

Questionnaire survey on corporate biodiversity efforts in Japan

Summary of the FY2022 survey results

January 19, 2024

Keidanren Committee on Nature Conservation (KCNC)

Overview of the survey

1. Objectives

The survey aimed to reveal the status of, and challenges and opportunities in, biodiversity efforts by individual companies in Japan, and collectively as the Japanese business sector, referring to key global frameworks such as the Kunming-Montreal Biodiversity Framework (GBF) of the Convention on Biological Diversity (CBD) and the Taskforce on Nature-related Financial Disclosures (TNFD).

2. Target

Keidanren member companies (1,529 companies, including KCNC members)

3. Survey Period February - April 2023

4. Number of valid responses: 326 companies, including 111 KCNC members

* Note for interpreting data presented in the following slides: The sum of proportions presented in some graphs exceed 100% due to rounding decimals. "N" in this disclosure refers to the number of valid responses.

Executive summary (1)

(1) Compared to the 2019 survey, more companies are mainstreaming biodiversity".

- ① **Awareness of biodiversity is high**, with 60% of companies reporting that more than 80% of management knew the meaning of the term "biodiversity," and 25% of companies reporting that more than 80% employees knew the meaning. As compared with this, **awareness of the term "nature positive" was low**. [P6]
- ② Regarding the **organizational structure** to promote biodiversity actions, **assignment of a section/group in charge was reported by the highest number of companies (66%)**. A **small number of companies have biodiversity-related reports or decisions involving their board of directors and management meetings (28% and 30%, respectively)**, and these numbers have **increased** as compared with the results of the previous survey in 2019 (11% and 22%, respectively). [P7]
- ③ With regard to statements and reports on biodiversity in **corporate management and sustainability documents, such statements and reports in sustainability and environmental policies were reported by the largest number of companies (71%)**. **Biodiversity-related statements in corporate management policies, strategies and/or plans were reported by a small number of companies (37%)**. Nevertheless, overall, the number of companies that have biodiversity-related statements and/or reports in these or other types of corporate documents has increased as compared with the the 2019 survey results. [P8]
- ④ The most common **medium for biodiversity information disclosure** was via a website (69%). Only a few companies (6%) used legally mandated reports such as the annual securities reports and business reports. Overall the proportion of **companies disclosing biodiversity information increased** as compared to 2019. [P9]
- ⑤ **Many companies used or referred to CDP or GRI** for biodiversity information disclosure (**63% and 49%, respectively**), and **29% referred to TNFD**. [P10]

(2) Many companies have already been implementing activities that contribute to GBF.

- ① **Efforts related to Target 8. Climate change and biodiversity, 7. Fertilizers, pesticides, plastics and other pollutions, 15. corporate biodiversity information disclosure, 3. Protected areas and OECM, and 4. Endangered species and genetic diversity were frequently mentioned**. However, the most frequent mention of Target 8 needs careful interpretation, as this may include climate actions that do not necessarily intend to contribute to biodiversity. [P12]
- ② Overall the proportion of companies with biodiversity actions that contribute to any of the 23 GBF targets was the highest in **the pulp and printing sector**, followed by **construction, food/beverage/tobacco/feed**, and **real estate and rental and leasing**. In addition, the most frequently mentioned **targets differed by industry sector**. [P13]
- ③ **Twenty nine (29) per cent of companies have set quantitative indicators and targets related to each of the GBF targets**, which has **slightly increased** since 2019 (27%). [P16]
- ④ **Contribution to a variety of goals of the SDGs through biodiversity-related efforts was also mentioned**. Beyond the biodiversity-focused goals, i.e., 15 "Life on land" and 14 "Life under water," contribution to Goals 13 "Climate action," 12 "Responsible consumption and production," and 11 "Sustainable cities and communities" were mentioned. [P18]

Executive summary (2)

(3) Biodiversity information disclosure along the TNFD guidance is still in the initial stage of LEAP approach in many companies, but has advanced in some companies [P22].

- ① **The proportion of companies that have already assessed their dependence/impact on and risks/opportunities from biodiversity in their value chains was 10%, while 48% of companies indicated that they were planning or considering to do.** [P20]
- ② Although many companies have value chains that extend beyond Japanese national jurisdiction, **only a few companies indicated that they assess their dependence/impact on biodiversity in their overseas value chains.** [P21]
- ③ The biodiversity-related risks and opportunities identified by the companies were categorized and tabulated according to the TNFD definition, with **physical risks and transition risks** being the most frequently cited risks (57 in both cases), and **products/services and markets** (50 and 36, respectively) being the most frequently cited **opportunities.** [P23, 24]

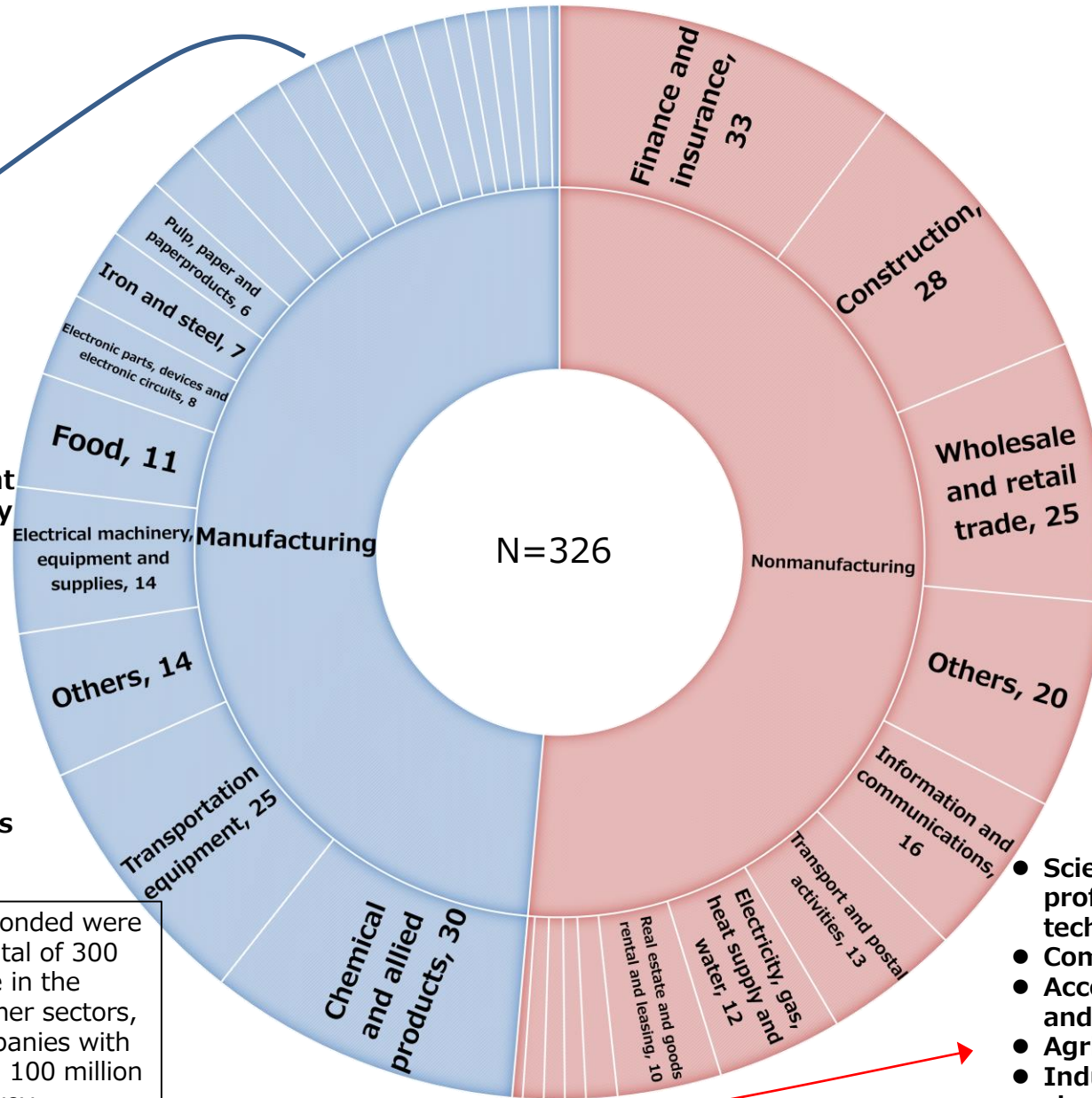
(4) As biodiversity became a key agenda in corporate management, many companies are facing technical challenges in biodiversity actions.

- ① The most frequently cited reason for companies to promote biodiversity actions was to align with international and national norms and to take social responsibility (221 responses), but many companies also cited **corporate philosophy or necessity for business operations (149 responses), and requests from investors and customers (98 and 60 responses, respectively).** [P27]
- ② **Major barriers in biodiversity actions have shifted as compared with the 2019 survey results. Fewer mentions were made regarding barriers such as not contributing to profit making or unclear relevance to business operations (51% to 17% and 34% to 25%, respectively), while technical challenges were mentioned more often.** Frequently mentioned technical issues were setting and measuring indicators and targets (220 responses), difficulty in setting and evaluating scenarios (184 responses), complex supply chains (172 responses), and limited knowledge, human resources and budget (153 responses). [P27]
- ③ **The majority of companies were either not making as much progress in biodiversity actions as climate actions, or were working on the two issues separately (151 and 67, respectively).** However, a few companies were intending to create synergies between biodiversity and climate actions, or were linking TNFD- and TCFD- (Task Force on Climate-related Financial Disclosure) guided disclosures (50 and 34, respectively). [P28]

Responding companies by sector

Sector

- Ceramic, stone and clay products
- Fabricated metal products
- Non-ferrous metals and products
- Business oriented machinery
- General-purpose machinery
- Information and communication electronics equipment
- Production machinery
- Petroleum and coal products
- Rubber products
- Plastic products
- Printing and allied industries
- Textile products
- Beverages, tobacco and feed
- Furniture and fixtures



