

CDP Japan 500 Climate Change Report 2018

On behalf of 658 investors with assets of US\$87 trillion



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Paul Simpson

Chief Executive Officer, CDP



Business as usual is no longer an option, but a prosperous and sustainable low-carbon future is achievable, if we choose to rise to the challenge.

2018 was another momentous year for action on climate change. The landmark report from the Intergovernmental Panel on Climate Change (IPCC) underlined the urgent need to bend the curve on global greenhouse gas emissions. Meanwhile the UN Environment Programme offered a stark reminder of the gap between where we are now and where we need to be. The choice facing companies and investors has never been clearer: seize the opportunities of the low-carbon transition or continue business as usual and face untold risks.

Against this backdrop, it is encouraging that 2018 saw a quickening pace of climate action. We saw more companies disclose their environmental data, and more set stretching targets to reduce emissions. Eighteen years ago, when CDP started, climate disclosure was non-existent in capital markets. In 2018, over 7,000 companies, worth more than 50% of global market capitalization disclosed environmental data through our platform. That's an 11% jump on the previous year.

Environmental disclosure further entered the mainstream with the FSB's Task Force on Climate-related Financial Disclosure (TCFD), which built on the work of CDP and paves the way for mandatory climate-related disclosures across all G20 countries over time. Through our upgraded disclosure platform, which incorporates the TCFD's recommendations, the 7,000 companies disclosing this year have aligned their disclosures with those recommendations (72% of the listed companies that disclosed through CDP were able to answer between 21 and 25 of the 25 new TCFD questions).

As we have long believed, where there is greater transparency, greater action follows. As showcased by 2018's Global Climate Action Summit, leaders from across the worlds of business and finance are taking the urgent steps required to build a sustainable future for all. The summit was an important and timely reminder of the progress we are seeing across the real economy.

From the 500 companies that are now committed to set science-based emissions reductions targets; to those moving toward 100% renewable electricity; and the investors stepping up to shift their investments to low-carbon, we are seeing tremendous progress in the right direction.

But there is no time for complacency. There are still some serious hurdles in the race towards Paris Agreement implementation. In October 2018, Brazil elected a president whose policies threaten the future of the Amazon rainforest, one of the world's biggest carbon sinks. Meanwhile in the US, President Trump continues to ignore stark warnings on the damage climate change will inflict on the US economy, instead pushing through deregulation and attempting to resurrect the coal industry.

There's also no denying the reality of intensifying climate impacts. From a Europe-wide heatwave to record droughts in Cape Town, hurricanes in the Americas and wildfires in the Arctic, 2018's extreme weather events brought enormous costs to both capital markets and wider society.

To stay below the 1.5°C guardrail, the IPCC tells us the global economy needs to reach net zero-carbon by mid-century and halve emissions by 2030, compared with 2010 levels. This represents nothing short of a complete transformation of the global economy. It is going to take unprecedented co-operative action between companies, investors, cities, states and governments across all sectors.

We know that business is key in enabling the global economy to achieve – and exceed – its climate goals. The continued action of these entities will be vital as we go through 2019, the final year before nations update their national climate plans for the Paris Agreement and just as global emissions need to peak.

This is the time for businesses to ramp up action and send a clearer signal to governments that they need the policy ambition to match. Business as usual is no longer an option, but a prosperous and sustainable low-carbon future is achievable, if we choose to rise to the challenge. We must, we can and I believe we will.

CDP CEO
Paul Simpson

Lloyd's Register Japan Foreword



There's still much more to be done to mitigate the climate crisis, but disclosure is a crucial tool in reaching the goals of the Paris Agreement



In 2018 the world was struck by the effects of climate change in the form of devastating hurricanes, floods, and large-scale wildfires. In Japan, heavy rainfall and typhoons resulted in the submersion and destruction of the Kansai International Airport, and had severe impacts on business.

Since the industrial revolution human activity has already resulted in an increase of global temperature by approximately 1°C. This is expected to increase to 1.5°C by 2030. The recent Special Report from the IPCC highlighted the devastating consequences exceeding 1.5°C will have on our planet and peoples. It states that to mitigate the worst effects of global warming, and limit temperatures to 1.5°C, emissions must peak by 2020 and reach net-zero by 2050. The threat of climate change is imminent, and its effects are already being felt the world over.

Against this backdrop, it is encouraging that many companies in Japan have begun to regard climate change as an urgent issue. Several have begun to implement the recommendations made by Financial Stability Board's Climate-Related Financial Disclosures Task Force (TCFD), reporting on the risks and opportunities climate change poses to

their business. The disclosure of environmental data is rapidly becoming mainstream corporate practice.

CDP has been asking companies to disclose their environmental data since its launch in 2003. At the time, I was working in an operating company, heading up their environmental and CSR work. I am clearly reminded of the fresh surprise that I had received the CDP questionnaire for the first time. In the following 15 years or so the amount of companies reporting to CDP has skyrocketed, and disclosure has taken a top spot on many boards' agendas. There's still much more to be done to mitigate the climate crisis, but disclosure is a crucial tool in reaching the goals of the Paris Agreement.

The Lloyd Register Group has been cooperating with CDP as a partner for many years. I would like to thank you for your continued participation in the scoring and reporting of Japanese respondents. We will continue to contribute to climate change measures by Japanese companies in the future.

Lloyd's Register Japan K.K.
Director
Hidemi Tomita



With the increased demand for environmental disclosure, the credibility and accuracy of the disclosed information has also been increasingly emphasized.

In 2018, natural disasters caused by heavy rain and super typhoons frequently occurred in western Japan and other parts of Japan. We were also hit by record cold weather and extreme heat, but these phenomena were not only observed in Japan. The increased risk of natural disasters due to global warming was a concern all over the world.

With the adoption of the 2015 Paris Agreement, the climate change landscape has changed significantly.

At COP24, held in Katowice, Poland in December 2018, the implementation guidelines for the Paris Agreement were successfully agreed upon. For the Paris Agreement, which will enter into force in 2020, the adoption of a substantially uniform rule for all countries is a great achievement.

Japan has also shown a positive attitude towards driving global decarbonization, leveraging our superior technology and scientific knowledge in the hopes of promoting the development of, and investment in, innovative technologies for the dissemination of renewable energy, reduction, sealing, decomposition, and reuse of greenhouse gases.

While transitioning to a decarbonised economy may affect corporate activities, it also represents a major new business opportunity.

And more and more companies are taking note, and working to reduce their emissions, through the adoption of science-based emission reduction targets, which aim to hold temperature increases to below 2°C above pre-industrial levels. The number of participating companies to “Science Based Targets initiative (SBTi)” has almost doubled both in the world and in Japan since the end of September 2017.

With the expansion of ESG investment, and the release of the Task Force on Climate-related Financial Disclosures (TCFD)’s final recommendations report in June 2017, there is a growing demand for disclosure on corporate activities related to climate change. As of the end of December 2018, more than 500 global companies support the TCFD recommendations, 43 of which are Japanese companies.

To respond to such growing needs, CDP introduced a sectoral questionnaire revised to the content of the TCFD recommendations report in 2018. CDP is expected to further expand its significance in the international community by providing specific measures for information disclosure.

SGS Japan has been contributing to the CDP scoring and reporting process since 2014. It is a great honour for me to represent SGS Japan, and I sincerely appreciate the opportunity to take part in this process.

With the increased demand for environmental disclosure, the credibility and accuracy of the disclosed information has also been increasingly emphasized.

SGS Japan, a worldwide verification company, is committed to continuing its contributions to CDP activities so that we may see an improvement in the corporate value of Japanese companies.

SGS Japan Inc
Managing Director
Nobuharu Suzuki

SOCOTEC Certification Japan Foreword



As companies have taken this opportunity to review their strategic design and actions on climate change through this information disclosure, it is expected that they also play a role as a driving force to transition to the low carbon society.



From 2017 to 2018, and to 2019, a momentum for ESG information disclosure has been growing. The move towards ESG investment is particularly noticeable: more than 2,000 organisations signed UNPRI in 2018. Throughout the investment chain consisting of asset owner, asset manager and asset creator (company), a global trend, where investment destinations are selected after identifying those who have high potential for sustainable growth in the medium to long term by way of ESG information disclosure requests and evaluations, provides a good opportunity for companies in terms of their stable funding.

Since Final Report of TCFD Recommendations was issued in 2017, the government and industry in Japan have experienced a variety of movements at an accelerated rate: the High Level Meeting on ESG Finance in July 2018; establishment of Study Group on Implementing TCFD recommendations for mobilizing green finance through proactive corporate disclosure in August 2018 followed by the release of the world's first TCFD Guidance based on Group's outcomes in December of the same year; and issuance of Cabinet Office Order for Partially Amending Cabinet Office Order on Disclosure of Corporate Affairs (Cabinet Office Order No. 3 of 31 January 2019). 598 organisations, including 59 Japanese bodies, signed TCFD at the end of January 2019.

Under these circumstances, data related to climate change provided by CDP gives information with high market value for ESG information disclosure. An increasing number of ESG evaluation bodies and institutional investors are assessing companies by utilising information disclosed by CDP.

ESG investment, which focuses on non-financial information as "insightful information for the future of the companies" to select investment destinations, is expected to expand further. Each company will have to demonstrate to investors and ESG evaluation bodies through their engagements that among all ESG measures which ones are considered as material issues in their business environment.

As companies have taken this opportunity to review their strategic design and actions on climate change through this information disclosure, it is expected that they also play a role as a driving force to transition to the low carbon society.

While the management of each organisation reveals, for the main issues of climate change, what responsibilities it holds, how it recognises and evaluates risks and opportunities, and how it defines processes for formulating the strategies, it is urged to clarify the financial impacts in a line of questions in CDP 2018. These questions will also serve as a tool to enhance organisational resilience and discover opportunities for businesses and drastic paradigm changes.

We believe that the important thing is the organisation's stance to attain the expected performance.

Environment Department of SOCOTEC Certification Japan has become a scoring partner for climate change since 2018. The SOCOTEC Group is headquartered in Paris, France, which is known as the venue of the Paris Agreement adopted in 2015, and through Environment Department we have long contributed to environmental conservation and improvement.

