financed emissions were reduced due to advancement of decarbonization technologies across the industry.

Targeted value chain	Companies whose primary business is (finished) passenger vehicle production
Targeted emissions	Scope 1, 2
Metric	Absolute emissions ($ktCO_2e$)
Base year results	FY2021 **934** $ktCO_2e$
Latest results	FY2023 **719** $ktCO_2e$ (Down **13%** year on year, Down **23%** from the base year)
Numerical targets (Benchmark scenario)	FY2030 **−38%** from base year (SBTi 1.5℃ standard)



Targeted emissions	Scope 3 Category 11
Metric	Emission intensity (gCO_2e/vkm) (Well-to-Wheel*1) Note: Emissions per unit of distance travelled
Base year results	FY2021 **198** gCO_2e/vkm
Latest results	FY2023 **178** gCO_2e/vkm (Down **3%** year on year, Down **10%** from the base year)
Numerical targets (Benchmark scenario)	FY2030 Compared to FY2021 **−31** to **−43%** (SBTi B2D to IEA NZE)



Reference: Absolute emissions from FY21 to FY23
Scope3: 33.4 → 33.7 MtCO2e

*1 An emission metric that covers emissions from energy production processes and emissions from operating vehicles.

ii. Major transition initiatives in the automotive sector

Support for client transitions

Starting with constructive dialogue with clients, we work to provide financing support for investments aimed at reducing emissions, as well as assistance in formulating and promoting strategies to procure renewable energy and to decarbonize supply chains. In addition, because of the increasing importance of recycling materials and batteries in the automotive sector, we are working toward the social implementation and commercialization of new technologies and supply chain transformations.

- Status of client engagement and dialogue topics for the automotive sector (p.21)
- Example of support for client transitions:
  - Investment in lithium-ion battery (LiB) recycling technology (p.24)

Confirmation of responses to transition risk

To measure the progress of engagement, we began assessing the status of clients' responses to transition risk in the automotive sector starting in FY2024.

Automotive sector: Status of client responses to transition risk

All clients fall into the category (3): **"Has set targets aligned with the Paris Agreement and is implementing specific initiatives"** or higher

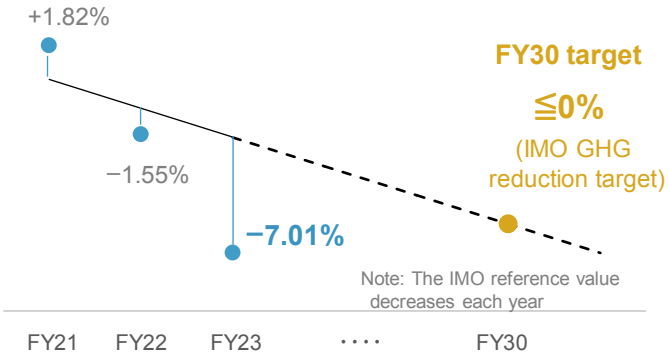
(Exposure amount basis as of March 31, 2025. (1) low ⇔(5) high. Details on p.45)

(6) Maritime transportation sector

i. Overview and progress on Scope 3 medium-term targets

For the maritime transportation sector, to measure and evaluate the state of reductions in emission intensities by vessel type and size, the portfolio climate alignment score is used as a metric for target setting, with reference to the technical guidance in The Poseidon Principles. For calculations, the benchmark values of the International Maritime Organization (IMO)'s Carbon Intensity Indicator (CII) regulations is applied.
The FY2023 results demonstrated steady progress in reducing emissions through measures such as speed reduction and implementing operational efficiency improvement devices. As a result, the portfolio climate alignment score of was -7.01%, a level below the benchmark value of the CII regulations.

Targeted value chain	Vessels of 5,000 gross tonnage and above, excluding domestic shipping vessels
Targeted emissions	Scope 1 (vessels in operation)
Metric	Portfolio climate alignment score*1
Base year result	FY2021 **+1.82%***2
Latest result	FY2023 **- 7.01%**
Numerical target (Benchmark scenario)	FY2030 **0% or less** (IMO GHG reduction target)



Reference: Absolute emissions from FY21 to FY23
Scope1： 3.5 → 2.5 MtCO2e

*1. Portfolio climate alignment score indicates how much the GHG emission intensity of a vessel diverges from the reference line.
*2. Consistency score with IMO regulations on vessels' energy efficiency. Since the regulation was not in place in FY2021 and FY2022, the results for these years were calculated using an original benchmark (reference line × 3% / 4% reduction rate for each year).

ii. Major transition initiatives in the maritime transportation sector

Support for client transitions

Starting with constructive dialogue with clients, we work to provide financing support for transitions to environmentally friendly vessels (vessels that use low-carbon or next-generation fuels). We also support clients' emissions reduction strategies, such as strategies to procure renewable energy and responses to international regulations.

- Status of client engagement and dialogue topics for the maritime transportation sector (p.21)
- Example of support for client transitions:
  - Release of a new product that supports the adoption of eco-friendly vessels (p.23)

Confirmation of responses to transition risk

To measure the progress of engagement, we began assessing the status of clients' responses to transition risk in the maritime transportation sector starting in FY2024.

Maritime transportation sector: Status of client responses to transition risk

All clients fall into the category (3): **"Has set targets aligned with the Paris Agreement and is implementing specific initiatives"** or higher

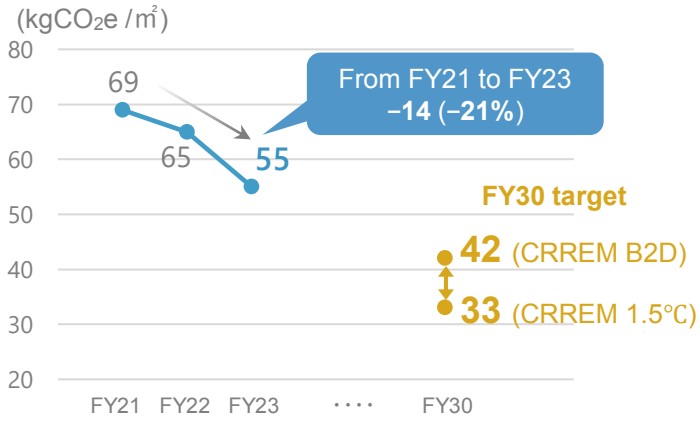
(Scope of assessment: Vessel operators, Exposure amount basis as of March 31, 2025. (1) low ⇔(5) high. Details on p.45)

(7) Real estate sector

i. Overview and progress on Scope 3 medium-term targets

The real estate sector's emission intensity in FY2023 was 55 kgCO2e/m^2, a 16% reduction from the previous fiscal year and a 21% decline from the base year's results.
Clients are progressing with efforts toward environmentally friendly real estate development and energy conservation. In FY2023, significant progress was made on Scope 2 emissions reductions, especially due to an increase in the renewable energy adoption rate among companies that have set renewable energy targets such as RE100. Consequently, Mizuho's financed emissions declined significantly year-on-year. At the same time, through engagement with clients, we recognize the sector's challenges in the form of constraints on locations to install solar panels onsite, limitations on further energy conservation measures, and difficulties in reducing emissions in tenant-occupied areas. These challenges may slow the pace of future emissions reductions.

Targeted value chain	Companies, REITs and SPCs in Japan whose primary business is real estate leasing
Targeted emissions	Scope 1, 2, and Scope 3 Category 13
Metric	Emission intensity ($kgCO_2e$ /㎡) Note: Emissions per unit floor area
Base year result	FY2021 **69** $kgCO_2e$ /㎡
Latest result	FY2023 **55** $kgCO_2e$ /㎡ (Down **16%** year on year, Down **21%** from the base year)
Numerical target (Benchmark scenario)	FY2030 **33** to **42** $kgCO_2e$ /㎡ (CRREM 1.5°C to Below 2°C)



Reference: Absolute emissions from FY21 to FY23
Scope 1, 2 and Scope 3 Category 13: 361 → 363 ktCO2e

ii. Major transition initiatives in the real estate sector

Support for client transitions

Starting with constructive dialogue with clients on the decarbonization of the real estate sector, we are working to support the procurement of renewable energy and the development and acquisition of real estate with high environmental value through green financing and other products. Moreover, since GHG emissions from real estate are largely attributable to emissions from purchased electric power (Scope 2), we are actively supporting decarbonization in the electric power sector.

■ Status of client engagement and dialogue topics for the real estate sector (p.21)

Confirmation of responses to transition risk

To measure the progress of engagement, we began assessing the status of clients' responses to transition risk in the real estate sector starting in FY2024.

Real estate sector: Status of client responses to transition risk

Over 80% fall into the category (3): **"Has set targets aligned with the Paris Agreement and is implementing specific initiatives"** or higher

(Exposure amount basis as of March 31, 2025. (1) low ⇔(5) high. Details on p.45)

Conclusion

In addition to addressing climate change as part of the transition to a decarbonized society, environmental issues such as the conservation of natural capital and the realization of a circular economy are constantly evolving. Mizuho remains committed to the fundamental principle of prioritizing sustainability as a key element of our management strategy. Based on the progress of our initiatives in the previous fiscal year and changes in the external environment, we review our action plans annually to ensure steady advancement in efforts related to climate change, natural capital, and associated initiatives.

FY2025 Action Plan

Addressing climate change	Governance	• Strengthen the business execution line's initiatives to implement the Net Zero Transition Plan, and report to the supervisory line. • Respond to sustainability disclosure regulations (ISSB, SSBJ in Japan, CSRD in Europe).
	Strategy	• Focus on supporting clients' GHG emission reduction actions (transition). • Develop a more integrated framework for advancing transition plans, considering opportunities, risks, and the transition of the real economy. • Perform strategic approaches tailored to regional and sectoral characteristics, act as a bridging role in addressing medium- and long-term challenges, and fulfill the function of providing policy recommendations. • Examine enhancement of resilience evaluations and scenario analyses with respect to disclosure regulations.
	Risk management	• Enhance our framework of risk controls for carbon-related sectors. • Revise our financing and investment policies to properly reflect environmental and social conditions.
	Metrics and targets	• Monitor progress in sectors where Sector 3 targets have been set and examine additional necessary measures. • Expand the scope of Scope 3 measurements based on disclosure regulations and examine measurement systemization.
Natural capital		• Continue supporting clients' nature-positive transitions and explore collaborations with clients on natural capital initiatives. • Advance dependency and impact assessments to further identify business opportunities and risks related to natural capital. • Examine the development of business models in partnership with clients within the circular economy.

Appendix

1. Mizuho's Environmental Policy and approach to achieve net zero by 2050

(1) Environmental Policy

Mizuho clarifies in the *Environmental Policy* our awareness of environmental issues including addressing climate change and preserving natural capital, and our specific role and actions to these challenges. Especially, addressing climate change is positioned as one of the most material issues regards to the Group's management strategy, and we clarified our stance to achieve a decarbonized society.