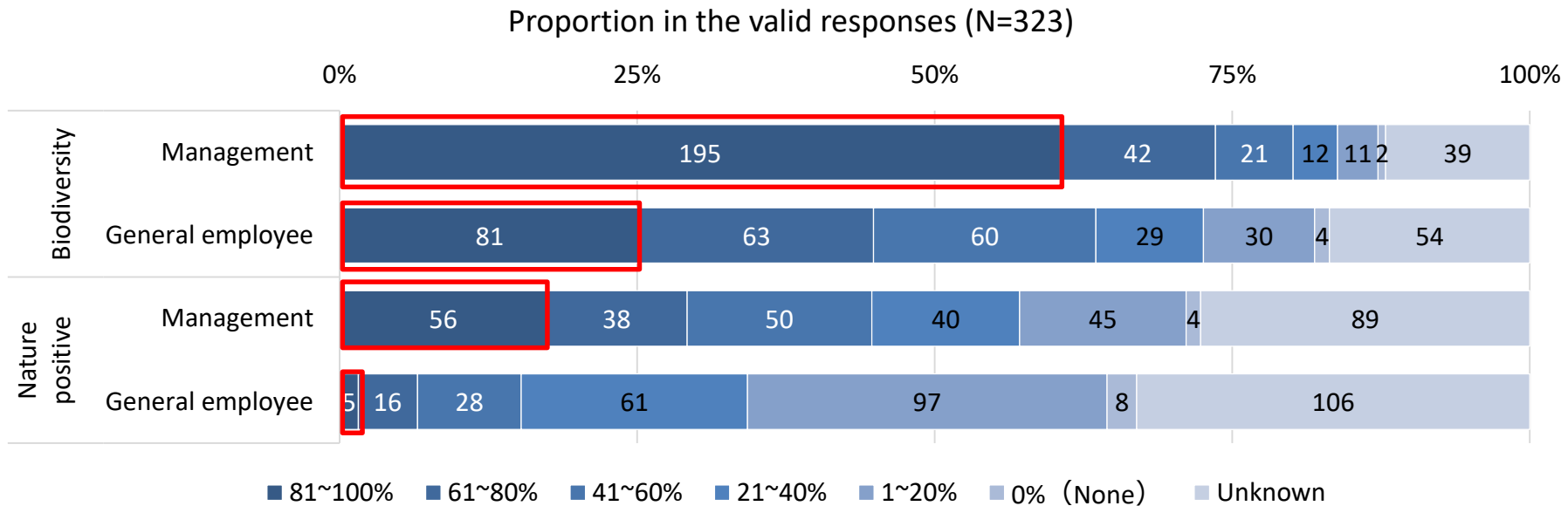
- Scientific research, professional and technical services
- Compound services
- Accommodation, food and beverage services
- Agriculture and forestry
- Industries unable to classify

Most companies that responded were large companies with capital of 300 million yen or more, while in the nonmanufacturing and other sectors, many medium-sized companies with capital of between 50 and 100 million yen responded to the survey

(1) Mainstreaming of biodiversity

Awareness of biodiversity

Q. What percentage of your company's management (board and executive officers) and general employees know the meaning of "biodiversity" and "nature positive"? If your company has not conducted a survey, please answer with a rough estimate. (N = 323)



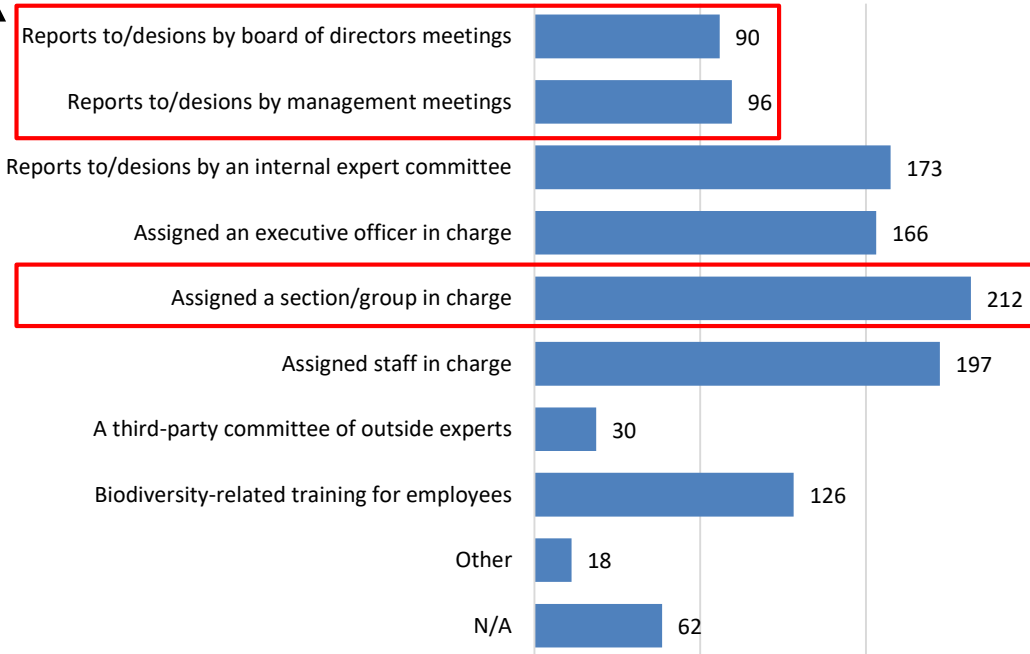
- ✓ Awareness of "biodiversity" is particularly high among the management level.
- ✓ Awareness of "nature positive" is low, as compared with "biodiversity" .

Organizational structure to promote biodiversity actions (1)

Q. What is your company's organizational structure to promote biodiversity actions? (N=322)

Percentage in the valid responses (N=322)

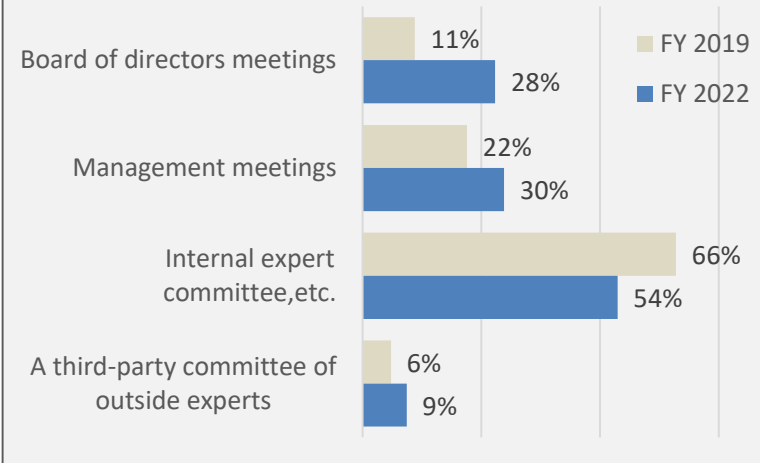
0% 25% 50% 75%



Comparison with the FY 2019 Survey Results

Percentage in the valid responses

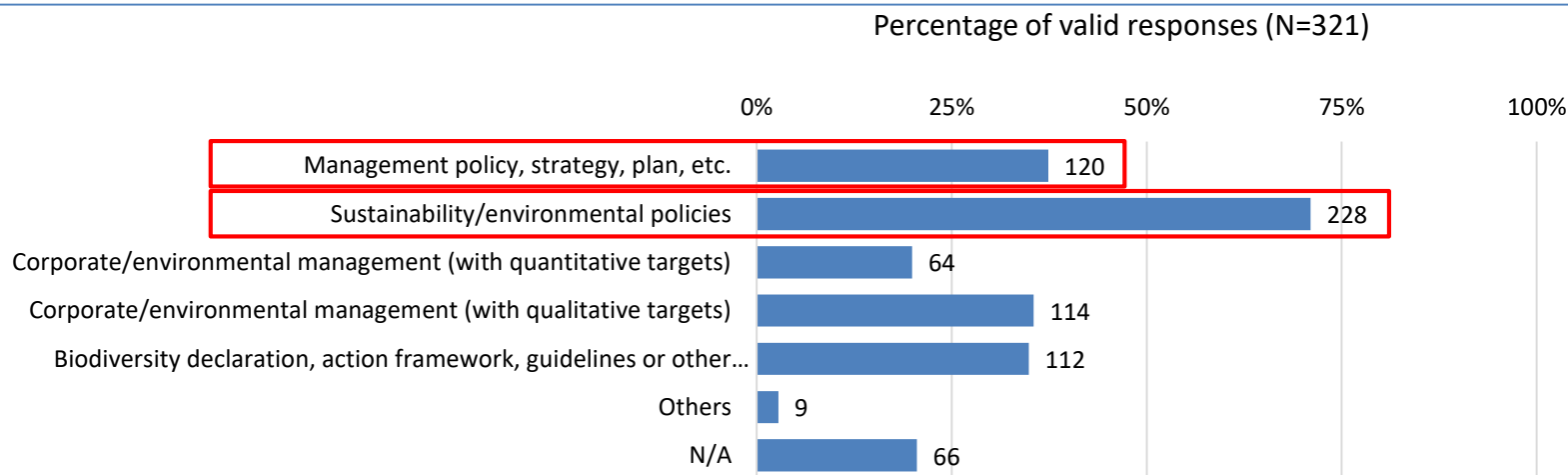
0% 25% 50% 75%



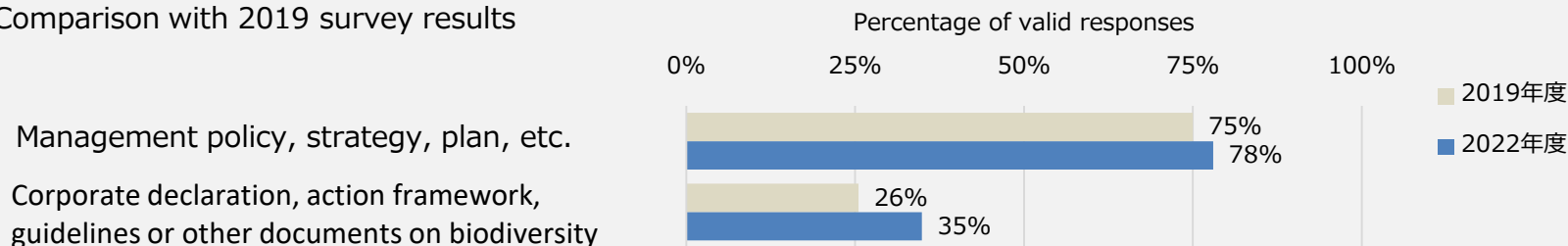
- ✓ Many companies have established a section/group to promote biodiversity actions.
- ✓ The number of companies that have biodiversity-related reports and decisions involving their board of directors and management meetings is limited but increasing.