People in France hold high expectations for promoting measures for climate change. French President Emmanuel Macron established le Haut Conseil pour le Climat (High Council for Climate) at the end of 2018 to evaluate from an independent position whether the climate policies of the French government are sufficient for the goal "to achieve carbon neutrality by 2050" set according to the Paris Agreement. The country is now in the phase of evaluation of specific action plans and results.

In light of these, SOCOTEC Certification Japan will, by fully recognising the importance of response to climate change in Japan and aiming to create society where climate change measures and economic growth are both feasible, contribute to CDP and other ESG information disclosure and specific approaches of the companies.

SOCOTEC Certification Japan
General Manager
Mizuki Kurauchi

The Climate A List 2018

Company	Country
Apparel	
Kering	France
Biotech, Healthcare and Pharmaceutical	
Ono Pharmaceutical Co., Ltd.	Japan
AstraZeneca	UK
Bayer AG	Germany
Johnson & Johnson	USA
Koninklijke Philips NV	Netherlands
Novo Nordisk A/S	Denmark
Food, Beverage and Agriculture	
Asahi Group Holdings, Ltd.	Japan
Sumitomo Forestry Co., Ltd.	Japan
Coca-Cola European Partners	UK
Danone	France
Diageo Plc	UK
General Mills Inc.	USA
Nestlé	Switzerland
Philip Morris International	USA
REMA1000	Norway
Fossil Fuels	
Naturgy Energy Group SA	Spain
Neste Oyj	Finland
Hospitality	
Las Vegas Sands Corporation	USA
Infrastructure related	
Sekisui Chemical Co., Ltd.	Japan
Sekisui House, Ltd.	Japan
Daiwa House Industry Co., Ltd.	Japan
Toda Corporation	Japan
Bouygues	France
City Developments Limited	Singapore
FERROVIAL	Spain
Grupo CCR	Brazil
Hewlett Packard Enterprise Company	USA
Hyundai E&C	Republic of Korea
National Grid PLC	UK
Nexity	France

Company	Country
Suez	France
Veidekke ASA	Norway
Waste Management, Inc.	USA
Manufacturing	
Komatsu Ltd.	Japan
Sumitomo Chemical Co., Ltd.	Japan
Sony Corporation	Japan
Toyota Industries Corporation	Japan
Nabtesco Corporation	Japan
Mitsubishi Electric Corporation	Japan
Apple Inc.	USA
BASF SE	Germany
Bic	France
Borregaard ASA	Norway
Braskem S/A	Brazil
Brembo SpA	Italy
Cisco Systems, Inc.	USA
Electrolux	Sweden
FIRMENICH SA	Switzerland
Groupe PSA	France
HP Inc	USA
Hyundai Motor Co	Republic of Korea
INDUS Holding AG	Germany
International Flavors & Fragrances Inc.	USA
LG Display	Republic of Korea
Lockheed Martin Corporation	USA
L'Oréal	France
Metsä Board	Finland
Nexans	France
PACCAR Inc	USA
Schneider Electric	France
Siemens AG	Germany
Signify NV	Netherlands
Stanley Black & Decker, Inc.	USA
Unilever plc	UK
Valeo Sa	France
Valmet	Finland
Xerox Corporation	USA

Company	Country
Materials	
Klabir S/A	Brazil
Michelin	France
Owens Corning	USA
Pirelli	Italy
Saint-Gobain	France
Stora Enso Oyj	Finland
The NAVIGATOR Company	Portugal
Extraction of Resources	
BHP Billiton	UK
Power Generation	
EDF	France
ENGIE	France
Retailing	
Marui Group Co., Ltd.	Japan
Best Buy Co., Inc.	USA
Carrefour	France
J Sainsbury Plc	UK
The Home Depot, Inc.	USA
Servicing	
MS&AD Insurance Group Holdings, Inc.	Japan
Sompo Holdings, Inc	Japan
Fujitsu Ltd.	Japan
Benesse Holdings, Inc.	Japan
Accenture	Ireland
Adobe Systems, Inc.	USA
AIB Group Plc	Ireland
Alphabet, Inc.	USA
ASE Technology Holding	Taiwan
Bank of America	USA
BCE Inc.	Canada
Berner Kantonalbank AG BEKB	Switzerland
BNY Mellon	USA
BT Group	UK
China Mobile	China
Covivio	France
Deutsche Telekom AG	Germany

Company	Country
DNB ASA	Norway
EVERY ASA	Norway
First Financial Holding Co	Taiwan
Goldman Sachs Group Inc.	USA
Grupo Logista	Spain
IGM Financial Inc.	Canada
Infosys Limited	India
ING Group	Netherlands
Intesa Sanpaolo S.p.A	Italy
Kleipierre	France
Landsec	UK
Level 3 Communications, Inc.	USA
Lloyds Banking Group	UK
Macerich Co.	USA
Mercialys	France
Microsoft Corporation	USA
Oracle Corporation	USA
Power Corporation of Canada	Canada
Power Financial Corporation	Canada
RELX Group Plc	UK
Rexel Developpment	France
salesforce.com	USA
Shinhan Financial Group	Republic of Korea
Sopra Steria Group	France
Stockland	Australia
Telefonica	Spain
Telstra Corporation	Australia
thyssenkrupp AG	Germany
UBS	Switzerland
Unibail-Rodamco-Westfield	France
Transportation service	
Kawasaki Kisen Kaisha, Ltd.	Japan
Nippon Yusen Kaisha Line	Japan
Canadian National Railway Company	Canada
Deutsche Bahn AG	Germany
DP World	UAE
La Poste	France
UPS	USA

Scoring: a measure of a company's environmental performance

Scoring at CDP is mission-driven, focusing on CDP's principles and values for a sustainable economy and as such scores are a tool to communicate the progress companies have made in addressing environmental issues, and highlighting where risks may be unmanaged. CDP has developed an intuitive approach to presenting scores that highlight a company's progress towards leadership using a 4 step approach: Disclosure which measures the completeness of the company's response; Awareness which intends to measure the extent to which the company has assessed environmental issues, risks and impacts in relation to its business; Management which is a measure of the extent to which the company has implemented actions, policies and strategies to address environmental issues; and Leadership which looks for particular steps a company has taken which represent best practice in the field of environmental management.

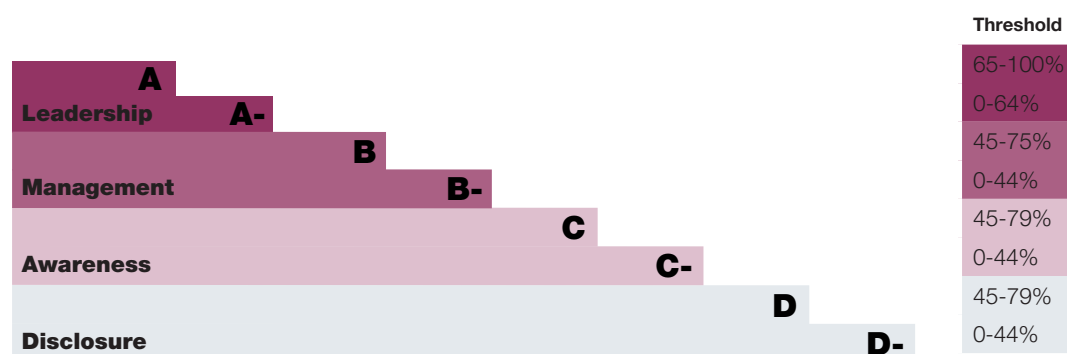
CDP's 2018 questionnaires take a sector focused approach, under this new approach, each of CDP's questionnaires has general questions alongside sectorspecific question aimed at high impact sectors.

The scoring methodology clearly outlines how many points are allocated for each question and at the end of scoring, the number of points a company has been awarded per level is divided by the maximum number that could have been awarded. The fraction is then converted to a percentage by multiplying by 100. In order to better focus on key data points and provide

a more detailed breakdown of a company's score, each question falls into a scoring category. Different weightings will be applied amongst sector scoring categories, and the number of points achieved per scoring category are used to calculate the final score for Management and Leadership levels, according to the scoring category weighting.

A minimum score and/or the presence of a minimum number of indicators on one level will be required in order to be assessed on the next level. If the minimum score threshold is not achieved, the company will not be scored on the next level. The final letter grade is awarded based on the score obtained in the highest achieved level. For example, Company X achieved 88% in Disclosure level, 82% in Awareness and 65% in Management will receive a B. If a company obtains less than 44% in its highest achieved level (with the exception of Leadership), its letter score will have a minus. For example, Company Y achieved 81% in Disclosure level and 42% in Awareness level resulting in a C-.

Public scores are available in CDP reports, through Bloomberg terminals, QUICK terminals, Google Finance and Deutsche Boerse's website. CDP operates a strict conflict of interest policy with regards to scoring and this can be viewed at <https://www.cdp.net/scoring-conflict-of-interest>.



F = Failure to provide sufficient information to CDP to be evaluated for this purpose⁷¹

⁷¹ Not all companies requested to respond to CDP do so. Companies who are requested to disclose their data and fail to do so, or fail to provide sufficient information to CDP to be evaluated will receive an F. An F does not indicate a failure in environmental stewardship

CLIMETRICS

The Climate Rating for Funds



The study into the climate performance of Japanese equity funds was our first analysis of funds outside Europe. We hope that we can build on this and bring Climetrics ratings to all Japanese investors in the future."

Nico Fettes, Head of Climetrics at CDP Europe



Climetrics is the world's first climate rating for investment funds, with public rating results and a fully transparent methodology. It enables fund investors to integrate climate change into their investment decisions.

The rating is powered by data from CDP, the leading global platform for environmental disclosure, and ISS-climate, a pioneer in developing and applying new methodologies for the measurement of climate aspects across all asset classes.

With free-to-search ratings, Climetrics enables any investor to compare and understand their climate risks and opportunities and take meaningful action on climate change.

CLIMETRICS JAPAN

Climetrics is currently only available for European funds. In 2018, CDP performed a study into the climate performance of over 1000 Japanese equity funds and found that compared to over European funds, Japanese funds achieve high ratings on average but often do not achieve top ratings.

Benefits

Benefit for corporations

Climetrics directly applies CDP Scores in its assessment of how funds are invested. Those funds investing in companies with high CDP Scores tend to achieve higher ratings.

The objective of the Climetrics rating is to provide an

incentive for fund managers to allocate more capital to corporations that take strong climate action as measured by the CDP Scores. This in turn should motivate more companies to provide high quality disclosure through CDP.