Environmental Policy (excerpt)
(For the full text, see https://www.mizuhogroup.com/sustainability/environment/policy/environmentalpolicy)

Our approach to addressing environmental issues

Environmental issues are becoming more diverse and complex, and are recognized as one of the most pressing global concerns.
Our economy, industries and society are supported by the varied benefits received from natural capital[1] and ecosystems. We believe that addressing environmental issues which impact such resources is humanity's shared responsibility towards a sustainable society.
At Mizuho, we recognize that our business activities may have both a direct and indirect impact upon the environment. We also believe that environmental initiatives such as mitigating and adapting to the impact of climate change, preserving biodiversity, and promoting circular economy are essential preconditions for the existence and activities of our company.
While maintaining a global and long–term perspective of risks and opportunities, we are aiming to enhance our corporate value and contribute to the creation of a sustainable society. We intend to achieve this by proactively implementing environmental initiatives which draw on our capabilities and knowledge of our group.

[1] Natural capital: The world's stock of renewable and non–renewable natural resources (e.g. plants, animals, air, water, land, and metals) which afford humanity all manner of benefits.

(2) Our approach to achieve net zero

In April 2022, we developed *Mizuho's Approach to Achieving Net Zero by 2050* and *Net Zero Transition Plan* to clarify medium to long term strategies and initiatives, which outline the actions we take to achieve a decarbonized society by 2050 by pursuing efforts to limit the temperature increase within 1.5°C so as to put our *Environmental Policy*'s initiatives and stance into practice.
Based on these policies and plans, we will actively promote climate-related initiatives and information disclosure in line with international standards

Outline of Mizuho's Approach to Achieving Net Zero by 2050 (excerpt)
(For the full text, see https://www.mizuhogroup.com/sustainability/environment/policy/2050approach)

Goal

- Mizuho is pursuing efforts to limit the temperature rise within 1.5°C.
- We are aiming to become carbon neutral by FY2030 for emissions from our business activities (Scope 1 and 2) and to reduce emissions produced via our finance portfolio (Scope 3) to net zero by 2050.
- Recognizing that abrupt, disorderly changes can have severe economic and social impacts, we are aiming for an orderly, just transition.

Net zero actions

- We understand the transition pathway to net zero will differ by region and industry and recognize the role of financial institutions to play in supporting clients' transitions, and we support the facilitation of clients' execution of transition strategies through engagement.
- We proactively support the development and application of innovative, clean, next-generation technology.
- We support government policies aimed at orderly transitions through our activities across economic organizations, industry associations, and initiatives.

(3) Identification of priorities in the Transition Plan

Mizuho clarifies its priorities and areas of focus in the *Net Zero Transition Plan*,

Materiality — Mizuho identifies materiality* based on expectations from society[23] and the importance[24] for the Group. One of the materiality is *the environment and society*.

* Priority issues over the medium to long term for the sustainable growth and development of Mizuho and its stakeholders, including clients, employees, and the economy and society

Declining birthrate and aging population, plus good health and lengthening lifespans	Industry development & innovation	Sound economic growth	Environment & society	Personnel	Governance

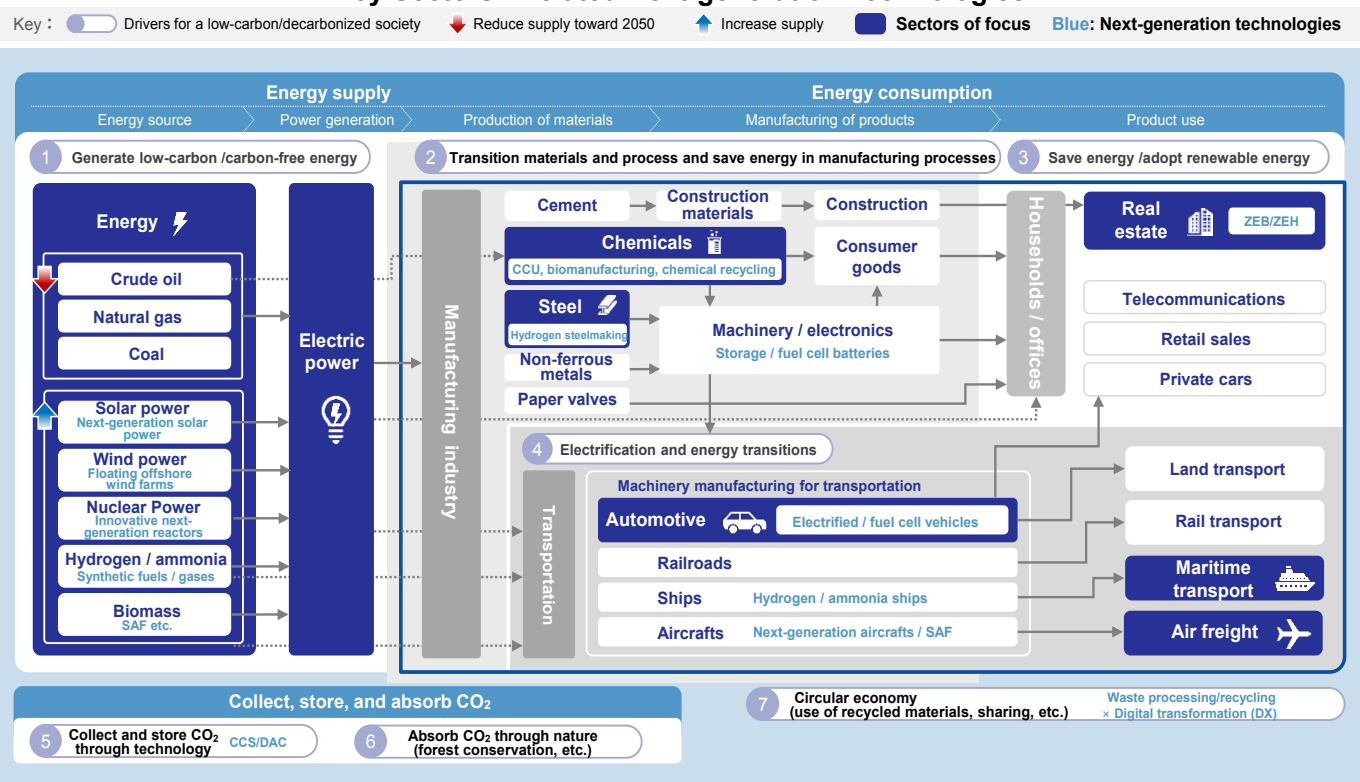
Top risks — Management determines Mizuho's top risks by reviewing risk events that may harm our corporate value in light of our particular vulnerabilities, the external business landscape, and other factors. *Worsening impacts of climate change and inadequate environmental responses* was designated as one top risk for FY2025 (p.43)

Scenario analyses — From scenario analyses, we have confirmed that transition risks have a greater impact on the Group's financials than physical risks and that it is important to further deepen client engagement to achieve smooth transitions. (p.30)

Key sectors / Next-generation technologies — Mizuho has identified key sectors to be focused on in facilitating net zero transitions and their associated next-generation technologies.

Key sectors (in the figure below)	We identified key sectors to focus on from a decarbonization perspective, based on emissions volume (impact on the real economy), opportunities arising from decarbonization, and risks as well as on the characteristics of Mizuho's portfolios and client base. - Electric power, energy, steel, chemicals, automotive, marine transportation, aviation, and real estate sectors
Next-generation technologies (Blue text in the figure below)	We identified related next-generation technologies for decarbonization in the above sectors. - Hydrogen, offshore wind, CCS, biomass (SAF), etc.

Key Sectors / Related Next-generation Technologies



[23] Expectations stakeholders have concerning Mizuho's impact on society.
[24] Based on the impact on corporate value over the medium to long term and the affinity with Mizuho's strategies and business areas.

2. Sustainable finance performance

Breakdown of sustainable finance amounts (JPY trillions)

	Category		Description	FY23 (single year)	FY24 (single year)	FY19 -24
Sustainable finance	**Social**			**0.5**	**0.6**	**2.7**
		Social loans	Arrangement of loans compliant with ICMA's social bond principles, LMA's social loan principles, and others	0.02	0.15	
		Social bonds	Underwriting of bonds compliant with ICMA's social bond principles, and others	0.5	0.5	
	Sustainable			**1.7**	**1.4**	**8.8**
		Sustainability loans and sustainability-linked loans	Arrangement of loans compliant with LMA's sustainability-linked loan principles, Ministry of Environment's Green Loan and Sustainability-linked Loan Guidelines, and others	1.4	1.3	
		Sustainability bonds and sustainability-linked bonds	Underwriting of bonds compliant with ICMA's Sustainability Bond Guidelines, Social Bond Principles, Green Bond Principles, LMA's Sustainability-linked Bond Principles, and others	0.4	0.2	
	Project finance for infrastructure		Arrangement of project finance for public transportation, public facilities, and other infrastructure	**0.1**	**0.4**	**1.9**
	Proprietary Mizuho products (excluding Environmental and Climate-related Finance)		Mizuho Human Capital Management Impact Financing	**0.2**	**0.2**	**1.0**
			SDGs promotion support loans / private placement bond			
			Sustainable Supply Chain Finance			
			Mizuho Sustainability Link Loan PRO /Mizuho Sustainability Link Private Placement Bond PRO			
			Mizuho Positive Impact Finance			
			Mizuho Positive Impact Finance PRO			
			Value Co-creation investment			
	Other		Loans for innovation businesses	**1.4**	**0.2**	**4.7**
			Net increase in ESG / SDGs investment under management			
			Other			
Environmental and Climate-related finance	**Green**			**2.5*1**	**2.6**	**10.5**
		Green loans	Arrangement of loans compliant with LMA's green loan principles, and others	0.9*1	1.1	**8.0**
		Green bonds	Underwriting of bonds compliant with ICMA's green bond principles, and others	1.2	0.9	
		Financing for qualified green projects / businesses	Arrangement of finance targeting use of funds specified in the Mizuho's green bond frameworks, and others	0.4	0.6	**2.5**
	Transition (outside of coverage of Environmental and climate-related finance until FY2022 results)			**0.3**	**0.2**	**1.2**
		Transition loans and transition-linked loans	Arrangement of loans compliant with the ICMA's Climate Transition Handbook, the basic policies on climate transition finance, and others	0.2	0.1	
		Transition bonds and transition-linked bonds	Underwriting of bonds compliant with the ICMA's Climate Transition Handbook, the basic policies on climate transition finance, and others	0.1	0.1	
	Sustainable (environmental and climate-related finance)			0.8	**0.8**	**1.5**
		Sustainability loans and sustainability-linked loans	Arrangement of loans compliant with LMA's sustainability-linked loan principles, and others	0.6	0.5	
		Sustainability bonds and sustainability-linked bonds	Underwriting of bonds compliant with ICMA's Sustainability Bond Guidelines, Social Bond Principles, Green Bond Principles, LMA's Sustainability-linked Bond Principles, and others	0.1	0.3	
	Proprietary Mizuho products		Mizuho Eco Finance	**1.9**	**2.9**	**8.0**
			Mizuho Sustainable Real Estate NRL			
			Mizuho Sustainability Link Loan PRO /Mizuho Sustainability Link Private Placement/ Bond PRO			
			Mizuho Positive Impact Finance			
			Mizuho Positive Impact Finance PRO			
			Sustainable Shipping Impact Finance			
			Mizuho Natural Capital Impact Finance			
			Transition Investment Facility / Value Co-creation Investment			
	Other		Other environmental and climate-related finance	0.3	**0.1**	
	Subtotal			**5.8*1**	**6.6**	**20.5**
Total amount of sustainable finance				**9.7*1**	**9.4**	**40.3**

*1 Revised based on the refinement of aggregated figures.