Organizational structure to promote biodiversity actions (2)

Q. Does your company's management policy, strategy, plan or other corporate documents include biodiversity-related statements and/or contents? (N=321)



Comparison with 2019 survey results



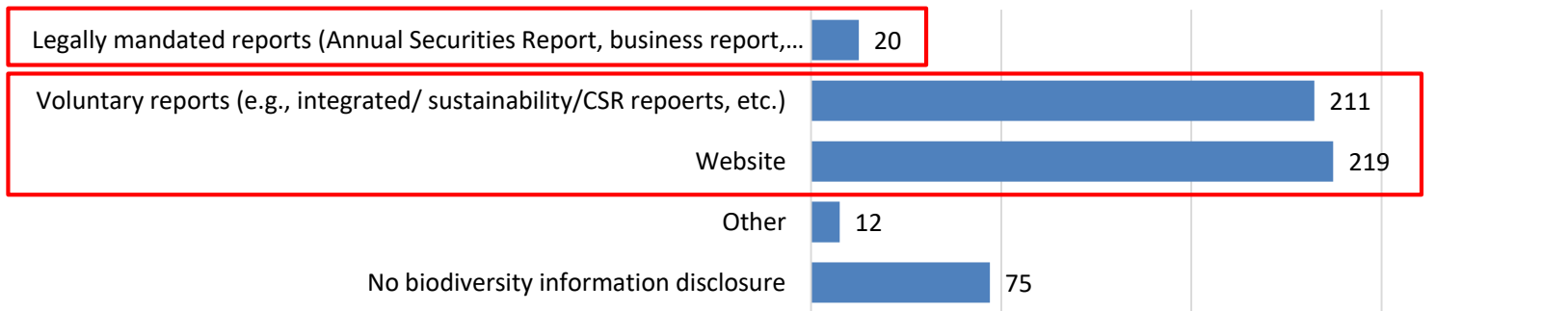
- ✓ The majority of companies include biodiversity-related statements/contents in their sustainability/environmental policies or other sustainability documents.
- ✓ While only a few companies include biodiversity-related statements or contents in their management policies, strategies and plans, overall the number of companies that mention biodiversity in any corporate document increased.

Biodiversity information disclosure (1)

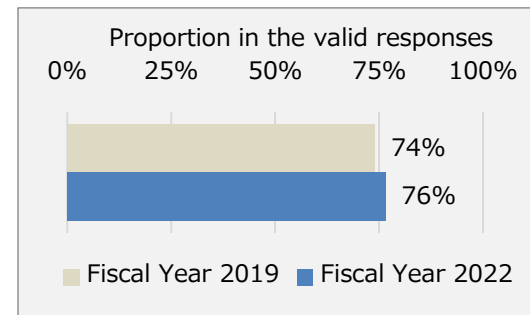
Q. In which media does your company disclose biodiversity information? (N=319)

Proportion in the valid responses (N=319)

0% 25% 50% 75% 100%



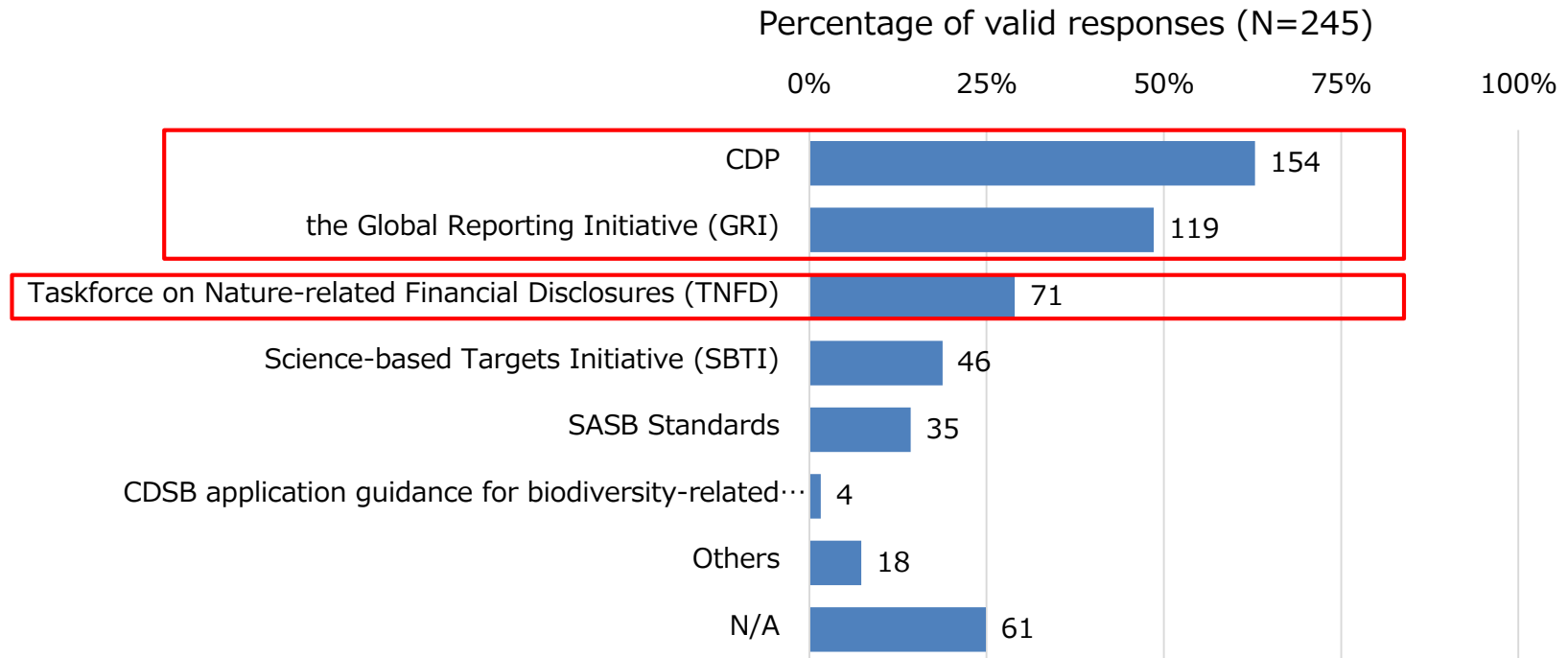
Proportion of companies with biodiversity information disclosure as compared with the 2019 survey results



- ✓ Many companies disclose biodiversity on their websites and in voluntary reports such as integrated reports and sustainability reports, and only a limited number of companies include biodiversity information in their securities reports and other statutory reports.
- ✓ As compared with the FY2019 survey results, the number of companies disclosing biodiversity information has increased.

Biodiversity information disclosure (2)

Q. Which disclosure frameworks or guidance does your company follow or refer to when disclosing biodiversity information? (N=245)



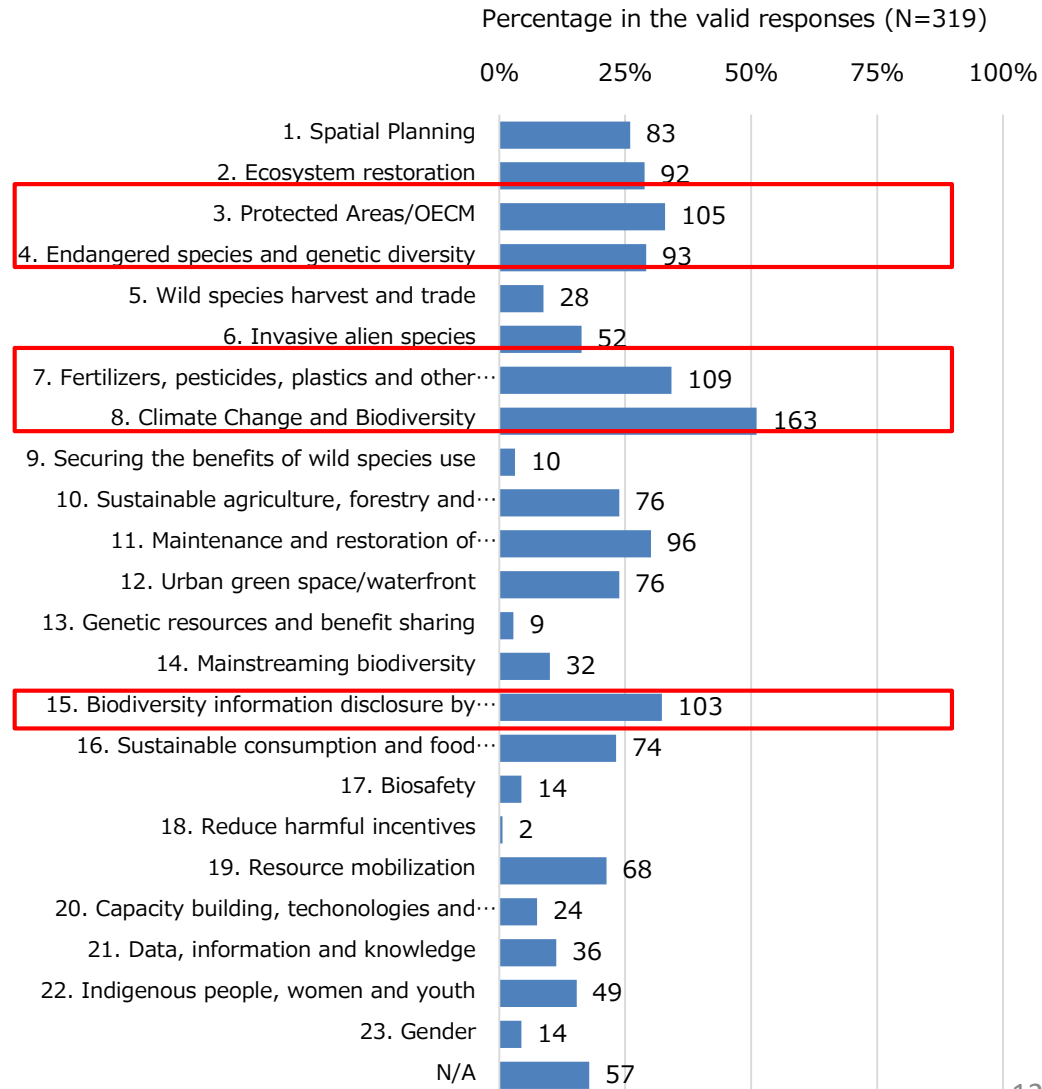
✓ Many companies used or referred to CDP or GRI for biodiversity information disclosure, and some companies referred to TNFD which was under development during the survey period.