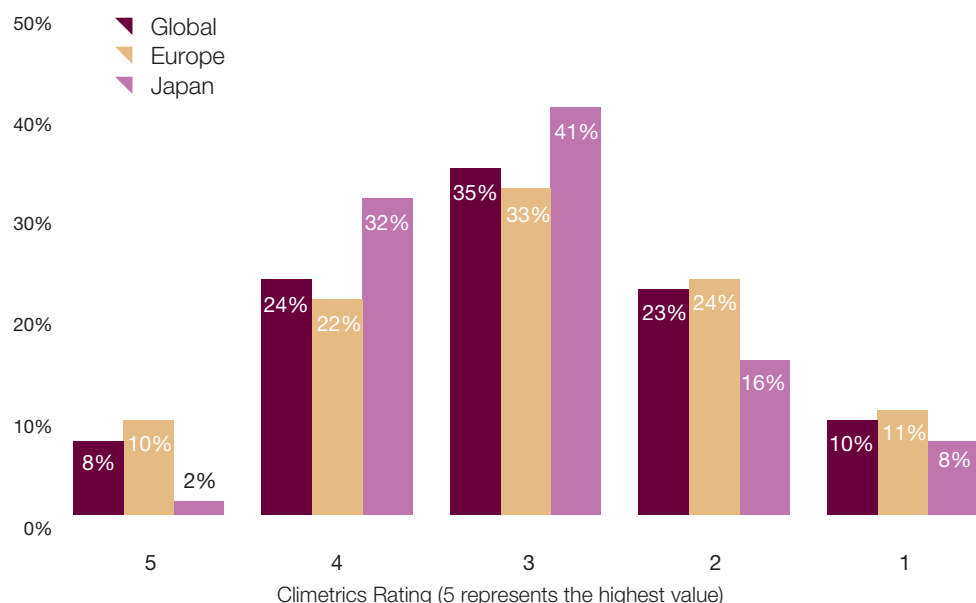
Benefits for corporate pension funds

Climetrics measures climate risks and opportunities based on a fund's portfolio holdings, its asset manager's public action on climate, and the fund's investment policy. Corporate pensions funds can use Climetrics to align their investments with their company's environmental leadership objectives.

Climetrics allows investors including corporate pension funds to:

- integrate climate-related risks into fund selection and monitoring;
- engage with asset managers on climate change;
- benchmark portfolios on climate-related risks; and
- improve climate change disclosure to beneficiaries.

Figure 1. Climetrics 2018 study of Japanese equity funds:



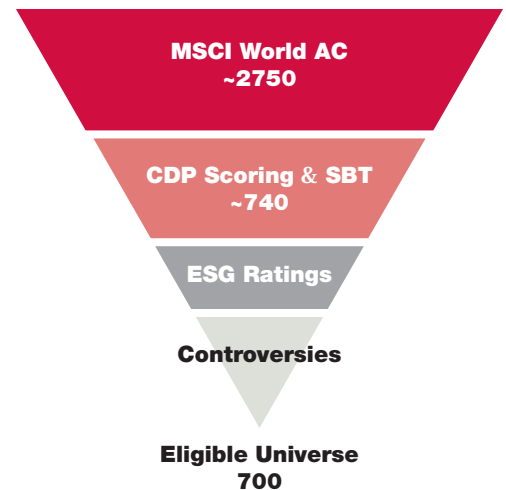
CPR INVEST: Climate Action Fund

In December 2018, CPR AM, subsidiary of the largest European asset manager Amundi, launched CPR Invest – Climate Action in collaboration with CDP.

The fund invests in global equities with a core strategy based entirely on climate action. The investment philosophy sees that companies have a pivotal role in ensuring that global temperature goals are met. All companies in all sectors and in all countries are considered in the starting universe of investable companies, the MSCI World Index (2750 stocks).

Three cumulative levels of exclusion filters are applied: CDP scores and Science Based Targets initiative data, ESG ratings at different levels of granularity based on Amundi ratings²⁾ and high ESG controversies through a RepRisk indicator.

This methodology leads to a final eligible universe of investable companies and to an advanced solution to manage climate-related risks of investments and possibly support the transition towards a low carbon economy.



² So called "SMBC Amundi Climate Action Fund" in Japan



The corporate environmental data CDP collects forms the backbone of the responsible investing market – without this data, investors wouldn't have the information they require to offer ESG products and services. At CPR Asset Management, we believe that the integration of ESG data into investment processes generates value in the long term. We need to know how exposed a company is to environmental risks and their long-term strategy for the lowcarbon transition, in order to identify future market leaders.

Tegwen Le Berthe
Head of ESG Development, CPR Asset Management





Japan Tobacco Inc.

Food, Beverage & Agriculture, Japan



To ensure a strong and sustainable future, we take a long-term perspective and adopt innovative approaches.



Tips for success

- ▼ Raise awareness that protecting the environment is beneficial for business as well as for society
- ▼ Combine the expertise of cross-functional teams to optimize energy and emissions reduction opportunities
- ▼ Use energy treasure hunts to identify opportunities and engage employees in energy management
- ▼ Recognize that the benefits of renewable energy go beyond emissions reduction and can also reduce cost and improve security of supply
- ▼ Encourage no- and low-cost opportunities for energy and emissions reduction – it's not all about capital expenditure

JT Group operates in more than 130 countries. In addition to our tobacco business, we have pharmaceutical and food businesses.

"It is no longer sufficient to simply respond or adapt to the changing conditions from one year to the next" (CEO, Masamichi Terabatake). Taking a long-term perspective, we focus our environmental efforts on: minimizing our contribution to climate change; protecting water resources; reducing waste; and optimizing resource use. Of these, climate change is the most critical. Climate change is not only a risk for wider society – it can also directly affect the supply of many of our raw materials. As such, we need to minimize our impact on global climate change, for the benefit of society and for our business.

In 2012, we mapped our group-wide carbon footprint and subsequently set our first greenhouse gas (GHG) target: to reduce the emissions for which we are directly responsible (Scopes 1 & 2) by 20% (2009-2020). We were able to meet this target three years ahead of schedule, in 2017.

Our target was achieved through a number of different approaches and initiatives. In particular, we have been focusing on increasing the proportion of renewable energy that we use, both in terms of purchased and self-generated. This includes some impressive large-scale and innovative projects. For example, our factory in Jordan became the first tobacco factory in the world to use direct solar steam generation for process heating and for building heating and cooling. This will save approximately 10% of the factory's annual GHG emissions and 18% of its annual energy costs. The project received the Environmental Stewardship Award from the Jordanian Ministry of Environment and the World Bank. Another example is our 17,000-panel photovoltaic installation at our factory in the Philippines; the largest roof-mounted solar system for self-consumption in South-East Asia.

We also look for opportunities across our other businesses. For example, we are currently installing a biomass co-generation system at our food business factory in Thailand. The system is planned to be in operation in 2019 and will reduce emissions by approximately 7,000 tonnes per annum and reduce energy costs.

In addition to reducing emissions from our own operations, we also continually seek ways to reduce GHG emissions across our value chain (Scope 3 emissions). Tobacco leaf, our main raw material, represents the largest single source of Scope 3 emissions for our business. Our agronomy experts in Zambia have developed the innovative Matope tobacco curing barn, which significantly reduces wood consumption, resulting in a 75% reduction in CO₂ emissions compared with traditional barns, whilst optimizing tobacco quality and yield. Going forward, we will be replacing all wood from natural forests used in the tobacco curing process of our directly-contracted growers with renewable fuel sources, which reduces emissions and promotes sustainable forestry.

In 2019, we will launch our Environment Plan 2030. As part of the plan, we will have a new target to further reduce our GHG emissions, with the longer-term aim to transition our operations to net zero carbon energy supply by 2050. We will also be working towards reducing emissions associated with our purchased goods and services. In line with the Paris Agreement on global climate change, this new target will be science-based and we will be seeking validation of our target from the SBTi. We plan to achieve the target by significantly increasing the proportion of renewable electricity we use, selecting alternative vehicles and fuels and further improving tobacco curing processes.

59%

**Japan 500
response rate
(297/500)**

2018 marked CDP's 16th global survey on climate change, and the 13th survey for Japan. Between 2006 and 2008, 150 Japanese companies were sent disclosure requests. This number grew to 500 companies in 2009. Since 2011, 500 Japanese companies have consistently been asked to report to CDP (these companies with henceforth be referred to as "Japan 500"). These companies were selected on the basis of companies that fall under the FTSE Japan Index.

This report predominantly focuses on analysis of the status of Japan 500 respondents, but also explores the responses of companies other than the Japan, as the number of voluntary respondents has increased year by year. To be concise we have not included all answers, instead choosing to focus only on answers to question of particular relevance to this report.

In response to, the recommendations of the Task Force on Climate Change-related Financial Disclosures (TCFD) CDP revised our Climate Change Questionnaire in 2018, adding sector-specific questions to offer more industry-specific analysis.

Response Status

Of the 500 Japan companies selected this year, the number of companies that responded by the deadline increased by 14 from last year, to 297, including responses by group companies (SAs) and responses after the deadline (Not Scored). As a result, the response rate in Japan500 in 2018 was 59%. Since 2018, Japan has also introduced a fee-based response system. However, the response rate has continued to increase from the 57% in the previous fiscal year and 53% in the previous fiscal year, suggesting that there is a growing drive from companies to actively disclose. In this report, 319 companies (including those other than Japan500) were analyzed.

Assessment score

The CDP scoring system adopts a banding system, the highest score being A, and the lowest being D-. In scoring, a quantitative score based on scoring methodology is performed, and then the final score (A-D-) is determined by the threshold.

In 2018, 20 companies (about 7%) ranked A, 31 companies (about 11%) ranked A-, and 97 companies (about 35%) ranked B (Figure 2). The number of companies to receive an A or A- saw an increase since the previous year, and in the same manner as the previous year, the number of companies receiving a C or D decreased.

The sector classification has also changed since 2018, and the classification is as shown in the figure. A large number of companies in the manufacturing and materials sectors received a disclosure request, and the response rate was high. On the other hand, the response rate in the service and retail sectors has remained low. The food, beverage, agriculture,

infrastructure, and manufacturing sectors show a high proportion of A-to A- scoring companies. The response rate of the power generation sector, which has historically been low, improved dramatically in 2018, exceeding 50% (Figure 3).