3. Analysis of Mizuho's operational sites regarding natural capital

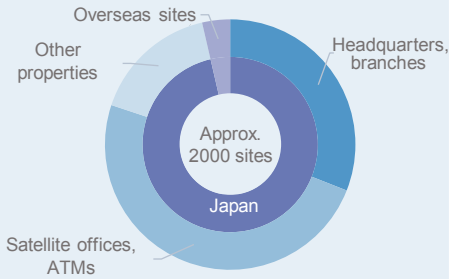
Process of Mizuho's operational sites analysis (LEAP Analysis)

Locate
Operational site identification

- Scoped "Water"and "Biodiversity", which are key natural capital for Mizuho
- Analyzed the points of contact between nature and Mizuho's operational sites in Japan and overseas
  - ➢ Approximately 2,000 sites, including headquarters, branches, satellite offices, ATM, and other properties*

* Training centers, dormitories, parking lots etc.

Breakdown of Mizuho's operational sites



Evaluate
Dependency and impact analysis

- Identified operational sites located in areas with high water risks (using the WWF Risk Filter*)
  - ➢ Identified certain sites in India, Thailand, and the United States with high water risks such as floods or droughts

* WWF Risk Filter (https://riskfilter.org/) allows confirmation of the physical, reputation, and regulatory risks related to water / biodiversity by region on a five-level scale from very high to very low. However, the biodiversity risk tool does not have a regulatory risk function

* Selected sites indicated as Very High/High by the filter

Analysis image using the WWF Water Risk Filter

Source; WWF Risk Filter Suite: riskfilter.org

Assess
Site survey and risk assessment

- To understand the actual on-site situations, conduct a survey of the selected operational sites regarding awareness of water-related risks, occurrence of such risks, and measures
  - ➢ Actual water risks are negligible, as the sites are outside hazard map zones and have BCPs and other measures in place
  - ➢ The selected sites have also implemented their own measures such as water conservation and sorting of waste to facilitate recycling

Prepare
Future action

- No operational sites were categorized as priority areas with high risks
- Continue to improve our operations and promote initiatives to reduce negative impact on nature

Analysis and assessment of "Water" risk (Evaluate & Assess of LEAP approach)

Selected sites for analysis and assessment	Water risks			
	Evaluate Desktop research: WWF Risk Filter			**Assess** Survey results
	Physical risk	Regulatory risk	Reputational risk	Actual risk
Site A (India)			High	Negligible
Site B (India)	High		High	Negligible
Site C (India)	High	High		Negligible
Site D (India)	High		High	Negligible
Site E (India)	High			Negligible
Site F (Thailand)	High			Negligible
Site G (US)	High			Negligible

- **Physical risk** — Risks emerging from conditions such as water scarcity (shortages and droughts), floods, and water pollution, which render water unusable or lead to the degradation of surrounding ecosystems
- **Regulatory risk** — Risks stemming from the lack of adequate regulations, management systems, infrastructure, or funding mechanisms related to water
- **Reputational risk** — Risks emerging from stakeholders' and local communities' perceptions or evaluations that a company is not conducting sustainable and responsible businesses regarding water

Source: WWF Risk Filter Methodology Documentation: riskfilter.org

4. Collaboration with governments and private Initiatives

Mizuho participates in various committees and advisory councils run by governments and public institutions, contributing to rulemaking related to the promotion of transition and energy policy. Also, we participate in various private sector initiatives and associations, considering the role of finance, to promote efforts toward building a sustainable society.

Contribution to rulemaking

Theme	Committees/Advisory Councils	Mizuho's role	Operating body
Transition	Asia GX Consortium	Member	FSA*1
	GX League	Member	METI*2
	Working Group on Energy Structure Conversion, Green Innovation Project Subcommittee, Industrial Structure Council	Member	METI*2
	Working Group on Transition Finance Development	Member	METI*2
	Japan Public and Private Working Group on Promoting Transition Finance in Asia	Member	METI*2
	The Transition Credits Coalition (TRACTION)	Member	Monetary Authority of Singapore
Energy policy	Subcommittee on Natural Resources Development and Fuel Supply, Advisory Committee for Natural Resources and Energy, Natural Resource and Fuel Committee	Member	METI*2
	Study Group on Future Power Scenarios	Member	Organization for Cross-regional Coordination of Transmission Operators
Measurement/ reporting of GHG emissions	Task Force on Development and Revision of GHG Protocol Standards	Expert	METI*2
Green finance	Working Group on the Green List	Member	MOE*3
Carbon credit	Working Group on Financial Infrastructure for Carbon Credit Transactions	Presenter	FSA*1
Impact	Impact Consortium	Working Group Vice Chair	FSA*1

*1 Financial Services Agency, Japan (FSA) *2 Ministry of Economy, Trade and Industry, Japan (METI) *3 Ministry of Environment, Japan (MOE)

Promoting sustainability through Initiatives

Theme	Initiatives/Associations
Transition	Asia Transition Finance Study Group
	Vietnam JETP (Just Energy Transition Partnership)
Hydrogen	Hydrogen Council
	JAPAN HYDROGEN ASSOCIATION (JH2A)
	Hydrogen Thailand
Carbon recycle	Carbon Recycling Fund Institute
Bio	MATSURI (Chitose Laboratory)
Food	The Consumer Goods Forum (CGF)
Storage battery	Battery Association for Supply Chain (BASC)
Natural capital	Keidanren Initiative for Biodiversity Conservation
	Business for GBF project
	TNFD Forum
	Cross Sector Biodiversity Initiative
Sustainability data	Sustainability Data Standardization Consortium (SDSC)

Theme	Initiatives/Associations
Circular economy	Circular Partners (CPs)
	JAPAN PARTNERSHIP FOR CIRCULAR ECONOMY (J4CE)
	Resource Recycling Council (RRC)
	Green Fuel Forward
Impact	Asian Venture Philanthropy Network (AVPN)
	GSG Impact JAPAN National Partner
	Impact Disclosure Taskforce
	Impact Investment Initiative for Global Health (Triple I for GH)
	Japan Impact-driven Financing Initiative
	Impact Startup Association (ISA)
	Social Impact Management Initiative (SIMI)
	The Global Impact Investing Network (GIIN)

5. Scope 3 medium-term targets and emissions measurement details

(1) Coverage of medium-term targets by sector

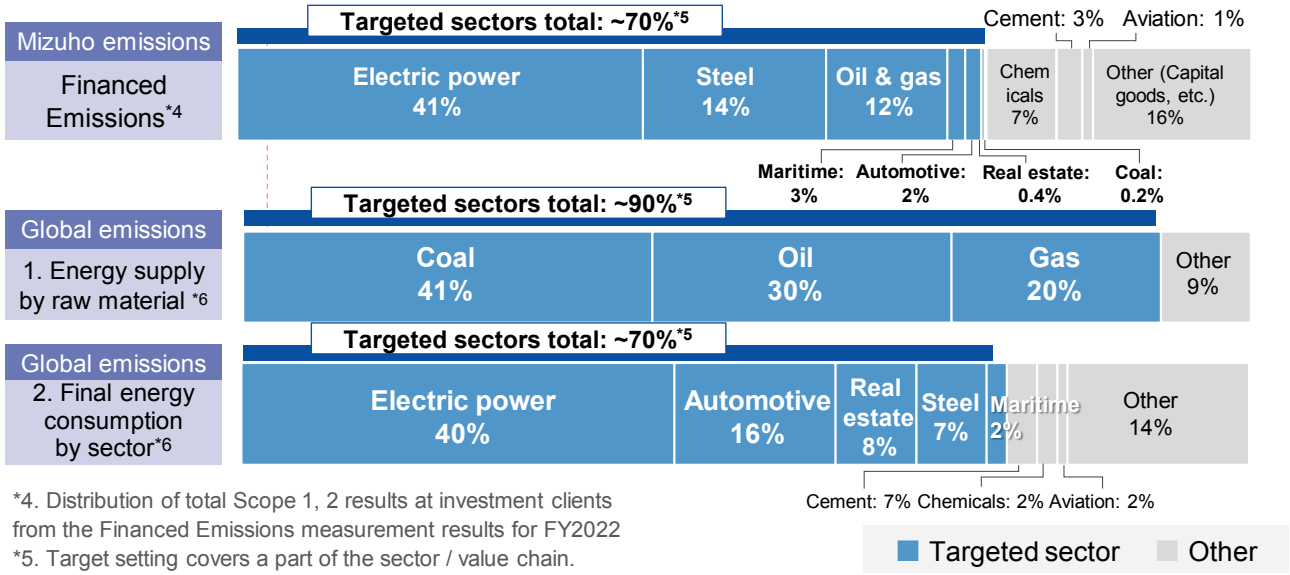
In order to reduce Mizuho's Scope 3 (financed emissions), we set medium-term targets for seven sectors by April 2024. In determining the target sectors, we considered sector-specific transition risk evaluations, credit exposure (EXP), global and Mizuho emissions, feasibility, and other factors. The selection covers high-priority sectors for promoting the transition of the real economy.

Transition risks and exposure by sector [target coverage]

Credit EXP (JPY) *1						
	Over 10 T		**Real estate** Capital goods		**Electric power**	
	5 T – 10 T			**Automotive** Chemicals	**Oil and gas**	
	1 T – 5 T	Insurance	Rail transportation, Packaged food and meats	**Maritime transportation** Metals and mining,*3 Construction materials	**Steel**	
	Under 1 T	Beverages		Agriculture, Aviation, Paper and forest products	Cement	**Coal**
Targeted sectors (Underlined)		Very Low	Low	Medium	High	Very high
		Transition risk evaluation*2				

*1. As of March 31, 2024
*2. Quantitative evaluation based on GHG emissions, carbon efficiency, and other evaluation criteria for the 19 sectors recommended for disclosure in the TCFD recommendations.
*3. The aluminum sector accounts for less than 10% of the metals and mining sector.