(2) Contribution to GBF

Contribution to the Kunming-Montreal Biodiversity Framework

Q. The 23 targets of the Kunming-Montreal Biodiversity Framework (GBF), are listed below. Does your company have any activities (including under planning) that correspond to each of the GBF targets? (N=319)

- ✓ Many companies are implementing activities that contribute to GBF. Out of the 23 GBF targets, many companies have biodiversity actions corresponding to target 8) Climate change and biodiversity*, 7) Fertilizer, pesticide, plastics and other pollutions, 15) Biodiversity information disclosure, 3) Protected areas and OECM, and 4) Endangered species and genetic diversity.
- ✓ By sector, the proportion of companies with biodiversity actions that contribute to either targets of GBF was largest in the pulp and printing, followed by construction, food/beverage/tobacco/feed, and real estate/goods rental. **
- ✓ Targets focused by companies differ by sector. **



*Regarding Target 8, a follow-up question on the synergy between climate and biodiversity actions (p.28) revealed that only a few companies (50 companies, 20%) were making such synergistic efforts, implying that many companies associated this target with their ongoing efforts on climate change that were not intentionally linked to biodiversity.

**Please refer to the next slide for the detailed result by industry sectors.

[Reference] Percentage of companies with initiatives corresponding to each GBF target (by industry sectors)

GBF Target	Manufacturing									Nonmanufacturing							
	Beverages, tobacco and feed	Pulp and Printing	Chemical and allied products	Iron and steel, Non-ferrous metals and products, Fabricated metal products	Electronic parts, devices and electronic circuits	Electrical machinery, equipment and supplies	Machinery and equipment, etc.	Transportation equipment	Other (Manufacturing)	Construction	Electricity, gas, heat supply and water	Information and communications	Transport and postal activities	Wholesale and retail trade	Finance and insurance	Real estate and goods rental and leasing	Other (Nonmanufacturing)
1. Spatial Planning	23	38	27	12	25	21	14	40	17	46	83	38	8	20	9	60	3
2. Ecosystem restoration	23	38	27	41	0	14	21	32	33	50	33	31	31	24	21	40	13
3. Protected Areas/OECM	54	63	20	41	0	43	21	40	47	43	42	38	15	24	24	60	6
4. Endangered species and genetic diversity	31	63	30	24	38	57	21	56	27	36	50	25	23	16	6	30	10
5. Wild species harvest and trade	8	38	3	0	0	21	0	0	13	14	0	13	15	24	0	10	3
6. Invasive alien species	8	38	20	6	0	21	21	32	3	21	42	13	23	8	6	20	13
7. Fertilizers, pesticides, plastics and other pollutions	62	50	57	24	25	50	43	28	37	36	17	31	23	32	12	30	26
8. Climate Change and Biodiversity	31	63	67	29	50	50	64	76	37	43	67	56	31	60	45	50	37
9. Securing the benefits of wild species use	0	13	3	0	13	0	0	4	0	4	0	13	0	4	0	10	3
10. Sustainable agriculture, forestry and fisheries	62	38	27	0	0	7	7	16	17	36	17	38	15	48	15	30	19
11. Maintenance and restoration of ecosystem functions	15	50	23	24	13	29	29	44	30	50	42	31	38	24	12	50	19
12. Urban green space/waterfront	15	50	17	0	13	29	14	36	23	46	33	25	8	20	15	80	6
13. Genetic resources and benefit sharing	0	0	17	0	0	0	0	0	7	4	0	6	0	0	0	0	0
14. Mainstreaming biodiversity	8	25	17	6	0	21	7	4	7	21	17	0	0	12	6	0	10
15. Biodiversity information disclosure	46	63	50	18	0	29	64	28	30	36	42	38	8	28	36	10	10
16. Sustainable consumption and food loss reduction	77	38	17	12	0	21	29	20	13	11	17	31	38	36	12	50	16
17. Biosafety	15	0	13	6	0	0	0	4	10	4	0	6	0	0	3	0	0
18. Reduce harmful incentives	8	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19. Resource mobilization	31	25	30	18	0	14	29	4	13	32	17	25	8	20	30	30	16
20. Capacity building, technologies and science	8	13	3	6	0	14	14	8	3	29	0	6	0	4	0	0	10
21. Data, information and knowledge	31	0	13	12	0	21	7	8	10	14	0	19	23	16	6	0	3
22. Indigenous peoples, women and youth	15	38	10	6	13	29	14	12	17	25	8	19	0	20	9	20	13
23. Gender	15	13	3	6	0	7	0	0	0	11	8	6	0	0	3	0	6
Average of all targets by industry sector	25	33	22	13	8	22	18	21	17	27	23	22	13	19	12	25	11

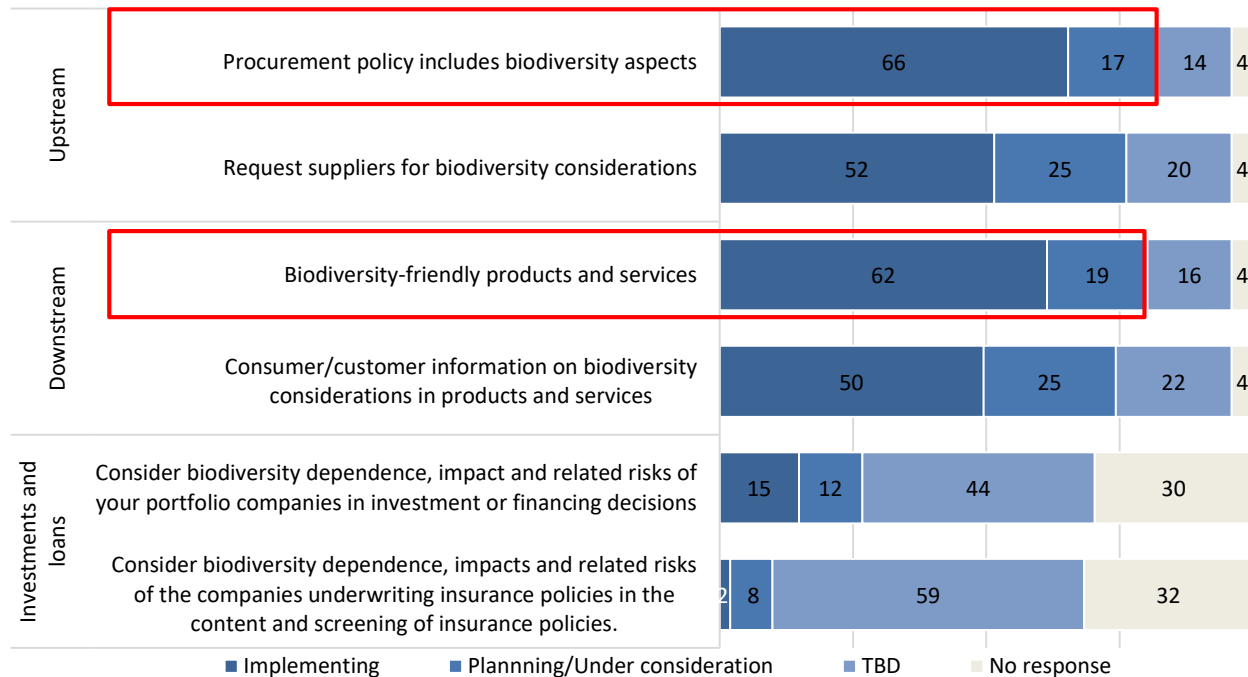
The numbers in the table indicate the percentage (%) of the number of firms that selected each target out of the total number of valid responses (number of firms) by industry sector. Dark green/blue in the color scale of the table indicates a large percentage of firms that selected the corresponding target, while light green/blue to no color indicates a small or no percentage.

Biodiversity efforts in upstream and downstream value chains

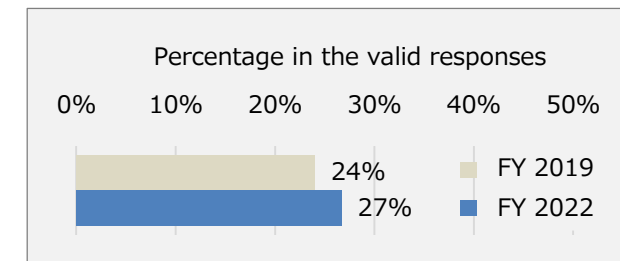
Q. In relation to Target 15 (biodiversity information disclosure by businesses), has your company implemented any of the following actions? Companies in finance and insurance sector are requested to answer the actions on investment, loan or insurance underwriting partners. (N=101)

Percentage in the valid responses (N=101)