Governance

With the introduction of corporate governance codes in Japan and the emphasis on TCFD recommendations, we expect to see changes in the way climate-change related issues are prioritized in governance.

In response to the CDP governance question (CC1.1) "Board Oversight of Climate-related Challenges," 91% of companies reported having board-level oversight (Figure 4), surprisingly, 25% of enterprises reported that the topic was being broached in "All Meetings" (Figure 5). Including those companies who answered "planned, several meetings," approximately three quarters of companies said that their boards regularly discuss climate change issues. It would appear that a lively discussion of climate change has opened up on the boards of Japanese companies.

Scenario analysis

Climate-change scenario analyses are a particularly noteworthy issue that has been newly included in questions since 2018, based on TCFD recommendations. In response to the question of whether the business strategy uses climate change scenario analysis, about 47% of all respondents reported conducting either or both qualitative and quantitative scenario analysis. Meanwhile 35% of respondents report that while they are not using climate-related scenario analysis, the plan to do so within the next two years. As such we can infer that more than 80 percent of enterprises perceive climate change scenario analysis as necessary for their business strategy (Figure 6).

Risk and Opportunities

Aligning the CDP questionnaire with the TCFD Recommendations has resulted in a significant change to risks and opportunities related questions in 2018. For example, a detailed classification of physical risk (acute, chronic) and transition risk (regulation, market, technology, reputation, etc.) has been introduced for risk, where previously categorization consisted of regulatory, physical, and other risks.

More than 70% of enterprises responded that all of these physical and transition risks are related to risk recognition. For example, more companies show an awareness of acute physical risk, rather than chronic risk, and many show a lack of awareness of transition risk (Figure 9). While it is natural to be more aware of immediate risks, businesses are also reporting viewing climate change as a long-term threat, and are showing an overall increase in risk awareness.

Figure 2. Score distribution of Japan 500

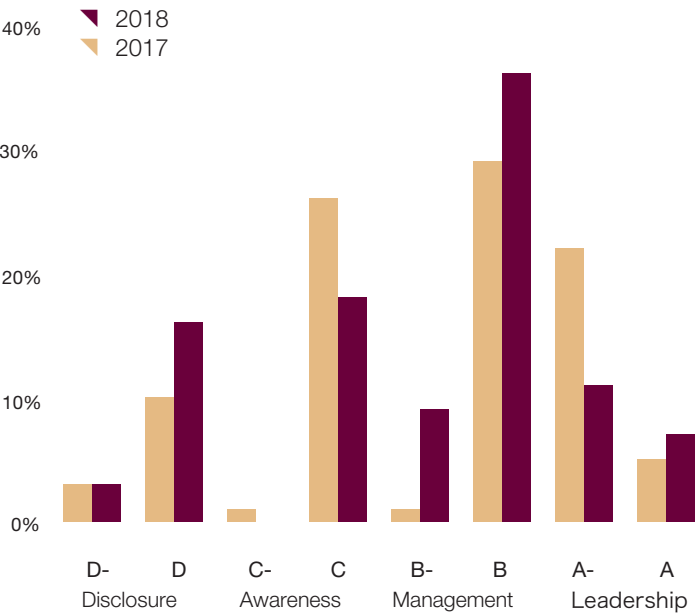


Figure 3. Score by industrial sector, Japan 500

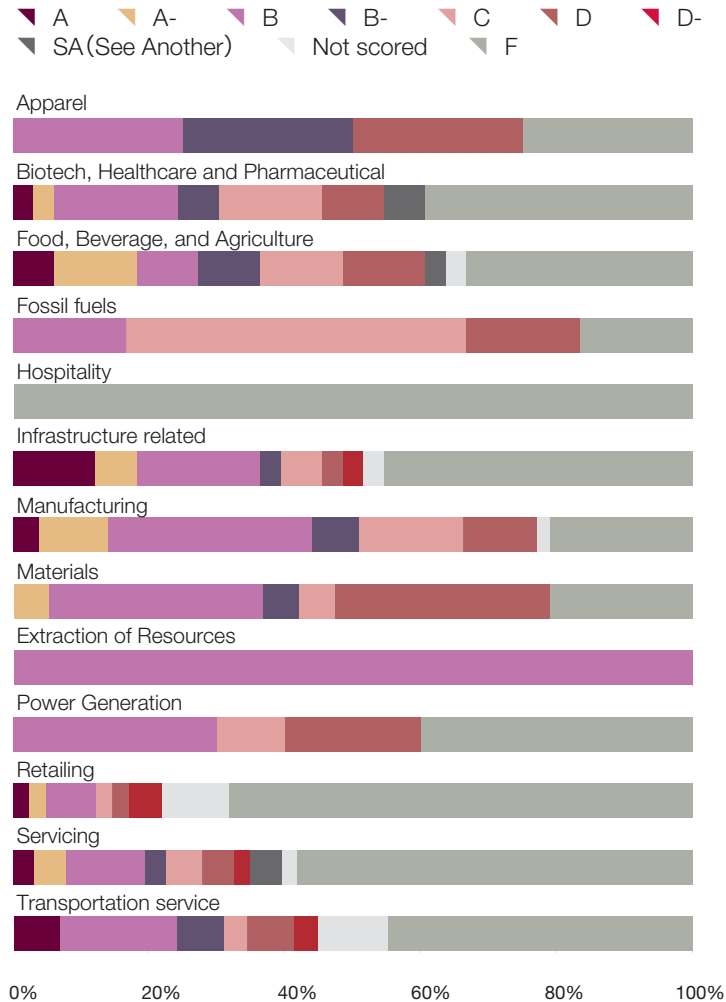


Figure 4. Board-level oversight of Climate related issues

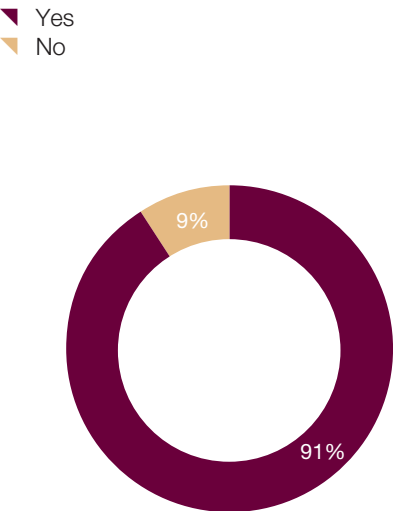


Figure 5. Board's oversight of climate-related issues - Frequency

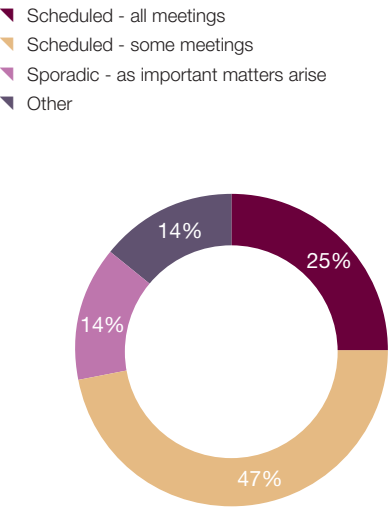


Figure 6. Does your organization use climate-related scenario analysis to inform your business strategy?

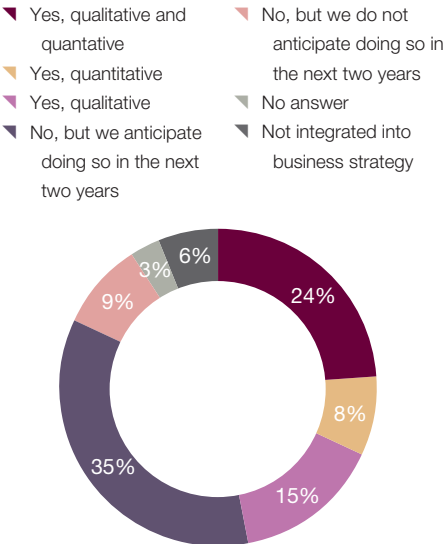
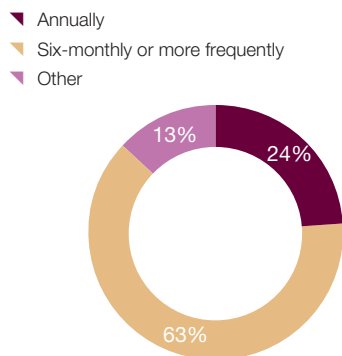


Figure 7. Identifying and assessing climate-related risks - Frequency



Regarding the frequency of these climate change risk assessments, 24% of enterprises say that they evaluate them annually, and 63% of enterprises say that they evaluate them every six months or more frequently (Figure 7).

Regarding the extent to which future risks are considered (CC2.2a), 61% of the respondents answered that they regard these risks as ones that may manifest in over six years time. 27% consider long-term risks as manifesting in less than six years, but this percentage has seen a significant decline since last year (37%), suggesting that companies are increasingly viewing climate change issues from a longer-term perspective (Figure 8).

More than 600 (614) respondents have identified climate related opportunities, with some companies identifying several types of opportunities. Approximately half (297) of these identified opportunities fall into the category of the development of low-emission products and services, and it is clear that many companies are aware of the products and services they could invest in to contribute to the low-carbon transition. Other responses recognized the opportunities presented by energy sources, markets, resource efficiency, development of new products and services through R & D and innovation, and changes in consumer orientation, with around 100 responses (Figure 10).

Reduction target

Regarding the emissions reduction targets for Scopes 1 and 2, 38% of respondents say that their companies have Science-Based Targets (SBT's). This number has doubled from the 16% of companies reporting SBT's last year. Additionally, 85% of respondents responded positively to SBT's, reporting that they either have set one, are planning to set one in the next two years, or are reporting

another target that is science-based (Figure 11). This shows that SBT's are becoming standard practice within companies.

Companies were also asked about their target year for their reduction target, which is expected to be set in the medium-to long-term, is also a focus of attention. 99 companies reported having the closest target year of 2020, 83 reported medium-term 2030 targets and 38 have long-term 2050 targets (Figure 12). Some companies have several of these goals. Of the respondents, 2055 was the longest target set.