GHG emissions by sector



*4. Distribution of total Scope 1, 2 results at investment clients from the Financed Emissions measurement results for FY2022
*5. Target setting covers a part of the sector / value chain. (Examples: The target for oil and gas covers upstream production businesses including integrated businesses; The target for coal covers thermal coal mining)
*6. IEA World Energy Outlook 2023 (Global)

Medium-term targets set for electric power, oil and gas, coal mining (thermal coal), automotive, maritime transportation, steel, and real estate

Note: Among the sectors specified in the NZBA target-setting guidance, no targets were set for the cement, aluminum, and agriculture sectors due to small amount of exposures and emissions in Mizuho's portfolio.

(2) Matters common to all sectors

i. Determination process for setting medium-term targets

- The medium-term targets have been set based on the NZBA target-setting guidance as of the time of consideration and are deliberated and approved by the Executive Management Committee of Mizuho Financial Group.

ii. Method for selecting the target portfolio

- The target portfolio consists of companies or projects that belong to clients in the targeted sectors and whose primary business is in the targeted business.
- We determine a company's sector and primary business by its largest business segment by sales.[25]
- Mizuho has established its sector classifications based on the classifications in the *Industry Classification Table* formulated by the Bank of Japan.

iii. Targeted assets

- Targeted loan balances are the sum of the loan balances at Mizuho Bank and Mizuho Trust & Banking. Available credit under committed lines of credit, securities, derivatives, and similar are not included in the loan balances.

iv. Metric formula

- The absolute GHG emissions and GHG emission intensities in the target portfolio are calculated with the following formulas.

Absolute GHG emissions	GHG emission intensity
$\sum \left(\text{Company emissions} \times \frac{\text{Outstanding loans or investments from Mizuho to clients}}{\text{Client's corporate value}^{26}} \right)$	$\sum \left(\text{Company Emission intensity} \times \frac{\text{Loan balance to company or project}}{\text{Total loan balance across the target}} \right)$

v. Measurement coverage percentages and data quality scores

- Measurement coverage percentages: When we are not able to obtain emissions, production, financial, or other data on a company and are consequently unable to calculate the target GHG emission intensities or absolute GHG emissions, we consider the company outside the scope of measurement. We calculate the measurement coverage for each sector by weighted average based on the loan balances of each company.
- Data quality scores: Emissions data from each company is scored according to the PCAF's data quality score approach and calculated as a weighted average based on the loan balances of each company.

Measurement coverage rate and data quality scores by sector for medium-term target (FY2023 result)

Sector	Electric power	Oil and gas		Coal	Steel	Automotive		Maritime transport	Real estate
		Scope1,2	Scope1,2, 3			Scope1,2	Scope3		
Coverage percentage	100%	100%	93%	100%	100%	100%		97%	100%
Data quality score	2.0	3.0	3.0	3.0	1.9	2.0	3.0	3.0	1.6

Reference — PCAF data quality score approach

Data quality	Option		Overview
Score 1	Reported emissions		Emissions data from company disclosures (with third-party certification)
Score 2			Emissions data from company disclosures (without third-party certification)
	Estimated emissions	Physical activity-based	Emissions data estimated from company energy consumption volume and emission factor
Score 3			Emissions data estimated from company production and emission factor
Score 4		Financial indicator-based	Emissions data estimated from company sales and emission factor
Score 5			Emissions data estimated from financing and investment balance to the company and emission factor

Certain ↑ ↓ Uncertain

vi. Carbon offsets

- For FY2023 measurement, we do not currently take carbon credits or other offset schemes into account. We will continue to examine carbon offsets, based on the direction of global discussions and formulation of international standards.

[25] The NZBA specifics the inclusion in target setting of any company that makes 5% or more of its direct sales from a thermal coal mining business. However, there is no established method for identifying these companies. We will continue to examine this issue going forward.

[26] *Listed companies* – EVIC of the client (Enterprise Value Including Cash = the total of the market value of common and preferred stock, interest-bearing debt (bonds + borrowings), and the book value of non-controlling interests (without deducting cash and cash equivalents). *Unlisted companies* – Enterprise value of the client (net assets + interest-bearing debt)

(3) Electric power sector

Targeted value chain	Companies and projects whose primary business is power generation
Targeted assets	Loans (Total of corporate finance and project finance)
Targeted scope	GHG emissions from power generation operations (Scope 1)
Metrics	GHG emission intensity (kg CO_2e/MWh) — GHG emissions per unit of power generated
Base year result	FY2020: 388 kgCO_2e/MWh
Benchmark scenarios	(1) IEA Net Zero Emissions by 2050 Scenario (NZE) [1.5°C] (2) IEA Sustainable Development Scenario (SDS) [Well-below 2°C] ※IEA World Energy Outlook 2021
Numerical target	FY2030: 138 kgCO_2e/MWh (1) to 232 kgCO_2e/MWh (2) (cf.) reduction rate from the base year: –65% to –40%
Data sources	Information disclosed by clients, Bloomberg, hearing from clients, etc.

Target setting approach

Approach to the targeted value chain and scope	・ Scope 1 emissions from power generation operations are targeted because they account for the majority of GHG emissions in the electric power sector.
Approach to metrics	The target was set in emission intensities (GHG emissions per unit of power generated) for the following reasons. ・ An important component of decarbonization of society and industry as a whole is reducing GHG emission intensities in power generation businesses, through support for the widespread take-up of renewable energy and for the development and practical application of next-generation technologies. ・ In view of the transition of society as a whole, it is necessary to address the increase in demand for electric power that will be driven by greater energy demands in emerging economies and further electrification. ・ If the target were set in absolute GHG emissions, the target might obstruct the flow for the growth and expansion of power generation projects with low emission coefficients.
Benchmark scenarios	・ We set the target as a range to pursue efforts to limit the global temperature increase to 1.5°C and keep it well below 2°C. ・ In order to set targets that account for regional characteristics and support countries achieving their NDCs, Mizuho's country-specific portfolios are used to calculate and set the SDS scenarios for each country.
Initiatives to achieve the target	・ With engagement as the starting point, Mizuho supports clients in reducing their GHG emission intensities by providing both financial and non-financial solutions and encouraging clients to promote business structural transformations and transition risk responses. ・ We provide financing to clients for climate change responses and actively support the development and practical application of next-generation technologies, through such initiatives as project finance for renewable energy and green loans and bonds. ・ We have prohibited financing and investment that will be used to fund the construction of new coal-fired power generation facilities or the expansion of existing facilities. ・ We have set a target to reduce the outstanding credit exposures of coal-fired power generation facilities, based on the ES Policy.

(4) Oil and gas sector

(Underlined: added in October 2024)

Targeted value chain	Companies and projects whose primary business is in upstream production (extraction, development, production, and liquefaction; including integrated oil and gas companies) and whose primary business is oil refining.	
Targeted assets	Loans (Total of corporate finance and project finance)	
Targeted scope	Direct emissions from production (extraction, development, production, and liquefaction) business (including methane leaks) (Scope1 and 2)	Direct emissions from oil refining (Scope 1 and 2) Indirect GHG emissions from production (extraction, development, and production) business (Scope 3 (Category 11))[27]
Metrics	GHG emission intensity (gCO_2e/MJ) — GHG emissions per unit of production	Absolute GHG emissions(Mt CO_2e)
Base year result	FY2019: 6.4 gCO_2e/MJ	FY2019: 67.0 Mt CO_2e
Benchmark scenarios	IEA Net Zero Emissions by 2050 Scenario (NZE) [1.5°C]	(1) IEA Net Zero Emissions by 2050 Scenario (NZE) [1.5°C] (2) IEA Sustainable Development Scenario (SDS) [Well-below 2°C] ※IEA World Energy Outlook 2021
Numerical target	FY2030: 4.1 gCO_2e/MJ (cf.) reduction rate from the base year: –36%	FY2030: Reduce by 12% (1) to 29% (2) from FY2019 level
Data sources	Wood Mackenzie database, information disclosed by each company, hearing from clients, etc.	

[27] Emissions when sold products are used (combusted)

Target setting approach

Approach to the targeted value chain and scope	・We have targeted upstream production businesses (extraction, development, production, and gas liquefaction) and the oil refining business, considering the oil and gas sector's percentage of our portfolio and value chain implications for real-economy transition. ・Over 70% of emissions in the oil and gas sector are Scope 3 (CO2 emissions from the combustion of sold products). For this reason, we have targeted Scope 3 emissions as well as Scope 1 and 2 emissions. ・For the gas liquefaction business and oil refining business we target Scopes 1 and 2 (Scope 3 overlaps with that of upstream production businesses).
Approach to metrics	・We think decarbonization of the oil and gas sector entails reducing absolute GHG emissions by scaling back use of fossil fuels and reducing GHG emissions intensities through having oil and gas companies improve their production processes. ・Compared to Scope 1 and 2 emissions (direct), Scope 3 emissions (indirect) require different action on the part of oil and gas companies and also have a different level of impact. To raise the effectiveness of our target-setting initiatives, we set separate emissions targets for Scope 1 and 2 and for Scope 3. ・For Scope 1 and 2 emissions of upstream production businesses, we set a GHG emissions intensity target that reflects clients' efforts for production process improvements. ・For Scope 3 emissions of upstream production businesses and Scope 1 and 2 emissions of oil refining businesses, we set an absolute GHG emissions target that reflects clients' efforts for total emissions reduction, since the potential for reducing emission intensity is limited and reduction in production and business structural transformation are expected to become main drivers of emissions reduction.
Benchmark scenarios	・We adopted the IEA NZE scenario to pursue efforts to limit the global temperature increase to 1.5°C. ・However, because the IEA NZE scenario assumes a significant decline in demand for oil and gas towards to 2030 and because initiatives must match the actual speed of transition in the real economy, we have set the target for Scope 3 emissions (absolute GHG emissions) to a range between the IEA NZE scenario and the IEA SDS scenario, which is a well-below 2°C scenario.
Initiatives to achieve the target	・Reducing emissions from the oil and gas sector encompasses both initiatives to reduce emissions from oil and gas production and initiatives to decarbonize the demand side that uses oil and gas. ・Through engagement, we verify the transition progress of clients and provide them with both financial and non-financial solutions. In this way, we support client initiatives toward business structural transformations and production process improvements. ・We are furthering our initiatives to encourage decarbonization on the demand side, alongside these initiatives. ・We take social impacts into consideration, such as impacts on the stable supply of energy, in our initiatives.