0% 25% 50% 75% 100%



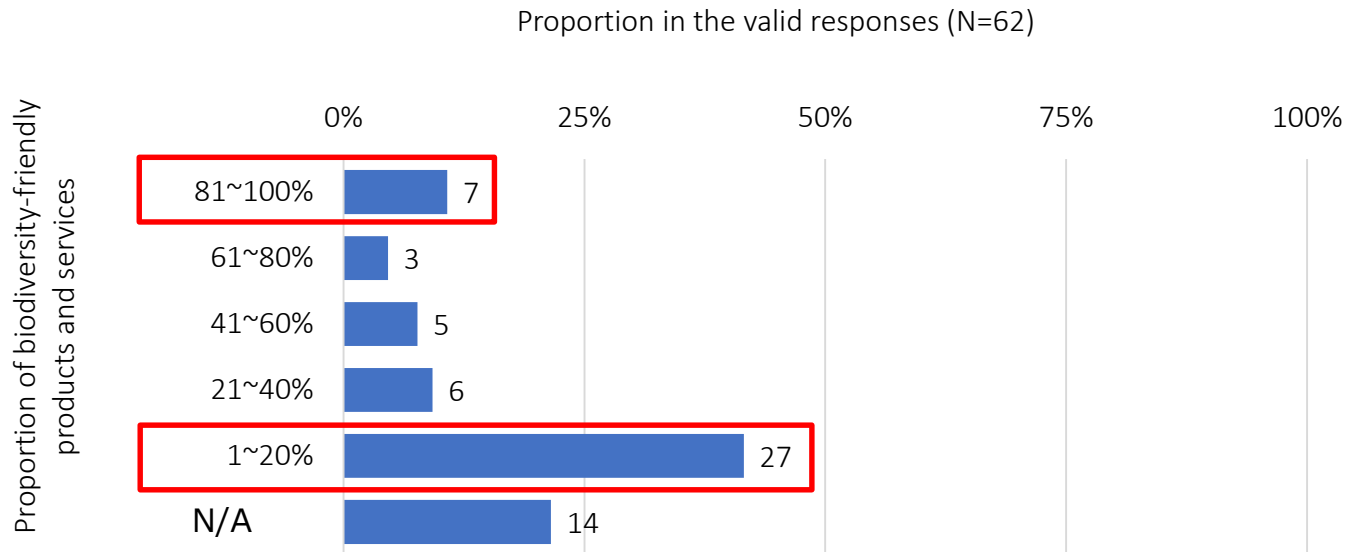
Comparison with the 2019 survey results of the proportion of companies with biodiversity efforts on their upstream and downstream value chains



- ✓ The majority of the companies that have actions on GBF Target 15 or are planning to implement actions, have procurement policies that consider biodiversity (upstream) or have biodiversity-friendly products and services (downstream).
- ✓ As compared with the FY2019 survey results, there has been an increase in those companies with biodiversity actions on their upstream and downstream value chains.

Biodiversity-friendly products and services

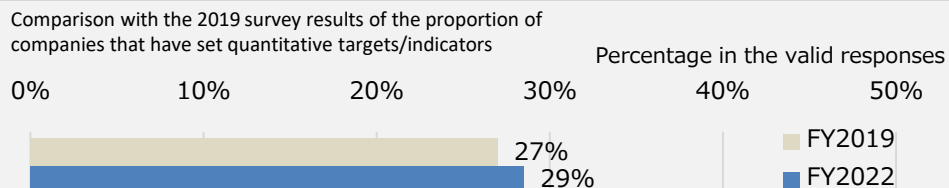
Q. What is the proportion of biodiversity-friendly products and services out of the entire goods and services sales? (N=62)



- ✓ Nearly half of the companies (27 companies, 44%) had only a small portion of biodiversity-friendly products and services (1-20%) out of total sales, while only a few companies (7 companies, 11%) had almost all of their products (80-100%) with biodiversity considerations.

Quantitative targets and indicators linked to the GBF targets

Q. The GBF targets related to biodiversity actions in your company were listed below. If any of these are implemented and monitored with quantitative targets and indicators, please specify the indicators and their units, target values and current progress to the extent possible. (N=326)



GBF Target	Examples of Goals and Indicators
1. Spatial Planning	Area of created green spaces, wild bird habitats, pollinator gardens, biotopes, green space certification; indicator species
2. Ecosystem restoration	Area of restored coral reefs, forests, sales of native species, wildlife corridors, seagrass beds and threatened fish habitats; threatened plant populations; native species sales
3. Protected Areas/OECM	Identification of important species and ecosystems in and near the corporate property lands, OECM registered area, watershed forest conservation, secondary forest (Satoyama) conservation, green space certification
4. Endangered species and genetic diversity	Protection of important species and ecosystems in and near the corporate property lands, threatened species surveys/conservation/habitat restoration, wildlife transportation
5. Wild species harvest and trade	Wildlife transportation, proportion of sustainable sourcing, FSC certified/legal paper
6. Invasive alien species	Invasion preventing plan of invasive alien species, area/population of non-native exterminators
7. Fertilizers, pesticides, plastics and other pollutions	Plastic recycling, VOC emissions, de-plasticized products/packaging, bio-pesticide, pesticide and insecticide free products, Rainforest Alliance certification
8. Climate change and biodiversity	GHG emission reduction, Renewable Energy conversion, green space in factory properties, tree planting, secondary forest (Satoyama) conservation, biodiversity-friendly forest management
10. Sustainable agriculture, forestry and fisheries	Fertilizer and pesticide reduction, RSPO certified palm oil ratio, sustainable food sourcing ratio, ESG on-site audits of natural rubber plantations, certified forest area, FSC certified material cost ratio, sustainable cacao bean sourcing ratio
11. Maintenance and restoration of ecosystem functions	Aquatic life impact risk management of wastewater, restoration of threatened fish populations, habitat management and restoration, mangrove afforestation, tree planting, coral reef conservation, water withdrawal in water stressed areas
12. Urban green space/waterfront	Greening private house gardens, rooftop greening, number of native tree species sold, green space certification, indicator species
14. Mainstreaming Biodiversity	Number of biodiversity-related actions
15. Biodiversity information disclosure	SBTN pilot, adopt the TNFD recommendations, economic value of mangrove ecosystem services, insurance underwriting and investment criteria on biodiversity
16. Sustainable consumption and food loss reduction	Wood raw material procurement guidelines, food loss reduction, waste recycling, review of manufacturing process use and emissions
17. Biosafety	Compliance of the Cartagena Protocol
19. Resource mobilization	Amount of ESG investments and loans, support to foundations for biodiversity
20. Capacity building, technologies and science	Awareness-raising and training of employees and other stakeholders
21. Data, information and knowledge	Number of followers of Instagram, reports on biodiversity-related initiatives, MSC raw material rate
22. Indigenous people, women and youth	Number of "green lectures," participatory forest conservation activities, and the number of participation of local residents and elementary school students in activities
23. Gender	Percentage of women in key management positions

Examples of corporate actions related to each GBF target

Q. Please list up to five major biodiversity-related actions which your company is focused on or proud of, in order from the most important.

GBF Target	Activity name and description
1. Spatial Planning	Planning and building green space to enhance biodiversity as well as its monitoring [Taisei Corporation / Construction] Contribution to biodiversity through greening projects [Sumitomo Forestry Co., Ltd./ Construction] Biodiversity considerations in the layout of radio transmission stations, data centers and cable installation [KDDI Corporation / Information and communications]
2. Ecosystem restoration	Contributing to biodiversity and coastal rehabilitation using steel slag products in collaboration with the Yokohama city government [JFE Holdings, Inc. / Iron and steel, Non-ferrous metals and products, Fabricated metal products] Artificial silica sand production from glass cullet [AGC Inc. /Ceramic, stone and clay products] Creation of a Hometown Forests [Nippon Steel Corporation / Iron and steel, Non-ferrous metals and products, Fabricated metal products]
3. Protected areas/OECM	Factory green space development and management that contributes to OECM [Fujitsu/Information and communications]
4. Endangered species and genetic diversity	Protection and monitoring of high conservation value areas [Daio Paper Corporation / Pulp, paper and paper products] Endangered plant conservation in the Aburahi Botanical Garden [Shionogi & Co., Ltd. / Others (Manufacturing)]
5. Wild species harvest and trade	Survey on marine seafood stock [Nissui Corporation / Beverages, tobacco and feed] Prevention of illegal wildlife trade [Japan Airlines Co., Ltd./Transportation, Postal Service]
6. Invasive alien species	Protection of native species against invasive species around Kurobe Dam [Kansai Electric Power Co., Inc. / Electricity, gas, heat supply and water] Removal of an invasive alien plant species, lanceleaf tickseed [Rinnai Corporation / Iron and steel, Non-ferrous metals and products, Fabricated metal products]
7. Fertilizer, pesticide, plastics and other pollutions	Regenerative agriculture pilots [Suntory Holdings Limited / Beverages, tobacco and feed] Suzuki Clean Ocean Project [Suzuki Motor Corporation / Transportation equipment] Reduction of marine plastic litter [SECOM Co., Ltd / Others (Nonmanufacturing)]
8. Climate change and biodiversity	Participation in the Blue Carbon Offset project [Tokuyama Corporation /Chemical and allied products] SANKI YOU Eco Contribution Point program [SANKI Engineering Co., Ltd / Construction]
10. Sustainable agriculture, forestry and fisheries	Trading the Rainforest Alliance certified coffee [Kanematsu Corporation / Wholesale and retail trade] Acquisition of the MSC/ASC Chain of Custody (CoC) certification [Okaya & Co., Ltd/ Wholesale and retail trade]
11. Maintenance and restoration of ecosystem functions	Rice paddy ownership program [NOK Corporation / Transportation equipment] Implementation of water stewardship plans [Bridgestone Corporation / Others (Manufacturing)] Monitoring of green space functions [Mori Building Co., Ltd / Real estate and goods rental and leasing]
12. Urban green space /waterfront	Acquisition of the "Association for Business Innovation in harmony with Nature and Community" certification for the office buildings [Mizuho Financial Group, Inc. / Finance and insurance] Building pollinator gardens and employee education [IBM Japan, Ltd. / Information and communications]
14. Mainstreaming biodiversity	Sustainable timber procurement [Sumitomo Forestry Co., Ltd. / Construction]
15. Biodiversity information disclosure	Survey on the spatial proximity of sourcing areas to important biodiversity areas and implementation of environmental conservation actions [TOYO INK SC Holdings Corporation /Chemical and allied products] Strengthen environmental and social risk management including on biodiversity [Daiwa Securities Group Inc. / Finance and insurance]
16. Sustainable consumption and food loss reduction	Acquisition of FSC® forest certification [Rengo Co., Ltd. / Pulp, paper and paper products] RSPO membership [AGC Inc. /Ceramic, stone and clay products]
17. Biosafety	Careful management of genetically modified organisms [Kyowa Kirin Co., Ltd. / Others (Manufacturing)]
19. Resource mobilization	Support to the first Blue Bond issuance in Japan[Mizuho Financial Group, Inc. / Finance and insurance] Thematic investment on biodiversity conservation [Meiji Yasuda Life Insurance Company / Finance and insurance]
20. Capacity building, technologies and science	"Nature-inspired manufacturing" research grant [Sekisui Chemical Co., Ltd. / Chemical and allied products] Large marine algae seed production by free gametophyte technology for seaweed bed restoration. [Kajima Corporation / Construction]
21. Data, information and knowledge	Open sea environmental DNA sampling by cargo vessels [Nippon Yusen Kabushiki Kaisha / Transport and postal activities] Ecological footprint monitoring [Daiichi Sankyo Company, Limited / Chemical and allied products]
22. Indigenous people, women and youth	Primary school lectures on biological surveys [Aisin Corporation / Transportation equipment]

[Reference] Contribution to the SDGs through biodiversity conservation

Q. Please indicate the number of the most relevant GBF target and the number of all relevant SDG targets for the priority initiatives you have answered and the initiatives you would like to promote.