Disclosing Scope2 emissions

Following the revision of the GHG protocol three years ago, Scope 2 emissions calculation methods (location-based and market-based) have been included. The number of companies reporting on a market basis has gradually increased to 70% in 2018, up from 60% last year. Enterprises reporting on a location basis returned to the 76% and 75% of previous years (down to 67% last year), suggesting an increase in both location and market reporting (Figure 13, 14).

Trend for third-party verification or assurance

Scope 1 and Scope 2 emissions
203 companies undertook third-party verification or assurance, an increase of 20% compared to 2017 (Scope 1: 168 and Scope 2: 170), which was 64% of the companies that responded to the questions. By sector, 45% of companies that undertook third-party verification or assurance was in the manufacturing sector, followed by the services sector with 19%. All other sectors accounted for less than 10%.

For scope 2, companies started to select both/either location-based and/or a market-based figure to answer detailed information on third-party verification

Figure 8. Identifying and assessing climate-related risks - How far into the future

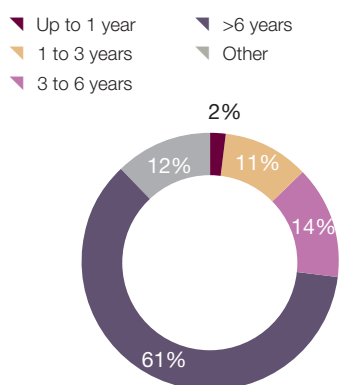


Figure 9. Risks

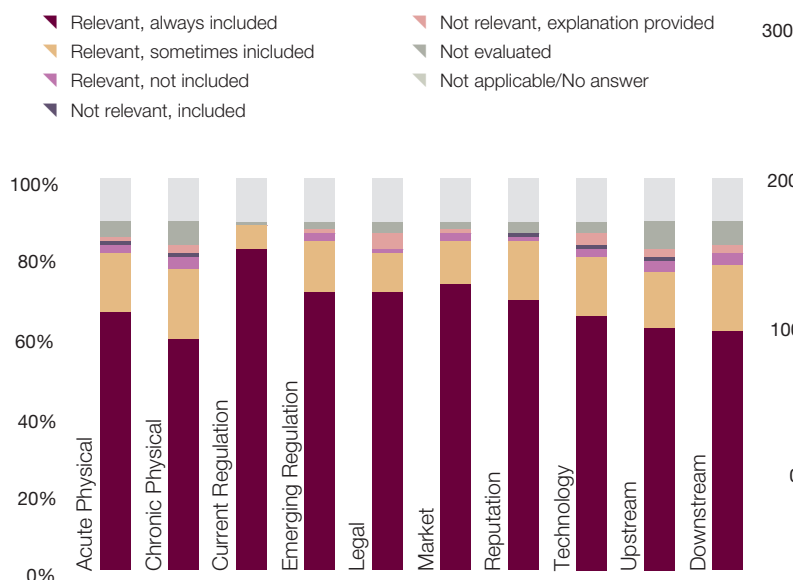


Figure 10. Climate-related opportunity & driver

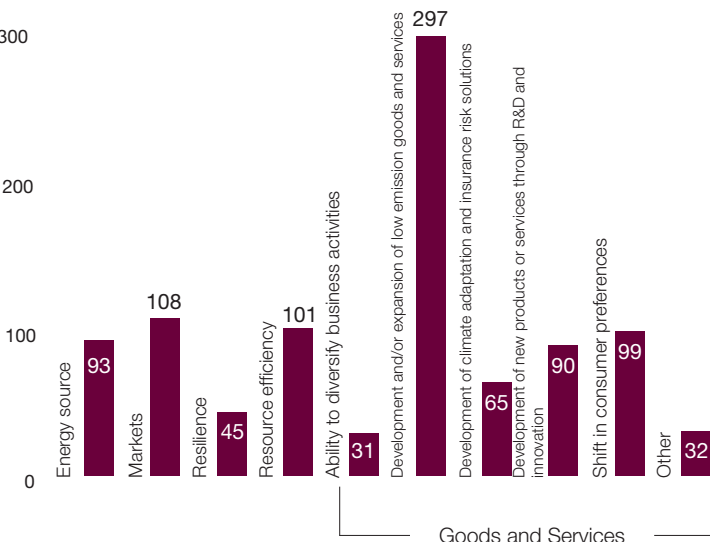


Figure 11. Science Based Target (Scope 1, 2)

- Yes, this target has been approved as science-based by SBTi
- Yes, we consider this a science-based target, but this target has not been approved as science-based by SBTi
- No, but we are reporting another target that is science-based
- No, but we anticipate setting one in the next 2 years
- No, and we do not anticipate setting one in the next 2 years

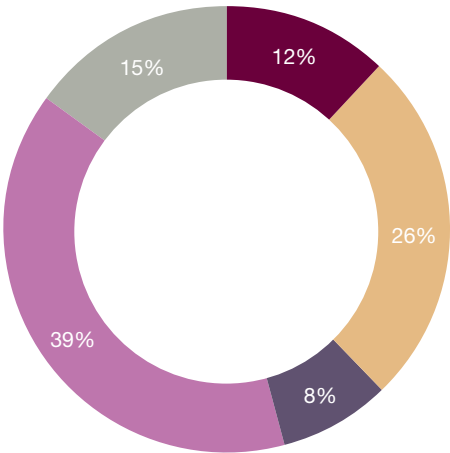


Figure 12. Target year (Scope 1, 2)

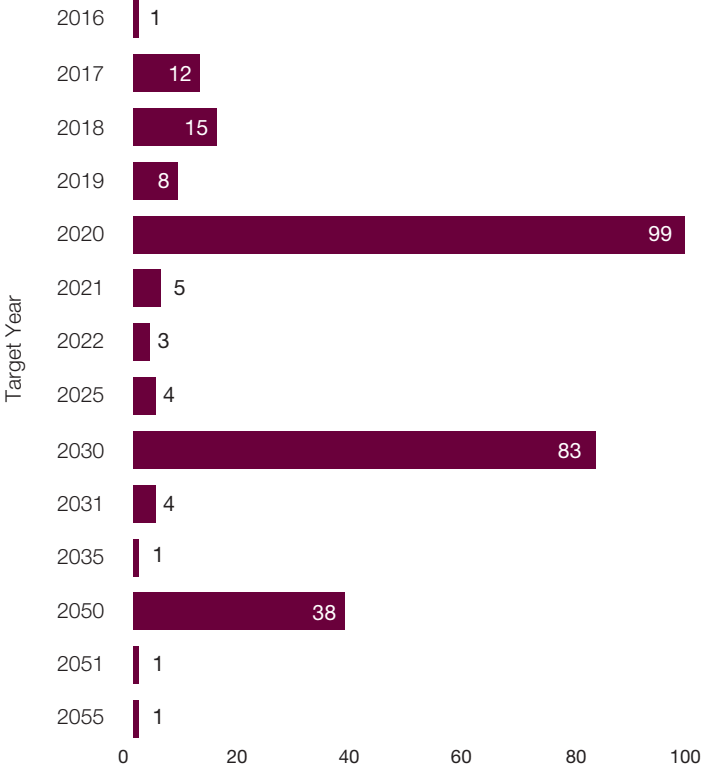


Figure 13. Location-based Scope 2 reporting

- We are reporting a Scope 2, location-based figure
- We are not reporting a Scope 2, location-based figure
- No answer

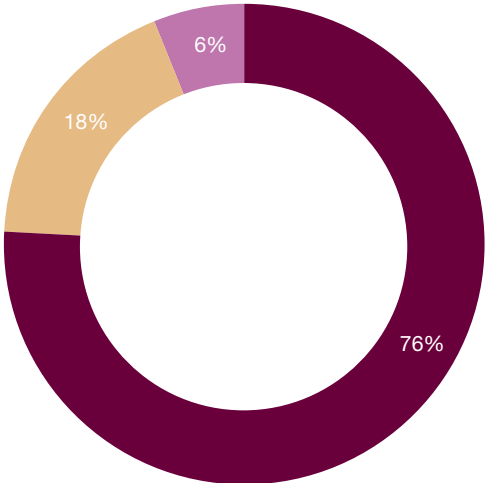


Figure 14. Market-based Scope 2 reporting

- We are reporting a Scope 2, location-based figure
- We have no operations where we are able to access electricity supplier emission factors or residual emission factors and are unable to report a Scope 2, market-based figure
- We have operations where we are able to access electricity supplier emission factors or residual emissions factors, but are unable to report a Scope2, market-based figure
- No answer

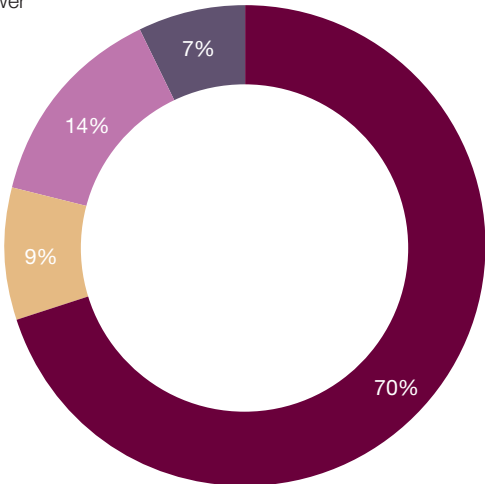
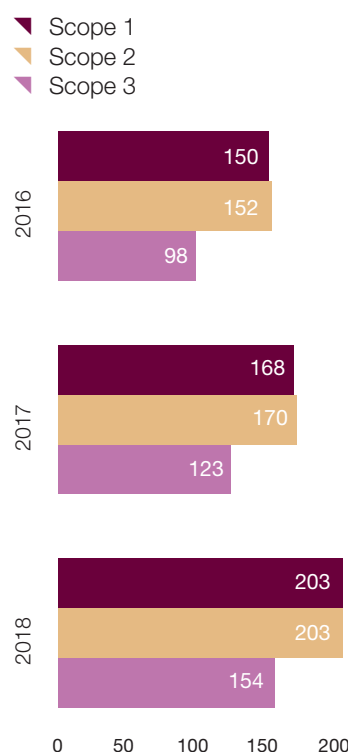


Figure 15. The number of companies with third-party verification or assurance



or assurance. 48% of companies that undertook third-party verification or assurance selected a location-based figure, 65% selected a market-based figure, and 15% selected both location/market-based figures.