(5) Coal mining (thermal coal) sector

Targeted value chain	Companies whose primary business is in thermal coal mining
Targeted assets	Loans (Total of corporate finance and project finance)
Targeted scope	Direct emissions (Scope 1,2) and indirect emissions (Scope 3 Category 11) from thermal coal mining operations
Metrics	Absolute GHG emissions (Mt CO_2e)
Base year result	FY2020: 5.1 Mt CO_2e
Benchmark scenarios	Consistent with the approach taken in the IEA Net Zero Emissions by 2050 Scenario (NZE)
Numerical target	FY2030: Zero balance for OECD countries, FY2040: Zero balance for Non-OECD countries
Data sources	Wood Mackenzie database, information disclosed by each company, hearing from clients, etc.

Target setting approach

Approach to the targeted value chain and scope	・In view of the Glasgow Climate Pact adopted at COP26, we focused on the mining of thermal coal, which is used as fuel in coal-fired power generation. ・Over 90% of emissions in the thermal coal mining sector are Scope 3 (CO_2 emissions from the combustion of sold products). For this reason, our targets cover Scope 3 emissions as well as Scope 1 and 2 emissions.
Approach to metrics	・Decarbonization of the thermal coal mining sector requires reducing emissions from the use of thermal coal. Accordingly, we adopted absolute GHG emissions (Mt CO_2e) as our target metric.
Benchmark scenarios	・To pursue efforts to limit the global temperature increase to 1.5°C, our targets are a zero balance by FY2030 for OECD economies and by FY2040 for non-OECD economies, based on the Glasgow Climate Pact adopted at COP 26 and the approach in the IEA NZE scenario.
Initiatives to achieve the target	・Mizuho is phasing out financing provided to thermal coal mining, based on the ES Policy. ・Through engagement, we verify the transition progress of clients and provide them with both financial and non-financial solutions. In this way, we support client initiatives toward business structural transformations. ・We take social impacts into consideration, such as impacts on the stable supply of energy, when implementing initiatives. ・These initiatives are being advanced in concert with the initiatives toward the medium-term target (FY2030 target) for the electric power sector.

(6) Steel sector

Targeted value chain	Companies and projects whose primary business is steelmaking (production involving blast furnace or electric furnace, continuous casting and rolling)
Targeted assets	Loans (total of corporate and project finance)
Targeted scope	GHG emissions from steel production operations (Scope 1, 2)
Metrics	Absolute GHG emissions (Mt CO_2e)
Base year result	FY2021: 17.3 Mt CO_2e
Benchmark scenarios	(1) IEA: Net Zero Emissions by 2050 (NZE) [1.5°C] – (2) MPP: Technology Moratorium [Well-below 2°C]
Numerical target	FY2030: Reduce by 17% (2) to 23% (1) from FY2021 level
Data sources	Information disclosed by clients, Bloomberg, CDP, estimates (PCAF emission factor)

Target setting approach

Approach to the targeted value chain and scope	・We focus on the companies and projects whose primary business is steelmaking (production involving blast furnace or electric furnace, continuous casting and rolling), as the steelmaking process accounts for most of the value chain emissions in the steel industry ・We focus on Scope 1 and 2 emissions, as most of the emissions of steelmakers come from their own steel production operations
Approach to metrics	・We set targets in absolute GHG emissions as a measure of emission reduction efforts by steelmakers including through business structural transformations (improvement of production efficiency, expansion of overseas operation, etc.) and development of decarbonizing technologies
Benchmark scenarios	・To pursue efforts to limit the global temperature increase to 1.5°C, we adopted the IEA NZE scenario [1.5°C] as a benchmark scenario ・As regards innovative technologies essential for the decarbonization of the steel industry (hydrogen direct reduction steelmaking, CCUS), the IEA NZE scenario assumes near zero-emission production commences at scale in the 2020s, accounting for more than 8% of primary production by, whereas technology roadmaps in Japan only envisage commercial in the 2030s and beyond, pointing to challenges in the speed of realizing next-generation technologies ・Since the feasibility of next-generation technologies must be taken into account in promoting the transition, we assume that rapid progress in the introduction of, and transition to innovative technologies will only happen in 2030 and beyond. We thus set our target within the range indicated in the MPP Technology Moratorium scenario [well-below 2°C]
Initiatives to achieve the target	・Centered on engagement with clients, we promote support including for business structural transformations by steelmakers and the development of decarbonizing technologies (decarbonization of the blast furnace process, dissemination of the electric furnace process, practical use of hydrogen direct reduction steelmaking) ・Through engagement with relevant government agencies, we promote policy measures to improve the surrounding environment

(7) Automotive sector

Targeted value chain	Companies whose primary business is (finished) vehicle production	
Targeted assets	Loans (corporate finance)	
Targeted scope	Scope1,2	Scope3 (Category 11)
Metrics	Absolute GHG emissions (ktCO_2e)	GHG emission intensity for new Light-Duty Vehicles (gCO_2e/vkm) (Well-to-Wheel[28]) — GHG emissions per distance traveled
Base year result	FY2021: 934 ktCO_2e	FY2021: 198 gCO_2e/vkm (Cf. absolute emissions 33 MtCO_2e)
Benchmark scenarios	1.5°C-aligned scenario under the SBTi absolute-based approach	(1) IEA Net Zero Emissions by 2050 Scenario (NZE) [1.5°C] (2) SBTi (IEA ETP) Beyond 2°C Scenario (B2D) [Well-below 2°C]
Numerical target	FY2030: Reduce by 38% from FY2021 level	FY2030: Reduce by 31% (2) to 43% (1) from FY2021 level
Data sources	Information disclosed by clients, etc.	S&P Global Mobility, 2023, etc.

Target setting approach

Approach to the targeted value chain and scope	・We focus on companies whose primary business is (finished) vehicle production, since these companies account for almost 80% of Mizuho's financed emissions in the automotive sector.

[28] Emission metric covering emissions from energy production process and emissions from running vehicles.

	・Since running vehicles are an overwhelming source of GHG emissions in the automotive value chain, we decided to include Category 11 of Scope 3 (use of sold products) in addition to Scope 1 and 2, which mostly cover emissions from automotive production activities.
Approach to metrics	・Compared with Scope 1, 2 emissions, Scope 3 emissions require different actions and transition pathways by the entities concerned. In order to raise the effectiveness of our decarbonization initiatives, we set separate emission targets for Scope 1, 2, and for Scope 3. ・ In line with the SBT Guidelines, among others, targets for Scope 1, 2 are set in terms of absolute emissions to promote reduction in the total amount of emissions. ・Meanwhile, Scope 3 targets are set in terms of GHG emission intensity per unit of activity (distance traveled) so as to promote decarbonization while meeting the rising demand for automobiles. ・For the purpose of reducing overall emissions from the automotive sector, targets are set in Well-to-Wheel terms, which includes emissions from the energy production process, so as to align the decarbonization of automobiles to decarbonization of energy supply based on the characteristics of each region.
Benchmark scenarios	・To pursue efforts to limit the temperature rise to 1.5°C, we adopted the IEA NZE scenario and the SBTi 1.5°C-aligned criteria as benchmark scenarios. ・However, because the IEA NZE scenario assumes a rapid transition to electric vehicles and because transition of the real economy requires initiatives that take into account distinct local energy characteristics, we set our target for Scope 3 emissions within the range between the IEA NZE and SBTi B2D scenario
Initiatives to achieve the target	・We and support the execution of our clients' decarbonization and vehicle electrification strategies based on the engagement with our clients (Support for carbon-neutral factory (shift to renewable energy and enhance energy efficiency, support for the supply chain development and sale of low-emission vehicles in light of local energy characteristics) ・In an effort to reduce emissions on the supply side of energy (electric power, oil and gas sectors), we set medium-term targets and promote engagement with, and support for actions by clients in each sector.

(8) Maritime transportation sector

Targeted value chain	Vessels of 5,000 gross tonnage and above, excluding domestic shipping vessels
Targeted assets	Finance secured by vessel mortgages
Targeted scope	Scope 1 (vessel operation)
Metrics	Portfolio climate alignment score
Metric formula	$\sum \left(\text{Climate alignment score of each vessel ((2) below)} \times \frac{\text{Balance of loans from Mizuho to each vessel}}{\text{Total loan balance across target portfolio}} \right)$
Formula for climate alignment score	Calculate AER(1) for each vessel and then the portfolio-level weighted average of climate alignment score (2), defined as the difference between AER and the decarbonization trajectory for each vessel. (1)AER= $\frac{\text{Annual } CO_2 \text{ emissions for voyage}}{\text{Annual distance traveled} \times \text{Deadweight at maximum summer}}$ (2) Climate alignment score = $\frac{\text{AER(1) of each vessel} - \text{Trajectory for each vessel}}{\text{Trajectory for each vessel}}$
Base year result	FY2021: Portfolio climate alignment score +1.82%[29] (cf.) Absolute emissions: 3.5 $MtCO_{2e}$
Benchmark scenarios	IMO's GHG reduction target / CII regulation value set in line with the target
Numerical target	Portfolio climate alignment score in FY2030: 0% or less (portfolio aligned with decarbonization trajectory)
Data sources	VesselsValue, a Veson Nautical solution

Target setting approach

Approach to the targeted value chain and scope	・We focus on GHG emissions from vessel operation, which accounts for 98% of the emissions from ships. ・With reference to the technical guidance to the Poseidon Principles[30], we cover finance secured by mortgages of vessels of 5,000 gross tonnage and above, excluding domestic shipping vessels.
Approach to metrics	・We adopted emission intensity per unit of activity (distance traveled x deadweight at maximum summer draught) to promote the decarbonization of ships while supporting the rising demand for maritime transport. ・In order to measure and assess the reduction in emission intensity depending on the type and size of the ship, we use the "portfolio climate alignment score" as a measure of target setting with reference to the technical guidance to the Poseidon Principles.
Benchmark scenarios	・We set targets in line with the IMO Strategy on Reduction of GHG Emissions, a global standard for international maritime transport. ・We use the reference values of the Carbon Intensity Indicator (CII) regulation as a benchmark for calculating climate alignment scores, as IMO has introduced the regulation as a rating scheme for the fuel efficiency of

[29] Since the IMO regulation on ship's energy efficiency was not in place in FY2021, actual performance was calculated using an original benchmark. (Reference Line × 3% reduction rate)
[30] Poseidon Principles Technical Guidance Version 4.2

	individual vessels to facilitate the achievement of targets set under its GHG Emissions reduction strategy. ・We will consider applying any revised reference values under the CII scheme to target-setting in view of amendments to the IMO Strategy on Reduction of GHG Emissions.
Initiatives to achieve the target	・We monitor our clients' actions taken to respond to CII regulation and the status of our clients' transition, and support decarbonization initiatives. ➢Arrangement of finance for higher fuel efficiency of vessels and the introduction of low-carbon fuel ships; ➢Provision of information on industry-wide carbon-neutral trends and initiatives across the sector such as shipbuilders, ship owners, operators and shippers. ・We provide financial and non-financial support for early realization of next-generation technologies such as carbon-neutral fuel (hydrogen, ammonia) and zero-emission ships.