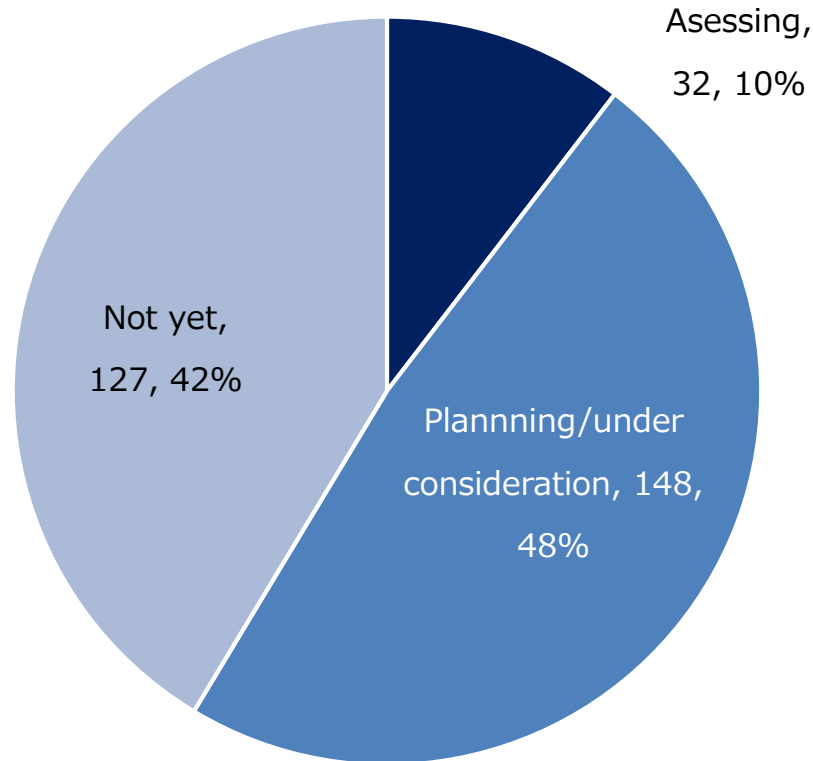
GBF Target	SDGs																
	1. No poverty	2. Zero hunger	3. Good health and well-being	4. Quality education	5. Gender equality	6. Clean water and sanitation	7. Affordable and clean energy	8. Decent work and economic growth	9. Industry, innovation and infrastructure	10. Reduced inequalities	11. Sustainable cities and communities	12. Responsible consumption and production	13. Climate action	14. Life below water	15. Life on land	16. Peace, justice and strong institutions	17. Partnerships for the goals
1. Spatial Planning	1	1	3	1	0	6	2	4	2	0	8	4	8	8	32	0	5
2. Ecosystem restoration	1	0	3	5	1	3	1	2	5	0	16	10	25	23	49	3	10
3. Protected areas/OECM	2	0	2	3	0	8	2	2	2	1	5	6	14	14	43	0	7
4. Endangered species and genetic diversity	0	0	1	2	1	1	1	0	0	0	3	3	2	10	25	0	4
5. Wild species harvest and trade	0	0	0	0	0	1	0	1	0	0	1	2	1	6	3	0	2
6. Invasive alien species	0	0	0	0	0	0	0	0	0	0	0	1	0	2	8	0	1
7. Fertilizer, pesticide, plastics and other pollutions	1	0	5	1	0	4	1	0	6	1	4	27	5	21	11	1	5
8. Climate change and biodiversity	1	1	2	4	0	3	12	3	6	0	8	12	25	7	26	0	8
9. Securing the benefits of wild species use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
10. Sustainable agriculture, forestry and fisheries	2	5	1	1	1	1	2	3	3	3	4	15	7	6	24	1	3
11. Maintenance and restoration of ecosystem functions	0	0	0	5	0	17	4	0	2	0	4	8	15	12	35	0	9
12. Urban green spaces/waterfronts	0	0	1	4	0	2	1	1	0	0	18	4	13	6	28	0	2
13. Genetic resources and benefit sharing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14. Mainstreaming biodiversity	0	0	0	0	0	2	1	2	1	0	0	4	2	4	6	0	0
15. Biodiversity information disclosure by businesses	2	1	0	1	0	6	2	4	3	2	3	8	8	13	22	0	3
16. Sustainable consumption and food loss reduction	1	5	1	1	1	0	0	1	0	0	0	8	1	1	3	0	1
17. Biosafety	0	1	0	0	0	0	0	0	0	0	0	1	1	2	1	0	0
18. Reduce harmful incentives	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19. Resource mobilization	0	0	0	4	1	4	2	1	1	0	3	4	7	15	19	0	4
20. Capacity building, technologies and science	0	1	1	1	0	2	1	0	0	0	1	1	3	5	7	0	1
21. Data, information and knowledge	0	0	0	4	0	3	1	0	1	0	2	1	4	9	11	0	3
22. Indigenous peoples, women and youth	0	1	0	1	0	0	0	0	0	0	1	4	3	2	4	0	1
23. Gender	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total of all targets on SDG targets	11	16	20	38	5	63	33	24	32	7	81	123	144	166	358	5	69

The numbers in the table show the number of times that a GBF target and the respective SDGs target co-occurred over the individual biodiversity actions by companies. Deep red and blue in the table show a higher number of co-occurrences between the GBF and SDG targets.

(3) Response to the TNFD recommendations

Assessment of biodiversity dependences, impacts and related risks and opportunities

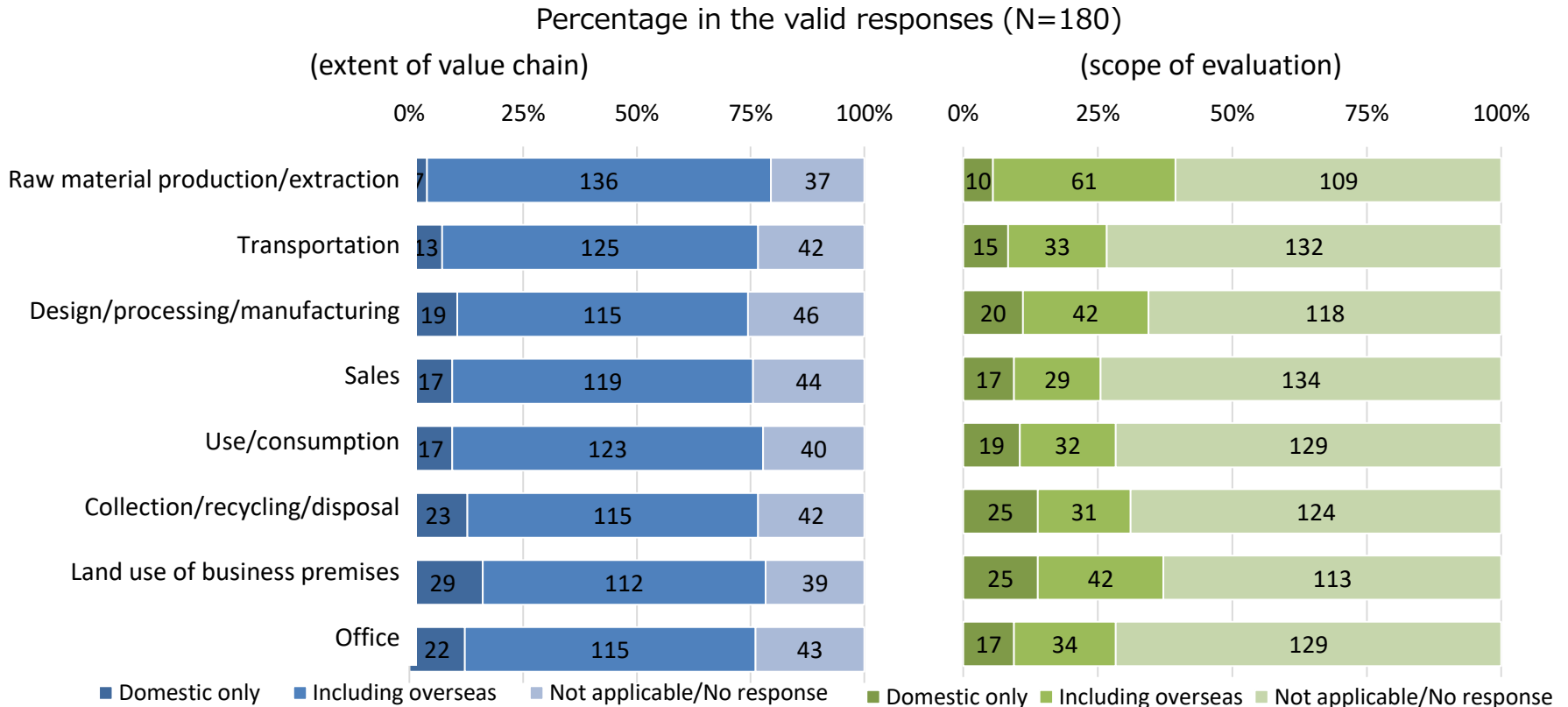
Q. Does your company assess the biodiversity dependences/impacts of value chains and related risks and opportunities? Financial institutions are requested to answer on these elements concerning your investees, loan recipients and insureds. (N=307)



✓ The proportion of companies that have already assessed biodiversity dependence, impacts and related risks and opportunities is still small (10%), but the proportion exceeds half in cases where companies that are planning or considering such assessments are included.