The number of companies that undertook third-party verification or assurance for 70% or more of the gross emissions against Scope 1 was 156, which was 77% of the companies with third-party verification or assurance, and those against Scope 2 was 160, 79% of the companies with third-party verification or assurance (average of Scope 1 and Scope 2 was 75% in 2017). These figures account to approximately half of the companies that responded to the questions. It is clear that most verified companies have set a wider verification scope (Figure 16).

The adopted verification standard*3 was 42% for ISO14064-3, the largest, 20% for ISAE3000, 19% for ISAE3410, and 11% for the Tokyo Metropolitan and Saitama emissions trading scheme. The percentage of companies that adopted ISO14064-3 and ISAE3000 has been on the rise since 2017, and those that adopted the Tokyo Metropolitan and Saitama emissions trading scheme or other standards fell slightly from the previous 14% in 2017.

Scope 3 emissions

The number of companies with third-party verification or assurance in Scope 3 increased by approximately 25% to 154 companies (123 in 2017) (Figure 15). This number has gradually increased since 2013 when the Scope 3 calculation guidance for GHG Protocol was created. In 2018, 48% of the companies undertook third-party verification or assurance for Scope 3, as compared to 29% in 2014. Moreover, approximately 40% undertook third-party verification or assurance for all 15 categories.

Regarding the calculation conditions for Scope 3, 157 companies (66 in 2015, 101 in 2016, and 109 in 2017) selected "Relevant, Calculated," "Not relevant, Calculated," or "Not relevant, explanation provided" in all 15 categories, and approximately half of the responding companies have evaluated all 15 categories to some extent. Under these circumstances, undertakings toward emissions reductions are in progress throughout the supply chain as well as the entity level by calculating emissions through the supply chain.

Climate-related information other than Scope 1, 2, 3

Avoided GHG emissions, amount of renewable energy generated, carbon footprint and so on can be detected as climate-related information other than Scope 1, 2, 3 with third-party verification or assurance (C10.2).

The scope for third-party verification or assurance is anticipated to extend further beyond GHG emissions to climate-related matters.

Climate Change Information Disclosure

The TCFD recommendations introduced in the CDP Questionnaire from 2018 were originally prepared with disclosure in financial reports in mind. In this regard, it is desirable that climate change information be disclosed not only in CDPs but also in corporate annual reports. As such, the questions in section C12.4 determine which other medias companies are publishing their environmental data in. The most common response, reported by 169 companies, was a voluntary sustainability report. 118 companies responded qualitatively to the report, and 108 companies responded with a mainstream report. For the mainstream reports, seven companies reported in accordance with the TCFD Recommendations and 14 companies responded in accordance with the CDSB Recommendations (Figure 19). However, it should be noted that there is considerable variation in interpretation of what is regarded as a mainstream report, as far as the answers are concerned.

Conclusions and Future Prospects

Despite responses now requiring a fee, the response rate of Japan 500 in 2018 slightly increasing to 59%. Although the number of voluntary respondents has steadily increased, 40% have thus far failed to respond,

The content of CDP responses has improved markedly for respondents, and from this it can be seen that respondents perceive climate change as an important management issue. The risk perception of climate change is also multifaceted, while a large number of companies are also showing an understanding of the business opportunities presented by climate action.

In 2018, the number of Japanese companies listed on the A list was 20. The number of companies engaging in advanced initiatives such as setting up SBTs and joining the RE100 has increased remarkably. In the past, Japanese companies have been reluctant to participate in these initiatives, this reluctance has evidently been alleviated.

In addition, changes in the frequency of climate-change related discussion in company board meetings coupled with an increase in the amount of companies conducting climate change scenario analysis suggests that we will see an upturn in the awareness of climate change demonstrated by companies,

However, it must also be said that there are still considerable differences between CDP responses and the level of information companies disclose in other medias, such as their sustainability reports. Since this year, CDP-linked TCFD recommendations call for disclosure of climate-related information in financial reports. In other words, we should be aware that an era is approaching in which financial reporting is expected to include environmental information at the same level of CDP responses.

3 In the case that companies adopted multiple verification/assurance standards, all standards were counted for analysis. When the company adopted both "ISAE3000" and "ISAE3410", they were counted for each.

Figure 16. Among companies that undertook third-party verification or assurance, those with verification scope of 70% or more

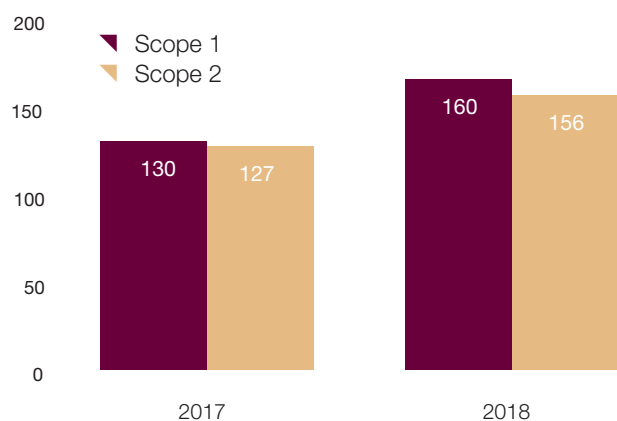


Figure 17. Proportion of used verification standard

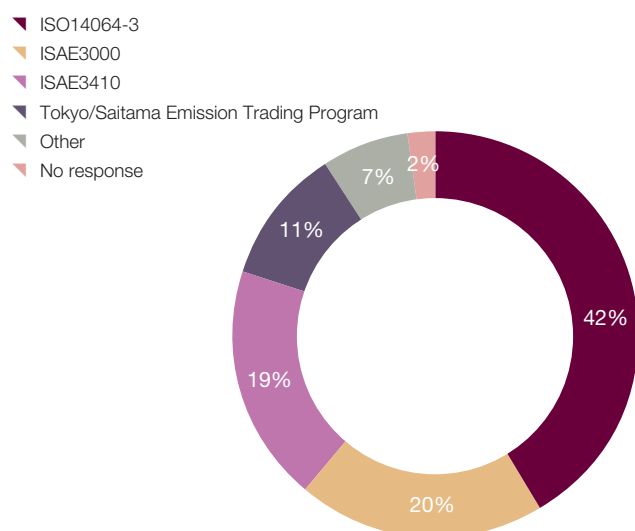


Figure 18. Evaluated scope 3 categories

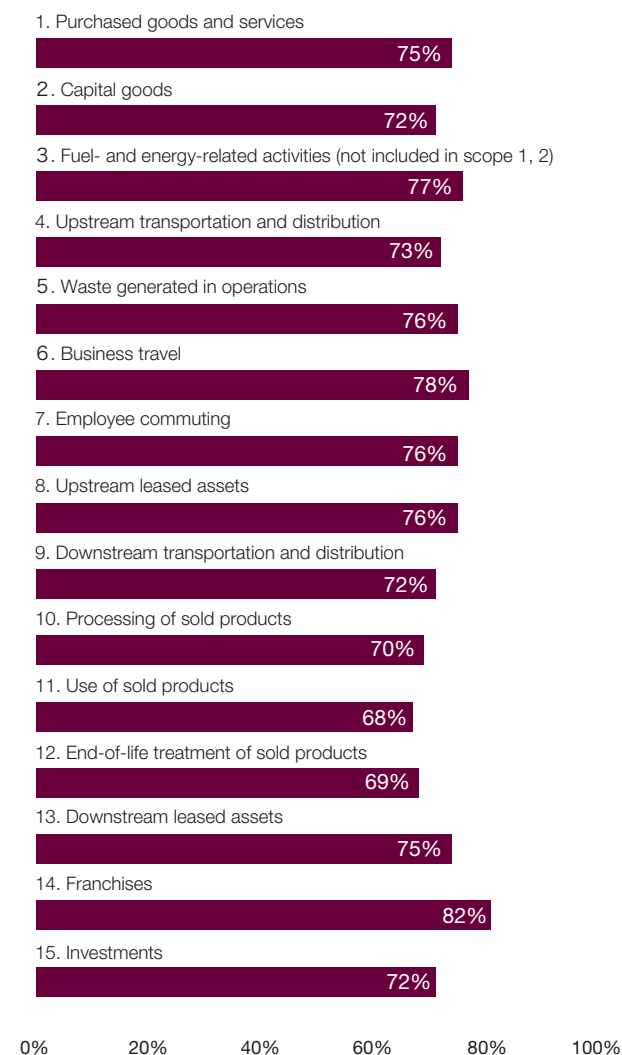
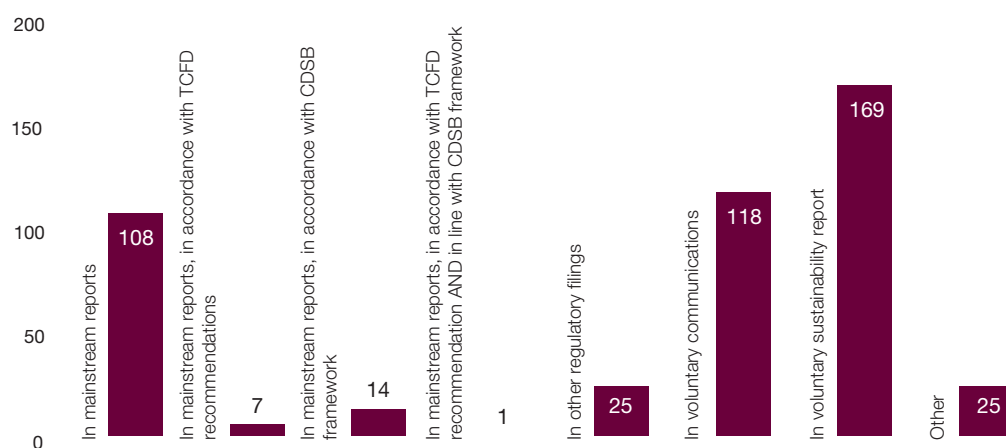


Figure 19. Published information



Carbon Pricing in Japanese Company

Figure 20. Carbon pricing system regulation status

- Yes
- No, and we do not anticipate being regulated in the next three years
- No, but we anticipate being regulated in the next three years
- Not applicable
- No answer

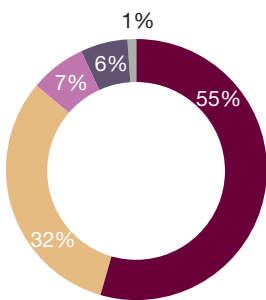
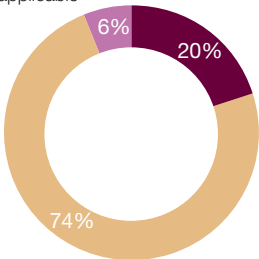


Figure 21. Purchasing status of project-based carbon credits

- Yes
- No
- Not applicable



Through classification of newly added questions and modified ones, carbon pricing questions were organized into C11 more systematically than that of 2017.