(9) Real estate sector

Targeted value chain	Companies whose primary business is real estate lending, REITs and SPCs in Japan (See "Approach to the targeted finance" below)
Targeted assets	Loans (corporate finance and non-recourse loans)
Targeted scope	Scope 1, 2 (emissions from owned property) and Scope 3 Category 13 (emissions from leased property
Metrics	GHG emission intensity ($kgCO_2e/m^2$)
Base year result	FY2021: 69 $kgCO_2e/m^2$ (Reference) Absolute emissions 361 $ktCO_2e$
Benchmark scenarios	(1) CRREM 1.5°C Pathway [1.5°C][31] – (2) CRREM 2°C Pathway [Well-below 2°C][32]
Numerical target	FY2030: 33 $kgCO_2e/m^2$ (1) – 42 $kgCO_2e/m^2$ (2) (Cf. Reduction rate from the base year: 52% - 38%)
Data sources	Information disclosed by clients (sustainability report, data published under the Act on Promotion of Global Warming Countermeasures (the Act), etc.), estimates (emission factor under the Act, etc.)

Target setting approach

Approach to the targeted finance	・We focus on corporate finance for real estate companies and REITs whose primary business is operating and leasing commercial property, as well as real-estate non-recourse loans through special purpose companies (SPCs) ・We focus on business entities in Japan, which account for over 80% of our portfolio, in view of the availability of disclosed data. ・While a wide range of business entities are involved in the real estate sector, the availability of disclosed data is limited. Accordingly, we defined the targeted supply chain as follows: ➢(1) Real estate companies: Large-scale companies (classified as such under the Companies Act, listed companies, etc.) whose primary business is real estate lending; ➢(2) Listed REITs: All of them, plus private REITs: Included where the major sponsor (owning over 50% of the REIT's asset management company) is a real estate company as defined in (1) above; ➢(3) Special purpose companies (SPCs): Included where their consolidated parent is a real estate company as defined in (1) above.
Approach to the targeted scope	・We target Scope 1, 2 (direct emissions of the company) and Scope 3 Category 13 (emissions from leased property), as emissions from property in use accounts for most of the lifecycle emissions from real estate
Approach to metrics	・We set targets in terms of GHG emission intensity to improve the efficiency, and promote the decarbonization of energy used, while meeting the increasing demand for real estate
Benchmark scenarios	・Since transition pathways differ in the real estate sector depending on the region and property type concerned, we adopted CRREM, which develops and provides 1.5°C scenarios by region and property type. ・Decarbonization of the real estate sector depends on the reduction of emissions from electricity, which accounts for almost 70% of the in-use emissions from property. Reaching the level envisaged in the 1.5°C scenario requires (1) increasing the share of renewable energy in the regional energy mix, as well as (2) procurement of renewable electricity and energy certificates by companies themselves, whereas the supply capacity of the renewable energy market is limited, hindering stable procurement. We thus set targets within the range of 1.5°C - well-below 2°C scenarios. ・These targets were calculated based on the property mix as of FY2021. They do not include data centers, which are expected to increase in the future, due to lack of adequate data and scenarios. Thus, we will review the targets as appropriate when better data and scenarios become available in future
Initiatives to achieve the target	・Centered on client engagement, we provide financial and non-financial support including through assistance in procuring renewable electricity and energy certificates, and financial arrangements for the execution of decarbonization strategies, such as expansion of ZEB[33] and other types of energy efficient property. ・Aiming at the decarbonization of electricity, we promote engagement with, and support the initiatives of clients operating electric power businesses, in light of our emission reduction target for the electric power sector (set in 2022)

[31] CRREM (Carbon Risk Real Estate Monitor) is an international initiative to calculate and publish GHG emissions pathways for commercial real estate consistent with the Paris Agreement. The CRREM Pathway Version 2 released in March 2023 was used to set this year's target.
[32] Version 2 does not include a science-based well-below 2°C scenario. This scenario was calculated with reference to the difference between the 1.5°C and 2°C (well-below 2°C) pathways in CRREM Version 1
[33] Net Zero Energy Building. Buildings that consume virtually zero primary energy.

6. Reference: Transition risk scenario analyses

(1) Overview of the scenario worldview for the electric utilities sector

Scenario

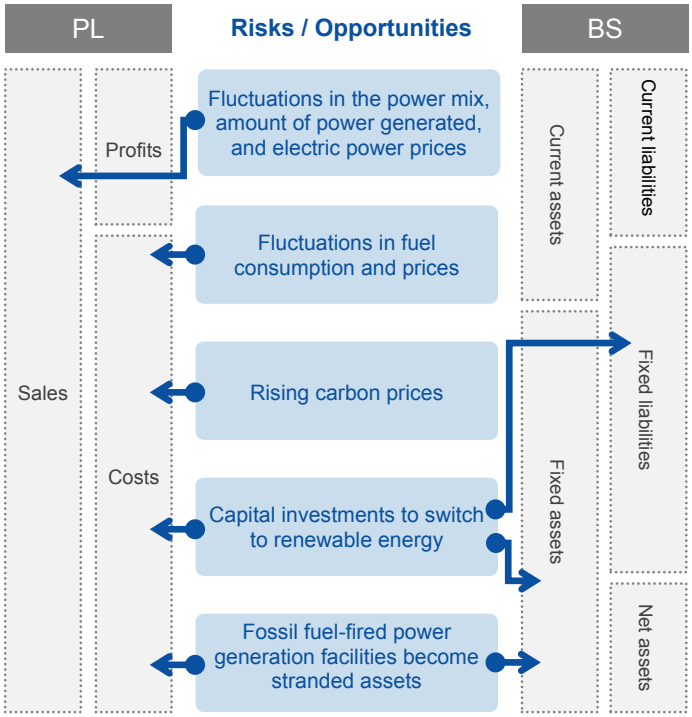
Net Zero 2050

Scenario summary

- Total power generated will increase 2.4 times by 2050 compared to 2020, due to the advancement of electrification toward carbon neutrality
- The percentage of power generated from fossil fuels will decrease to 15% in 2030 and to nearly zero in 2040

Impact on client financial results

- The carbon cost burdens will be relatively larger from the outset compared to the other scenarios, but they will diminish as clients switch to renewable energy
- Renewable energy investment burdens will be considerable and will negatively impact some clients' financial results



(2) Overview of the scenario worldview for the oil and gas and coal sector

Scenario

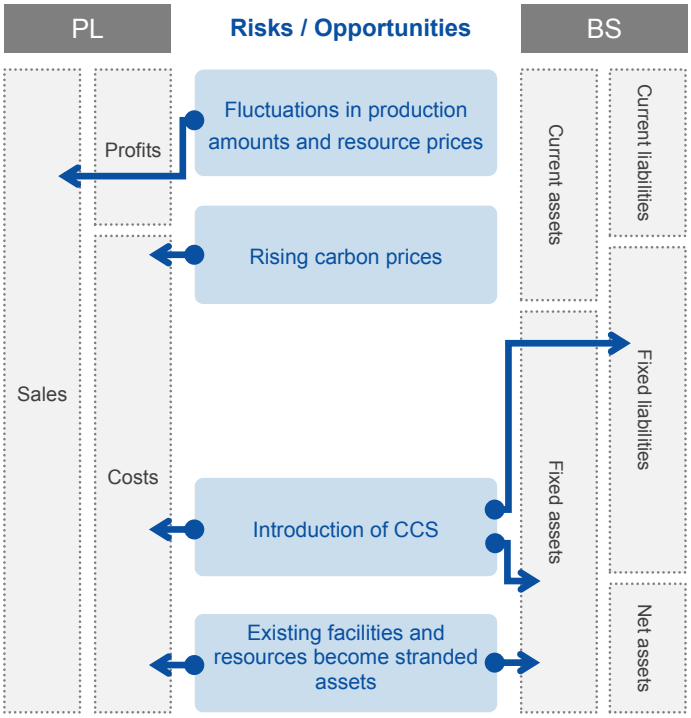
Net Zero 2050

Scenario summary

- Energy demand will decrease by 51% by 2050 compared to 2020
- The percentage of fossil resources in energy consumption is projected to decline from 89% in 2020 to 47% in 2050

Impact on client financial results

- Energy demand will decrease from the outset and the carbon cost burdens will be large, having a negative impact on some clients' financial results



(3) Overview of the scenario worldview for the steel sector

Scenario

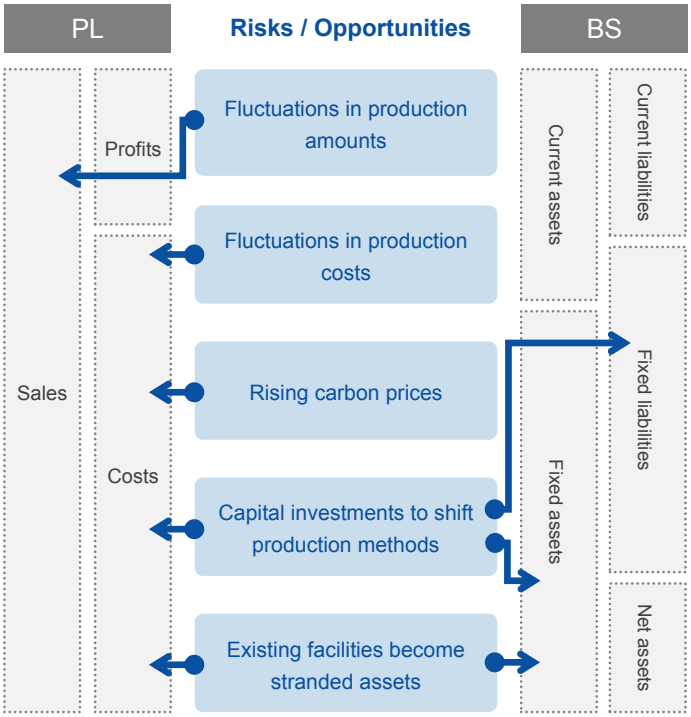
Net Zero 2050

Scenario summary

- Steel production will gradually decline until 2030, after which it will level off
- Production methods will shift, and the share of fossil fuels will decline from 85% in 2020 to 41% in 2050