Extent of value chains and scope of assessment

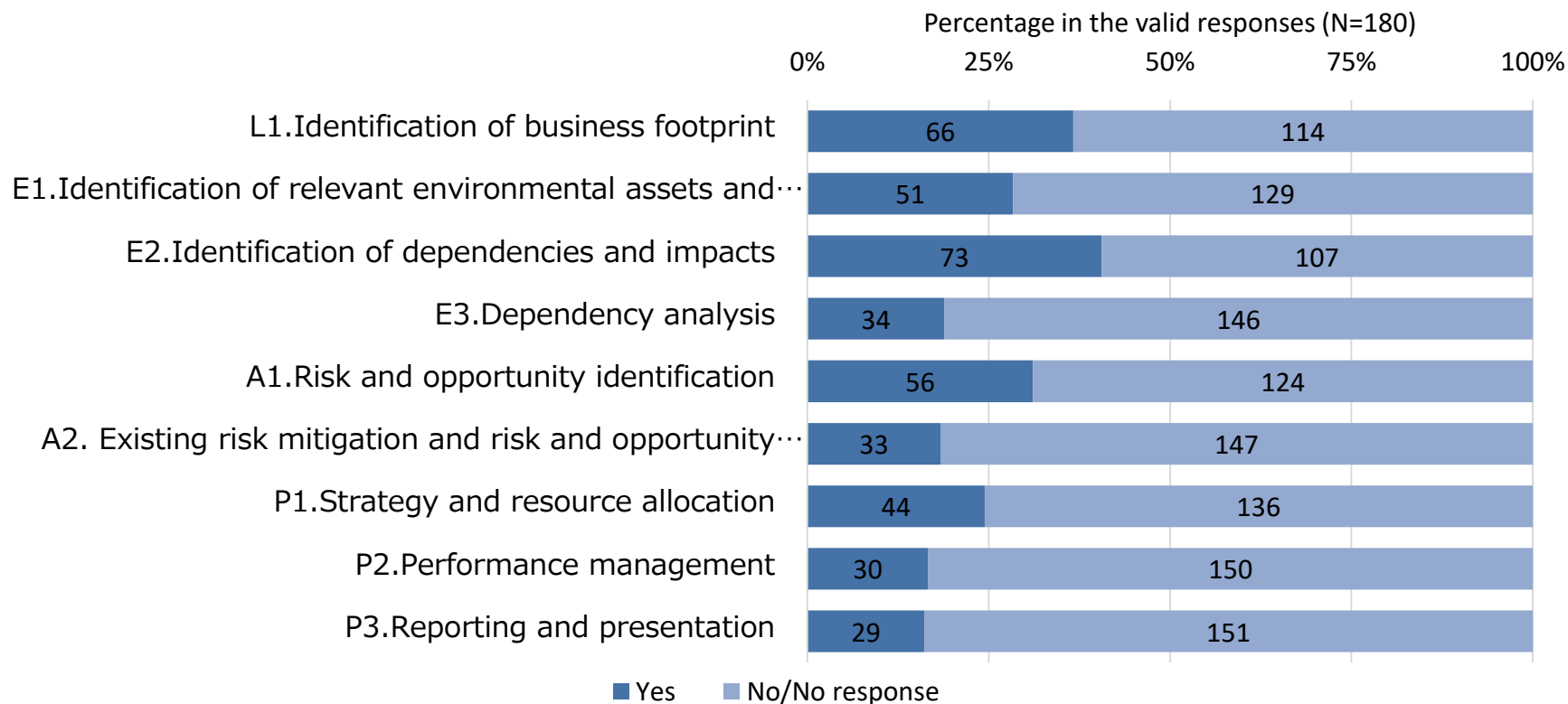
Q. Please specify the extent of your company's business value chains and the scope of the assessment of their biodiversity impacts and dependences. If your company is a financial institution, please answer on these elements of your investees, loan recipients and insureds. (N=180)



✓ The majority of the 180 companies have business value chains extending to other countries, but only a limited number of companies evaluate value chains beyond the national boundary.

Initiatives on LEAP approach

Q. The list below shows each step of the LEAP* approach that TNFD proposed for assessing business dependences and impact on biodiversity and related risks and opportunities. Please select the steps that your company has already taken. (N=180)

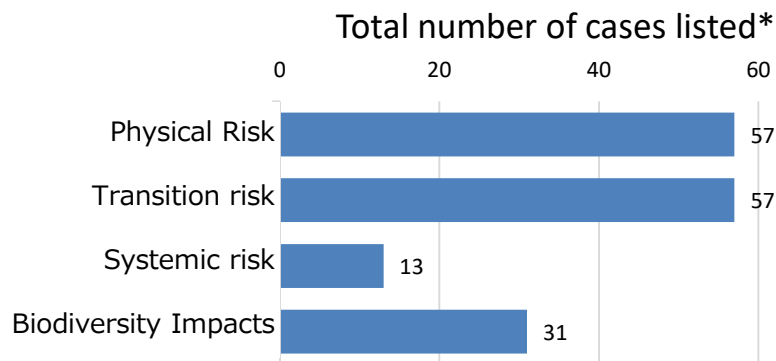


✓ Fewer companies have taken the latter half of the LEAP steps, and less than a quarter have progressed to the final Prepare stage.

*LEAP stands for **L**ocate, **E**valuate, **A**ssess and **P**repare. It is an approach that allows for systematic and step-by-step assessment of nature-related risks and opportunities based on scientific evidence. Note that the list was taken from the TNFD beta version 0.4.

Biodiversity-related business risks

Q. Please describe up to three of your company's business risks related to biodiversity.



Risk type*	Manufacturing	Finance and insurance	Information and communications	Wholesale and retail trade	Construction
Physical Risk	39	0	3	4	4
Transition risk	24	7	9	5	3
Systemic risk	3	7	0	1	1
Biodiversity Impacts	16	1	1	0	6

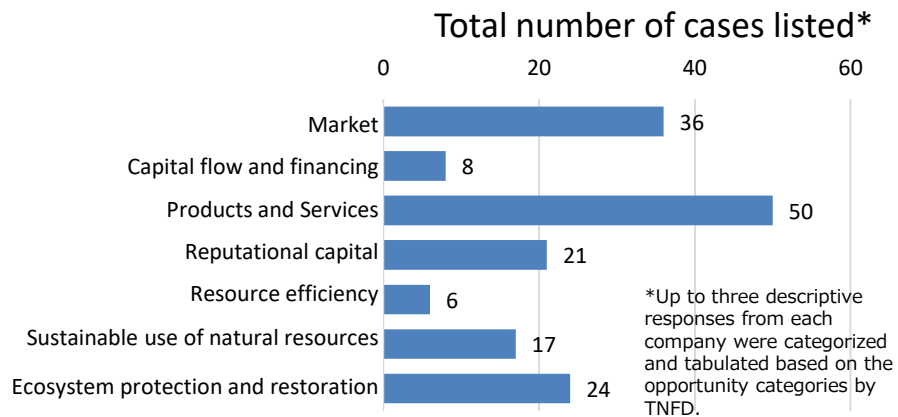
*Up to three descriptive responses from each company were classified into 4 categories: physical risk, transition risk, systemic risk, and biodiversity impact, based on the risk classification by TNFD.

Type of risk	Industry sector	Example
Physical risk	Manufacturing	Ecosystem degradation results in the loss of access to biomaterials, which hampers production and research.
Transition risk	Manufacturing	Constraints on business activities and cost increases occur when R&D expenditures cannot achieve sufficient business growth in the context of rapidly changing needs of society and customers due to institution and regulation changes.
Systemic risk	Finance	Increased global efforts to natural capital conservation will lead to higher environmental protection costs resulting in higher prices for many goods and services, including food, clothing, building materials and tourism. This can cause global inflation and negatively affect the finance markets.
Biodiversity Impacts	Construction	Possible degradation of wildlife habitats will occur due to discharge of water containing pollutants from construction sites.

✓ The number of companies aware of biodiversity-related risks, by type of risk, was highest for physical and transition risks.

Biodiversity-related business opportunities

Q. Please describe up to three business opportunities for your company related to biodiversity.



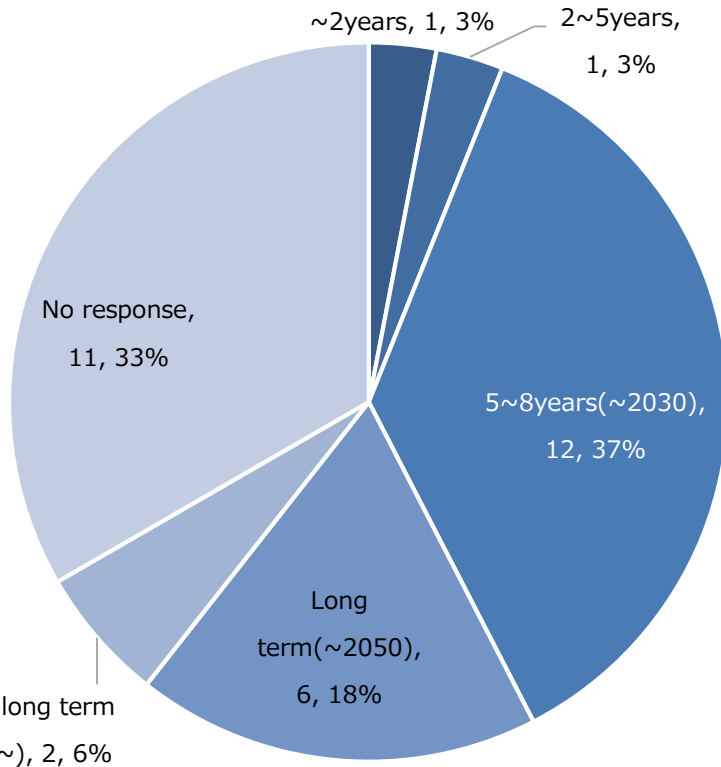
Opportunity type*	Manufacturing	Finance and insurance	Information communications	Wholesale and retail trade	Construction
Market	21	1	0	5	3
Capital flow and financing	0	8	0	0	0
Products and Services	24	4	6	3	5
Reputational capital	12	0	1	1	0
Resource efficiency	4	0	0	2	0
Sustainable use of natural resources	11	0	0	2	0
Ecosystem protection and restoration	14	0	0	1	4