There is increasing investor focus on how carbon pricing is being integrated into business planning. The answers to the questions highlight what investors should look out for in corporate disclosure on carbon pricing, and help unpack the relationship between internal carbon pricing and the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) such as “Is this company ready for a low-carbon transition and the accompanying risks and opportunities?”

Carbon pricing can be broadly classified into two examples as below: carbon pricing measures and internal carbon pricing.

The first type is carbon pricing system (measures), which is further divided into explicit carbon pricing and implicit one. CDP questions mainly ask about responses to explicit carbon pricing.

55% of the companies reply “Yes” to the question C11.1 “Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap

and Trade or Carbon Tax)?” whereas 7% of them say “No, but we anticipate being regulated in the next three years.” The situation greatly varies depending on which part of the world they are having operations or activities, but 63% of the companies are aware of the risks that they are or will be regulated by a carbon pricing system in the medium-term future from now. On the other hand, 32% of them respond that they do not anticipate being regulated in the next three years. There is a possibility that national/ regional policies will drastically change according to the measure based on the long-term scenario found in “An IPCC special report on the impacts of global warming of 1.5 °C.” Companies’ outlook for risks related to carbon pricing system will continue to attract attention from investors.

To C11.2 “Has your organization originated or purchased any project-based carbon credits within the reporting period?” question, 20% of all the respondents say that they have originated or purchased project-based carbon credits.

The second type is internal carbon pricing. Based on the premise that responses to climate change create business costs and opportunities, internal carbon price is used by companies to voluntarily determine carbon prices in order to

Types of carbon pricing

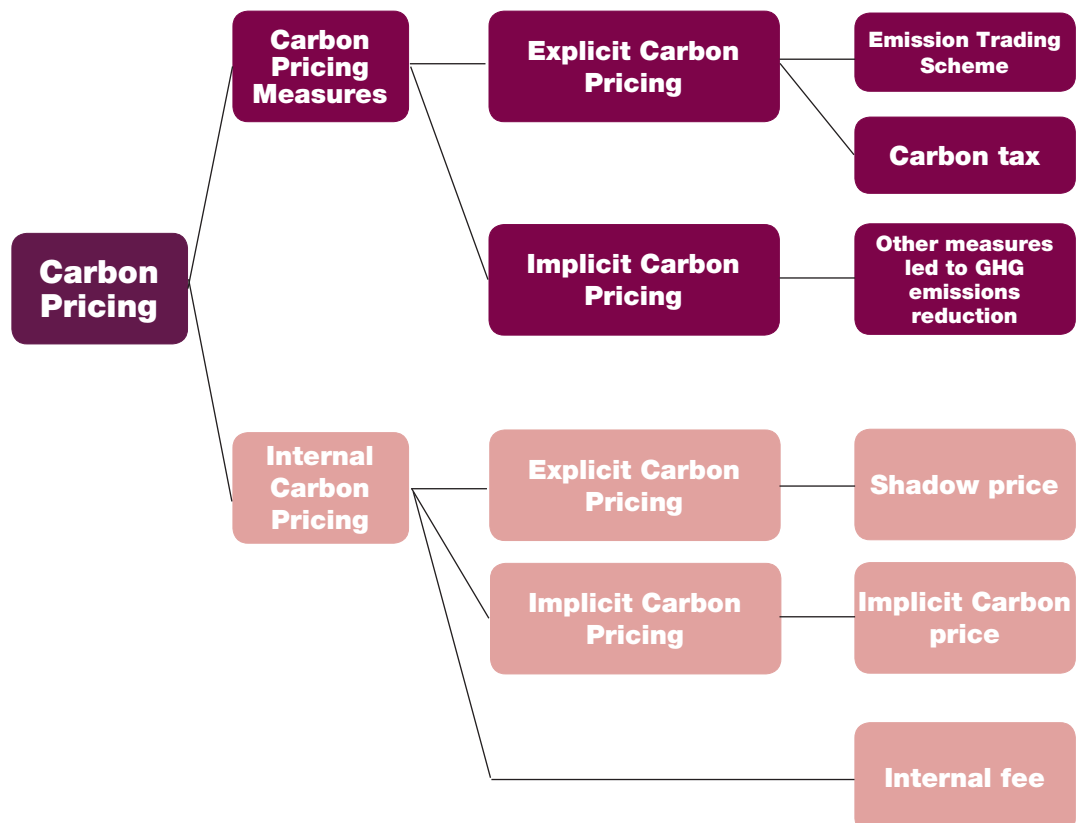
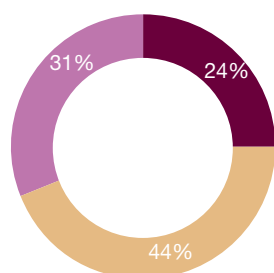


Figure 22. Are any of your operations or activities regulated by a carbon pricing system?

- Yes
- No, but we anticipate doing so in the next two years
- No, and we don't anticipate doing so in the next two years



quantify the impacts on their present or future business activities and make strategic decisions. It has been introduced as a tool for business planning or investment decisions mainly by organizations in the countries where the carbon pricing system is adopted. Internal carbon pricing is categorized into the types in Table 1.

Across all industries and geographies, companies have identified a variety of reasons for utilizing an internal carbon price — from simply translating carbon-related risks and opportunities into financial terms to deliberately drive low-carbon initiatives to using it as a business tool in Table 2.

C11.3 “Does your organization use an internal carbon price?”
75 companies answer that they have already used carbon pricing, which represents 60% increase from 2017.
Further, 44% of the companies say that they are not using it but planning to use within the next two years.

All combined, the rate of the companies currently using or planning to implement an internal carbon price in the medium-term future reaches 69%.

For C11.3a_C1 “Provide details of how your organization uses an internal carbon price” – a question about the objective for implementing an internal price of carbon, 65% of the 75 companies that have already used internal carbon price reply, “to drive investments in low carbon.” This indicates that the majority of companies using internal carbon pricing see it as a “tool to assess and manage carbon-related risks” in Table 2: Purpose of internal carbon pricing.

Five companies chose supplier engagement as an objective of internal carbon price. The emergence of these companies that are positioning internal carbon pricing as a “tool to identify carbon-related opportunities” in Table 2 shows a prospective example of advanced efforts.

Table 1. Types of internal carbon pricing

Shadow price	Implicit carbon price	Internal fee	Internal trading/Offsets
Used by attaching a hypothetical cost of carbon to each tonne of CO ₂ e - as a tool to reveal hidden risks and opportunities throughout its operations and supply chain and to support strategic decision-making related to future capital investments.	Some companies with emissions reduction or renewable energy targets calculate their ‘implicit carbon price’ by dividing the cost of abatement/procurement by the tonnes of CO ₂ e abated. This calculation helps quantify the capital investments required to meet climate-related targets and is frequently used as a benchmark for implementing a more strategic internal carbon price.	An Internal fee is the amount charged to responsible business units according to their carbon emissions. These programs reinvest the collected revenue back into activities that help transition the entire company to low carbon.	Internal trading allows the business units within a company to trade their allocated carbon credits. Or, using the voluntary carbon market, the company emissions are offset to internalize the cost of each tonne of CO ₂ e.
Quantitatively grasp the climate change risks (visualization)	Promote low carbon investment by incorporating it into investment index	Fund is actually collected within a company corresponding to emissions and utilized into low carbon investments or the like.	Promote emissions reduction and encourage investments into energy efficiency and development of clean energy and green products/services in order to promote companywide transition to low carbon activities.
No fund exchange	No fund exchange	Fund exchange	Fund exchange

(Cited from Putting a Price on Carbon CDP 2017 and edited for CDP 2018 questionnaires)

Table 2. Purpose of internal carbon pricing

Purpose	Potential objectives/outcomes
Tool to assess and manage carbon-related risks	<ul style="list-style-type: none"> - Assess risk exposure - Inform strategic response & future-proof assets and investments against regulatory risk, including investment in new technologies or energy efficiency to decrease cost - Demonstrate management of risk to shareholders
Tool to identify carbon-related opportunities	<ul style="list-style-type: none"> - Reveal cost-cutting and resiliency investment opportunities throughout value chain - Change employee and supplier behavior - Discover new markets and revenue opportunities - Influence R&D investment decisions
Transition tool	<ul style="list-style-type: none"> - Align investment strategy with a 2-degree scenario and align business with the Paris Agreement - Accelerate reduction of GHG emissions; drive investment in energy efficiency initiatives, renewable energy procurement, R&D of low-carbon products/services - Generate revenue to re-invest in low-carbon activities

(Reference source: Putting a Price on Carbon CDP 2017)

Table 3. Examples of how GHG emissions scopes are used for business decisions

GHG emissions	Examples of relevant decisions
Scope 1	Investment and production decisions
Scope 2	Energy purchasing decisions
Scope 3 upstream	Materials sourcing and procurement decisions
Scope 3 downstream	R&D decisions for innovative products for the current/future market

92% or 69 companies responded that Scopes 1 and 2 are covered by the internal carbon pricing mechanism. 10.7% (8 companies) answered Scope 3 is covered.

Each company has both a unique GHG emissions profile and a unique decision-making process. These factors combined determine the degree of influence that individual business units have over GHG emissions spread throughout the value chain. Examples of how different GHG emissions relate to different types of business decisions are provided in the table below (Table 3).