Impact on client financial results

- The sharp rise in carbon cost burdens from the outset will be coupled with investment burdens to shift production methods, having a negative impact on some clients' financial results



(4) Overview of the scenario worldview for the automotive sector

Scenario

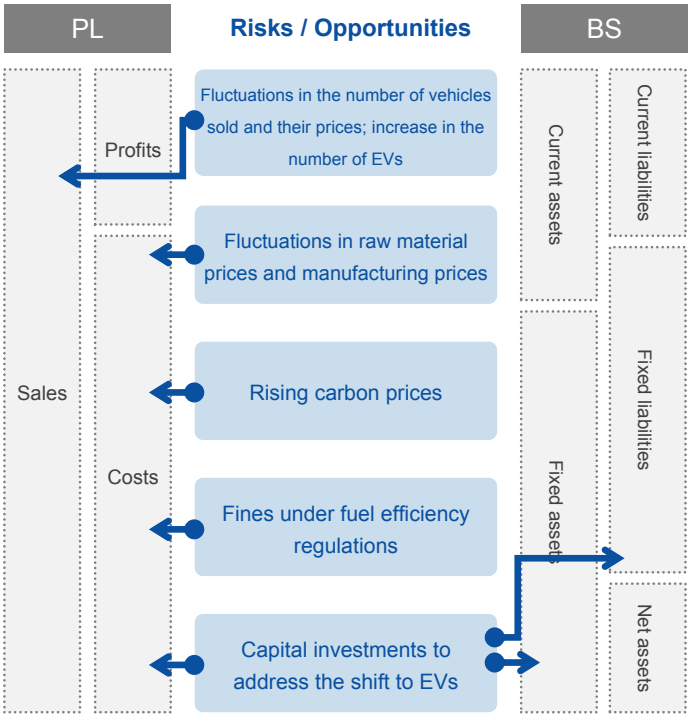
Net Zero 2050

Scenario summary

- The number of vehicles sold will increase, but growth will be moderate due to stricter fuel efficiency regulations and other factors
- The share of EVs will increase from 2% in 2020 to 57% in 2030 and 100% in 2050

Impact on client financial results

- For OEMs, the impact on client financial results will be limited, although the cost burdens associated with decarbonization will be considerable
- For suppliers, the cost burdens for steel and other materials will increase, having a negative impact on some clients' financial results



(5) Overview of the scenario worldview for the maritime transportation sector

Scenario

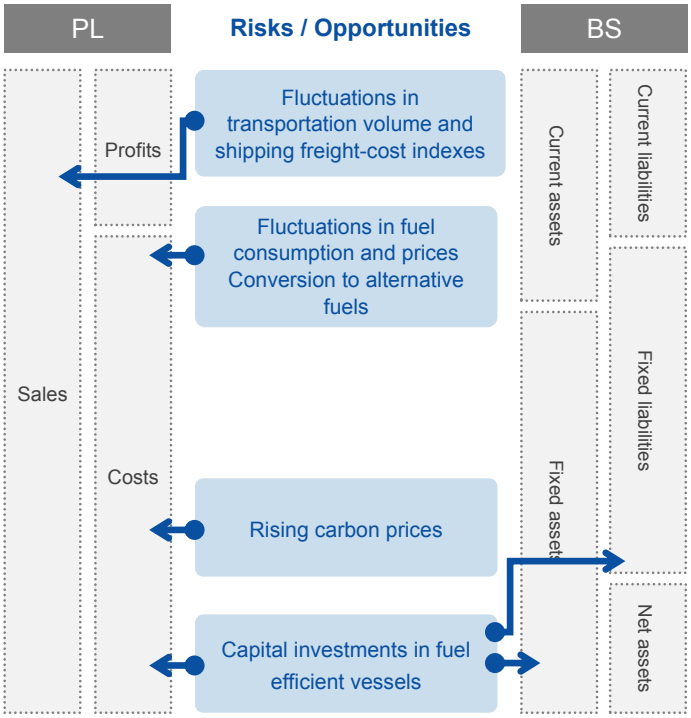
Net Zero 2050

Scenario summary

- Japan's transportation volume will decline by 16% over the period to 2050
- Transformations in the fuel mix will progress, with the percentage of fuel oil falling from 100% in 2020 to 16% in 2050

Impact on client financial results

- Compared to the other scenarios, carbon cost burdens will rise sharply from the outset and investment burdens in fuel efficient vessels will also be present, having a negative impact on some clients' financial results



(6) Overview of the scenario worldview for the aviation sector

Scenario

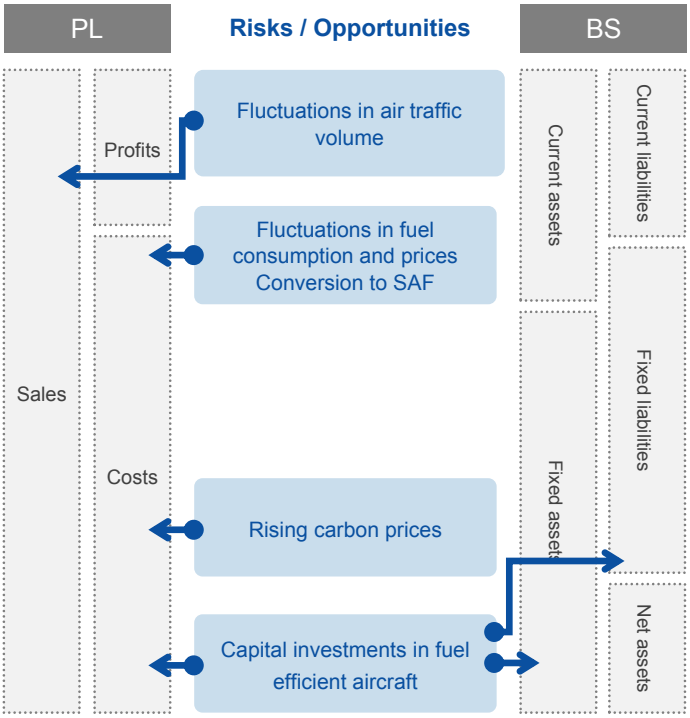
Net Zero 2050

Scenario summary

- International air traffic will increase by 59% for passengers and by 17% for freight by 2050
- Fuel conversions will start from 2030 on and 27% of jet fuel will be converted to SAF in 2050

Impact on client financial results

- Compared to the other scenarios, carbon cost burdens will rise sharply from the outset and investment burdens in fuel efficient aircraft will also be present, having a negative impact on some clients' financial results



(7) Overview of the scenario worldview for the cement sector

Scenario

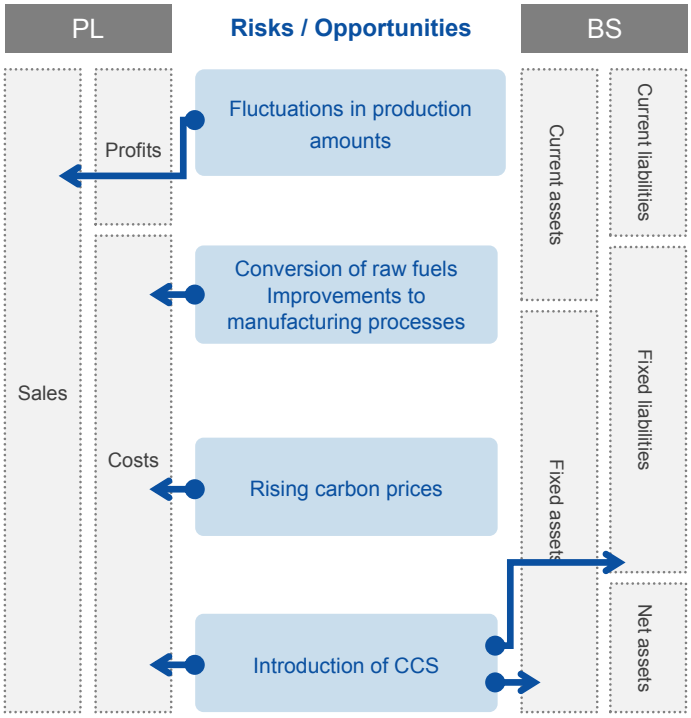
Net Zero 2050

Scenario summary

- Japanese cement production will decline gradually until 2050
- The recovery rate of process-derived CCS will rise to 75% by 2050

Impact on client financial results

- Compared to the other scenarios, carbon cost burdens will rise sharply from the outset and investment burdens in CCS will also be present, having a negative impact on some clients' financial results



(8) Overview of the scenario worldview for the chemical sector

Scenario

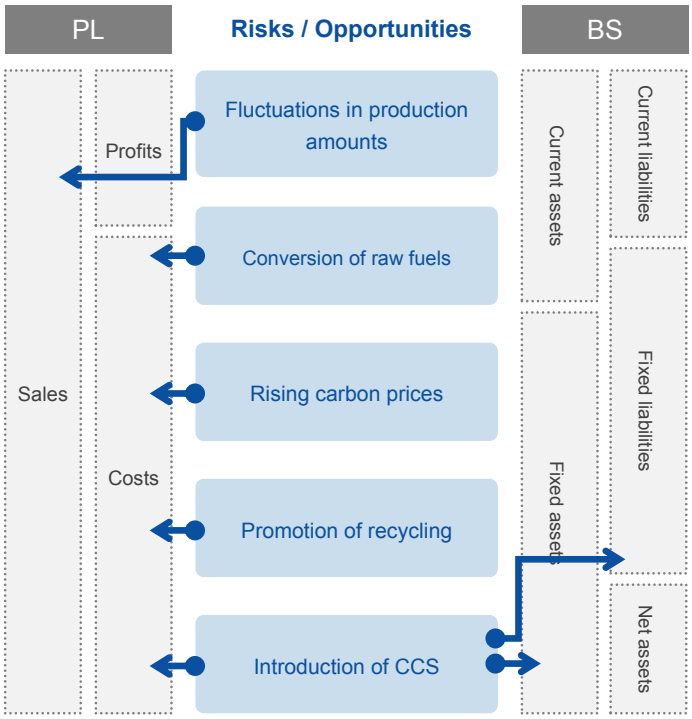
Net Zero 2050

Scenario summary

- Conversion of raw fuels will progress, with conversion of 28% of production to hydrogen-derived fuels by 2050
- The percentage of chemicals that are recycled will increase to 35% by 2050

Impact on client financial results

- The impact on client financial results will be limited, although the cost burdens will be considerable, such as investments in low-carbon technologies



Organization abbreviations

Abbreviation	Official Name
FG	Mizuho Financial Group
TB	Mizuho Trust & Banking
MSUSA	Mizuho Securities USA
RT	Mizuho Research & Technologies
LS	Mizuho Leasing Company