Opportunity Type	Industrial Sector	Example
Market	Manufacturing	New market formation and increased sales through the development of environment-friendly products
Capital flow and financing	Finance	Suppliers of nature conservation-oriented goods and services may increase their R&D and capital investments, which may increase investment and financing opportunities.
Products and Services	Information and communications	New business opportunity by the use of technologies such as AI-supported nature predictions.
Reputational capital	Manufacturing	Potential change in awareness and trust among customers and local people, contribution to local communities, increased business opportunities and branding.
Resource efficiency	Manufacturing	Early adoption of biodiversity-friendly materials and supplies and development of independent supply chains contribute to cost reduction.
Sustainable use of natural resources	Electricity, gas, heat and water supply	Developing a resilient system that can cope with resource depletion through sustainable and reduced resources use.
Ecosystem protection and restoration	Construction	Increased demand of nature-friendly infrastructure development, as well as of urban greening and facility projects to create green cities.

✓ Companies aware of biodiversity-related business opportunities, mostly products and services, followed by markets, and ecosystem protection and restoration.

Scenario analysis

Q. If your company has carried out scenario analysis, please select a timeframe for your scenario analysis from the drop-down list and provide a summary in the comments box, including the name of the scenario you referred to. (N=33)



Time frame	Industrial Sector	Example
5~8years (~2030)	Electricity, gas, heat supply, and water (Company A)	Maintain existing facility for the short- and mid-term (2023-2026); and for the long-term (2027-2030), adopt LEAP approach with new renewable energy development.
Long term (~2050)	Transportation equipment (Company B)	Aqueduct (WRI's water security scenario) 2040 scenario.
Super-long term (2050~)	Manufacturing/ Other (Company C)	Slope greening of mines under operation and ruins, as well as long-term simulations of conservation effects including vegetation, ecosystems and water resources

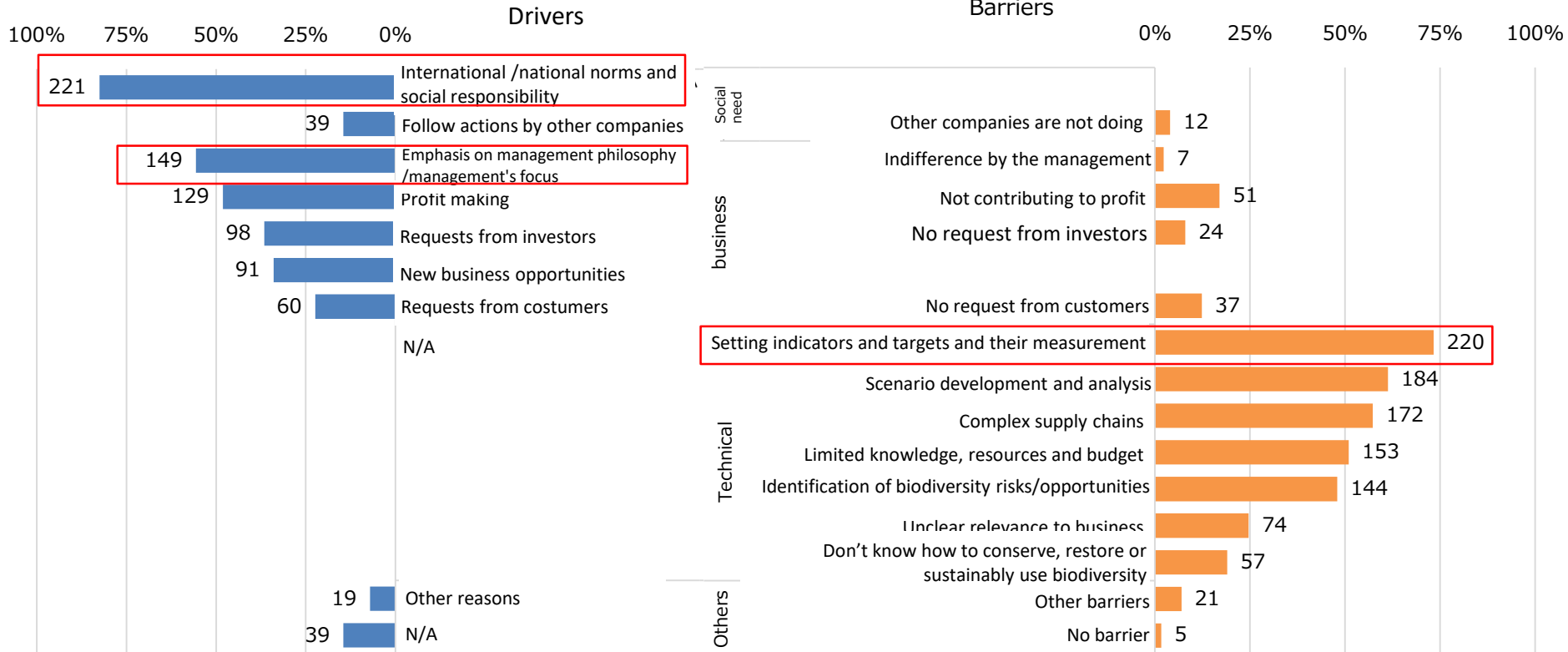
✓ Among the companies that have carried out scenario analysis, the largest number of companies adopted a timeframe of “up to 2030”, followed by “up to 2050”.

(4) Drivers and barriers for biodiversity actions

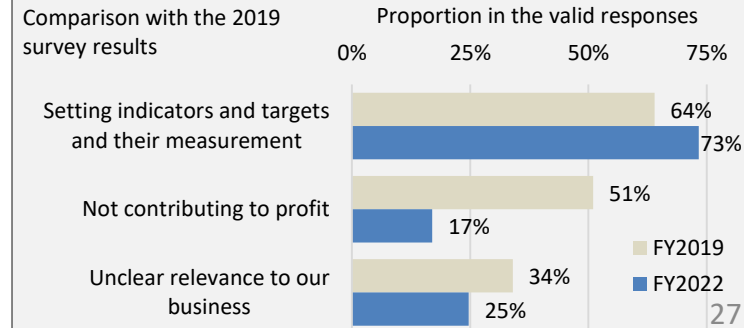
Drivers and barriers for biodiversity actions

Q. What motivated/drove your company to take biodiversity actions? (N=268)

Q. What are the barriers in taking actions on biodiversity (including response to TNFD)? (N=300)

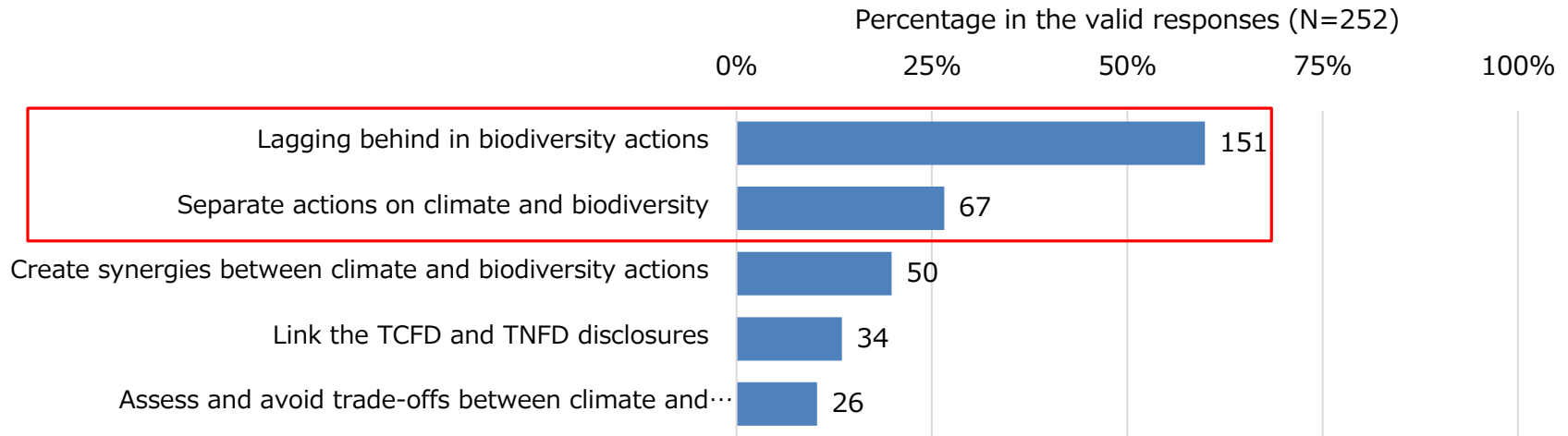


- ✓ The largest number of companies selected international and national norms and social responsibility as the drivers to take biodiversity actions, followed by the emphasis on management philosophy/management's focus.
- ✓ Many companies pointed out technical barriers in taking biodiversity actions, such as setting indicators and targets, and their measurements.
- ✓ Barriers for taking biodiversity actions have been shifting compared with the FY2019 survey results: a larger number of companies recognize technical barriers, while a smaller number of companies raised business management-related barriers, such as not contributing to profit.



Linking biodiversity and climate actions

Q. Does your company link climate and biodiversity actions in its business and information disclosure? (N=252)



- ✓ Many companies are lagging behind in biodiversity actions as compared with climate actions, or they are taking biodiversity and climate actions separately.
- ✓ Some companies are creating synergies between biodiversity and climate actions, or making efforts to link climate and biodiversity information disclosure, i.e., TCFD and TNFD.