Abbreviation	Official Name
BK	Mizuho Bank
SC	Mizuho Securities
AM-One	Asset Management One
FT	Mizuho-DL Financial Technology
IF	Mizuho Innovation Frontier

Glossary

(Prepared based on information available as of June 2025)

Terms	Official Name	Description
-CCS -CCU -CCUS	- Carbon dioxide Capture and Storage - Carbon dioxide Capture and Utilization	- CCS: A technology that separates out and captures CO_2 emitted from coal-fired power generation plants, factories, and other sources, and stores the captured CO_2 in a geological formation that is impervious to CO_2. - CCU: A technology that separates out and captures CO_2 emitted from coal-fired power generation plants, factories, and other sources, and then uses the captured CO_2 as a resource. - Technologies that combine CCS and CCU are called CCUS.
CDP	Climate Disclosure Project	An international environmental nonprofit organization established in the United Kingdom that engages with investors, companies, and municipalities to request disclosure of information regarding their environmental impacts.
CO_2e	CO_2 equivalent	The conversion of various GHG emissions, such as methane or nitrous oxide, to an equivalent amount of CO_2 emissions using global warming potential (GWP) factors.
COP	Conference of the Parties	A conference by the countries that have ratified a treaty or protocol. There are various COPs in many different fields in addition to climate change and biodiversity.
ENCORE	Exploring Natural Capital Opportunities, Risks and Exposure	A tool to visualize the impact environmental changes have on economies, jointly developed by the UNEP-FI, UNEP-WCMC, and Global Canopy
EVIC	Enterprise Value Including Cash	Calculated as the sum of the market capitalization of common and preferred stocks, interest-bearing liabilities (bonds + loans), and the book value of non-controlling interests.
Financed Emissions	GHG emissions from financing and investment, falling under Category 15 (investment) in Scope 3 emissions.	
Facilitated Emissions	GHG emissions from capital market activities, mainly underwriting operations.	
GFANZ	The Glasgow Financial Alliance for Net Zero	A voluntary coalition of global financial institutions formed at COP26 held in Glasgow in 2021. The organization aims to facilitate capital mobilization to support the transition to net zero by working to close gaps in data, actions, and investments, while promoting public-private partnerships and policy development.
GHG	Greenhouse Gas	Gases present in the atmosphere, such as carbon dioxide and methane, which contribute to the greenhouse effect.
GX	Green Transformation	An initiative to transform conventional fossil fuel-dependent industrial structures into economic and social systems centered on clean energy.
ICMA	International Capital Market Association	An association dedicated to promoting a well-functioning international bond market for sustainable economic growth and development.
IEA	International Energy Agency	An international organization within the framework of the Organization for Economic Cooperation and Development (OECD) that is involved in all aspects of energy policy for the purpose of ensuring stable energy supplies.
-ISSB -SSBJ	- International Sustainability Standards Board - Sustainability Standards Board of Japan	- ISSB: A council established by the IFRS Foundation, which formulates international accounting standards, to develop international sustainability disclosure standards. - SSBJ: An internal organization of the Financial Accounting Standards Foundation (FASF) of Japan established to communicate Japan's positions and opinions during the development of international sustainability disclosure standards and to develop standards for Japan.
LMA	Loan Market Association	An organization that establishes principles and issues guidelines for voluntary procedures related to green, social, and sustainable loans in cooperation with related associations.

Terms	Official Name	Description
NbS	Nature based Solution	Actions that protect, sustainably manage, and restore natural or modified ecosystems to address societal challenges effectively and adaptively, while simultaneously providing benefits for human well-being and biodiversity.
NDC	Nationally Determined Contribution	The climate action plans submitted by signatory countries under the Paris Agreement, outlining their specific targets for reducing greenhouse gas (GHG) emissions and addressing climate change.. Countries are required to submit and update their targets every five years.
NGFS	Network of Central Banks and Supervisors for Greening the Financial System	A network of central banks and financial regulators established to examine financial supervisory responses to climate change risks.
NZBA	Net-Zero Banking Alliance	An international initiative by banks to achieve by 2050 net zero GHG emissions from their financing and investment portfolios.
NZE	Net Zero Emissions by 2050 Scenario	A scenario formulated and published by the IEA based on the assumption that the world as a whole will achieve net zero GHG emissions by 2050.
PCAF	Partnership for Carbon Accounting Financials	An international initiative to develop methodologies to measure GHG emissions from the financing and investments of financial institutions.
PPA	Power Purchase Agreement	An agreement between a power producer that provides electric power and an electric power consumer.
RAF	Risk Appetite Framework	A concept that increases corporate value through the integrated oversight of business strategies, financial strategies, and risk management. This is a framework that manages business operations and risks by clarifying guidelines for business operations, risk-taking, and profit targets.
SAF	Sustainable Aviation Fuel	Alternative fuels that are cleaner than conventional jet fuel and are produced from waste oil and used cooking oil.
-SBT -SBTi	- Science Based Targets - Science Based Targets initiative	- SBTs are science-based, GHG emissions reduction targets set for companies that are consistent with the levels required by the Paris Agreement - SBTi is an international initiative jointly established by CDP, the United Nations Global Compact (UNGC), the World Resources Institute (WRI), and the World Wide Fund for Nature (WWF) that audits and certifies SBTs.
Scope1,2, 3	- Scope 1: GHG emissions directly emitted by a business itself. - Scope 2: indirect GHG emissions from the use of electric power, heat, and steam supplied by other companies. - Scope 3: indirect GHG emissions from business activities in the supply chain of a business that are not counted as Scope 1 and 2 emissions.	
SDS	IEA Sustainable Development Scenario	A scenario formulated and published by the IEA in which the world has a 67% probability of limiting the global temperature increase to 1.8°C or less and a 50% probability of limiting the increase to 1.65°C by 2100.
SPV	Special Purpose Vehicle	A company established for a limited purpose such as liquidation, securitization, or project financing of underlying assets.
-TCFD -TNFD	-Task Force on Climate-related Financial Disclosures -Taskforce on Nature-related Financial Disclosures	- A framework established to assess the risks and opportunities posed by climate change to businesses and to disclose information that impacts financial performance - A framework designed for companies to evaluate the impact of their economic activities on the natural environment and biodiversity and to disclose relevant information
WWF	World Wide Fund for Nature	An environmental conservation organization established in 1961 that engages in activities both domestically and internationally, such as protecting biodiversity and combating global warming.
Poseidon Principles	An international framework established in 2019, primarily by major financial institutions in Europe and the United States, to support the decarbonization of the shipping industry through financial measures.	
Transition Plan	- An aspect of an organization's overall business strategy that lays out a set of targets and actions supporting its transition toward a low-carbon economy, including actions such as reducing its GHG emissions. (Definition from TCFD Guidance on Metrics, Targets, and Transition Plans) - An aspect of an entity's overall strategy that lays out the entity's targets, actions or resources for its transition towards a lover-carbon economy, including actions such as reducing its greenhouse gas emissions. (Definition from IFRS S2 Sustainability Disclosure Standard)	

Links for Mizuho's sustainability-related documents

Document	Release Date	Link	Description
Environmental Social & Governance Data Book 2024	March 2025	Here	The report provides a summary of Mizuho's main ESG-related data.
Integrated Report 2024	July 2024	Here	The report includes financial information as well as ESG information and other non-financial information, and is designed to provide a concise, easy-to-understand, narrative-style explanation of how Mizuho will create value for its clients, society, and itself over the short, medium, and long term by executing strategies and bolstering its governance.
Sustainability Progress 2025	May 2025	Report Appendix	This document summarizes a wide range of information, including Mizuho's fundamental philosophy and strategies, quantitative and qualitative achievements, and progress toward goals, along with enhanced efforts to realize sustainability and aim for increased corporate value through addressing social issues.
Mizuho Sustainability Focus 2024	December 2024	Here	The report summarizes Mizuho's approaches and initiatives focusing on major changes in sustainability-related industries and themes with the potential to become new business vectors, all based on Mizuho's many years of industry insight. The 2024 Edition concentrates on priority areas for Mizuho's initiatives from the perspective of strengthening Japan's industrial competitiveness by means of industrial restructuring, with a view to both resolving social challenges and achieving sustainable economic growth.
Impact Business Compass	May 2024	Here	The report outlines Mizuho's approach to impact and presents the potential of impact businesses as well as our policies and initiatives to help spread the concept of impact throughout the economy and society.
Mizuho Avoided Emissions Focus Report	October 2024	Here	The report provides an explanation of Mizuho's initiatives and results on avoided emissions, in addition to global trends and future possibilities in avoided emissions, with the objective of further promoting and advancing the use of avoided emissions in financing and corporate evaluations.
Human Capital Report 2024	July 2024	Here	The report presents a comprehensive picture of how Mizuho is co-creating value with our clients and with economies and societies through human capital enhancement and corporate culture transformation.
Human Rights Report 2024	July 2024	Here	The report compiles details on Mizuho's initiatives for respecting human rights based on the United Nations Guiding Principles Reporting Framework.
Asset Management One Sustainability Report	May 2025	Here	This report introduces sustainability initiatives of Asset Management One, Mizuho Group's investment management company.

Links to Mizuho's Sustainability related websites

Website	Link	Description
Mizuho Financial Group's Sustainability page	Here	The page lists Mizuho's major sustainability-related information.
Mizuho SX site	Here	A brand site that introduces Mizuho's sustainable business initiatives.

Forward-Looking Statements

This report contains forward-looking statements, including estimates, forecasts, targets, and plans. These statements are based on information available at the time of preparation and assumptions regarding uncertain factors that may affect future performance. Such forward-looking statements do not guarantee future results, and actual outcomes may differ materially. These statements reflect the views of Mizuho Financial Group, Inc., and its group companies at the time they are made and involve risks and uncertainties, arising from a variety of factors. These factors include, but are not limited to, global socio-demographic and economic trends, energy prices, technological innovations, climate-related conditions and weather events, changes in governmental policies, legislative and regulatory developments, and other unforeseen circumstances. For further information regarding factors that could affect our results or investment decisions, please refer to this document, securities reports, financial summaries, and other disclosure materials published in Japan, as well as "Item 3.D. Key Information—Risk Factors" in our most recent Form 20-F filed with the U.S. Securities and Exchange Commission, available in the Financial Information section of our website (www.mizuhofg.com/index.html) and the SEC's website (www.sec.gov). We are under no obligation, and disclaim any obligation, to update or alter our forward-looking statements, whether as a result of new information, future events, or otherwise. Decisions regarding financing and investments, or involvement with other business entities, are made based on the independently established business strategies, risk management policies, and other guidelines of Mizuho Financial Group, Inc., and its group companies, regardless of whether such decisions involve sustainability considerations. These decisions and activities are conducted in compliance with applicable laws and regulations in each jurisdiction.

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