As for the types of internal carbon price implemented by organizations, 21 out of 75 companies that are using internal carbon pricing have taken approaches including internal fees or internal trading and offsets, and 28% of them say that they have already involved actual fund exchanges as shown in Table 1. It was revealed that, however, description that fund exchange is actually accrued cannot be found in many cases during the close study of these

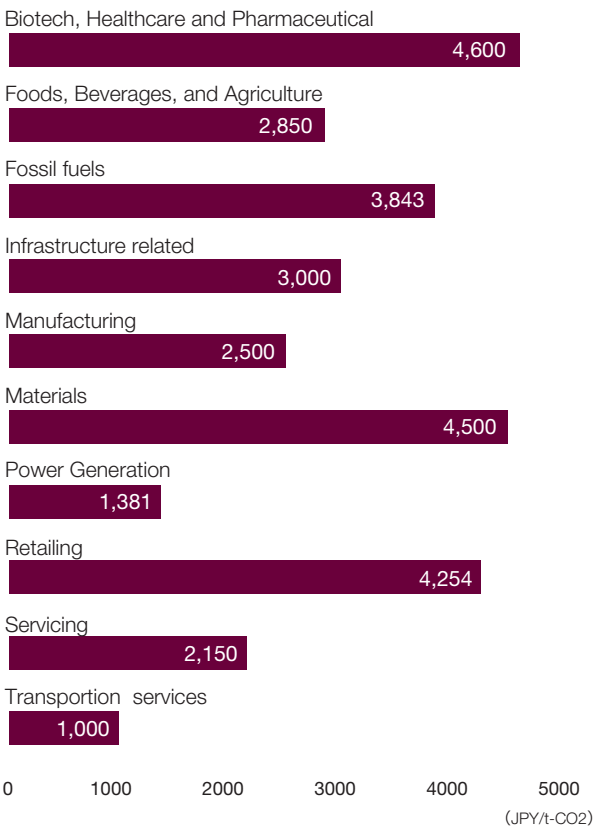
approaches. More detailed information disclosure is expected in the future.

Fig. 23 shows the medians of carbon prices, covering shadow price and implicit price only, of the 75 companies that have already used internal carbon pricing categorized by sector for reference purpose.

Carbon prices vary depending on the business sector. It is expected that more and more companies will use internal carbon pricing as a tool to stimulate investments in low carbon based on the above carbon prices.

Further, some advanced examples of internal fee and internal trading are appearing as below. Internal carbon pricing, accompanied by actual fund movements which may accelerate innovation, is also anticipated.

Figure 23. Medians of internal carbon prices of respondent companies by sector



Advanced examples of internal fee and internal trading

Collect emissions costs as sustainable fund from each company to allocate it as a budget for CO2 emissions reduction activities in the future.

By establishing a structure in which the amount corresponding to the emissions reduction obtained from introducing high efficiency equipment is paid to the operation function from the head office, strategic capital investments in low carbon is activated.

To accomplish GHG emissions reduction and zero emissions throughout product life cycle from procurement to disposal, a mechanism using carbon footprint is developed and carbon offset is introduced as part of enhancement of product values.

CDP and TCFD

Figure 24. Disclosure on Governance

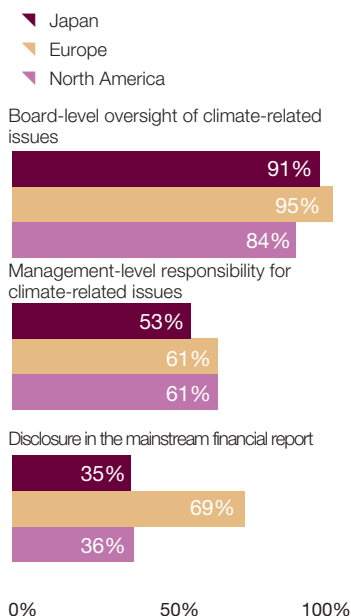
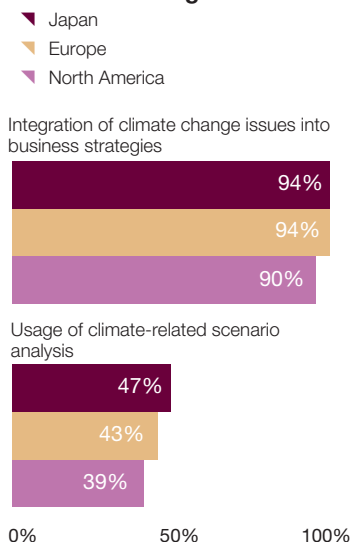


Figure 25. Integration of climate change issues into business strategies



Following its creation at COP21 in 2015, the Task Force on Climate-related Financial Disclosures (TCFD) released their recommendations in June 2017. The recommendations focused the ways in which investors can integrate corporate climate risks into their investment decision making, and consisted of two major points:

First, corporate management must recognize the significance of climate change as a business issue. Disclosing climate change related information in their mainstream financial report enables investors to access this information in a consistent and comparable way – companies must recognize the necessity to disclose this information to all stakeholders, with the same rigor with which they disclose their financial information.

Secondly, companies must take a forward-looking approach to their climate risks, through scenario analysis. Companies should disclose their organizations resilience in the face of climate-related scenarios that could potentially impact the future of the company.

CDP revised and reconstructed its questionnaire to align with the TCFD recommendation. In 2018, in the CDP Climate Change questionnaire, 25 questions reflect TCFD requirements.

Here we analyze companies in Japan, Europe, and North America based on 2371 companies that responded to the CDP 2018 questionnaire, to discover to what extent responding companies are

able to disclose the information the TCFD is aiming to elicit.

Figure 24 explores governance, finding that around 80 to 90% of companies have board-level oversight on climate change issues. Among them, those that had regular oversight accounted for up to approximately 80%. On the other hand, only 60% of companies in Europe and North America and 50% of companies in Japan responded that their management demonstrating oversight on climate change. Clearly there is more to be done in terms of strengthening governance on climate change issues. While over 70% of companies in Europe disclose their climate change information in mainstream financial reports, less than 40% of Japanese and North American companies did so. Though this might be due to differences in legal regulations for disclosure of financial information in each country. Considering the increase in the number of governments and ministries that support the TCFD, we can expect to see strengthening institutional support for environmental information disclosure in the near future.

As for the introduction of scenario analysis, while more than 90% of companies consider climate change within their business strategies, only about 40 to 50% of companies are using scenario analysis. Considering strategies using scenario analysis was mentioned for the first time by the TCFD, and so companies are not yet familiar with the concept. However, we expect to see the practice become increasingly common in the future.

Table 4 TCFD Recommendations and Mapping of CDP questions against it

Recommendations			Questionnaire CDP 2018
Governance	Disclose the organization's governance around climate-related risks and opportunities	Describe the board's oversight of climate-related risks and opportunities.	1.1b
		Describe management's role in assessing and managing climate-related risks and opportunities.	1.2, 1.2a
Strategy	Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	2.1, 2.2b, 2.3, 2.3a, 2.4, 2.4a
		Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	2.5, 2.6, 3.1, 3.1c
		Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	3.1a, 3.1d
Risk Management	Disclose how the organization identifies, assesses, and manages climate-related risks.	Describe the organization's processes for identifying and assessing climate-related risks.	2.2b, 2.2c
		Describe the organization's processes for managing climate-related risks.	2.2c, 2.2d
		Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	2.2
Metrics and Targets	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	4.2
		Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	6.1, 6.3, 6.5
		Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	4.1, 4.1a, 4.1b

The Japan Climate Initiative (JCI)

- Accelerate actions amongst non-state actors

Since the adoption of the Paris agreement in December 2015, the role of non-state actors with the aim of realizing a decarbonized society has become more significant than ever. Non-state parties include companies, local governments, non-governmental organizations (NGOs) and others, who have not necessarily been at the center of past climate change discussions.

However, things began to change when the We Are Still In coalition was established in the United States in 2017, committing to the Paris agreement after the announcement by the Trump administration of its intent to withdraw from the agreement. Following this, similar movements to establish cross-sectoral organizations of non-state players have been taking hold in other countries.

Japan is also part of this global trend. In July 2018, the Japan Climate Initiative (JCI), a group of nongovernmental parties fighting against climate change, was launched. CDP Japan supports this initiative as one of the secretariat organizations together with WWF Japan and Renewable Energy Institute. The JCI was established based on the recognition that a transition to a decarbonized society yields new opportunities for growth and development. Considering that the Paris agreement requires a progressive increase in reduction targets, it is clear Japan also needs to enhance its actions, and the JCI is expected to be a strong driver for this.

JCI's actions focus on four key areas

1) **Creation of momentum to move the whole nation toward the realization of a decarbonized society**

Participating members, including companies, local governments and NGOs, will actively develop their own climate actions and work together to activate efforts within and between sectors. Through these actions, JCI aims to create a momentum to move the whole nation toward a decarbonized society. As the first trigger for

this movement, the JCI held Japan Climate Change Action Summit in October 2018, with the participation of corporate CEOs, leaders of local governments and other representatives of organizations engaged in pioneering efforts.

2) **Support for implementation of members' activities**

The JCI holds seminars and workshops and showcases activities on its website to share experiences of RE100 and SBT companies, as well as local governments with a target to achieve zero GHG emissions, and to support activities conducted by other non-state parties. In February 2019, the JCI held a symposium inviting Ms. Christiana Figueres, former Executive Secretary of UNFCCC.

3) **Conducting dialogue with the government to strengthen Japan's climate action**

JCI creates a discussion channel with ministries in charge of formulating Japan's climate change strategies, so that these strategies will provide a clear path to a decarbonized society.

4) **Communication of Japanese non-state entities' efforts to the world for international collaboration**

The JCI seeks dialogue and collaboration with similar efforts in other countries. The JCI participated in the Global Climate Action Summit held in San Francisco in September 2018 and the COP24 in Poland in December 2018.

It started with the founding members of 105 organizations, including leading companies in fields such as information and communications technology, finance, construction, housing, energy, food and retail, as well as local governments, consumer organizations, think tanks and NGOs. It has now grown to a group of over 350 members (as of March 2019), showing there are many non-state players that see climate change as an opportunity for growth. This movement of non-state actors in Japan is noteworthy.

The JCI will continue these efforts and will also take the opportunity of the G20 summit being held in Osaka in June this year to further expand its actions.



Any company, financial institution, local government, research institute, NGO and other organization that agrees with the founding declaration is welcome to join the JCI. We look forward to welcoming more members and expanding climate actions and collaboration.

For details please see <https://japanclimate.org/english/>





Photo by Julien Paquin



One of the imperatives reinforcing the movement toward decarbonizing the global economy is increased awareness of the financial risk of high carbon coal, oil and gas.

The imperatives of decarbonization bring us toward less risk and toward more opportunity. Once decarbonization takes place, what you see is the opening up of opportunities. That is true for every company, true for every city, and every country. That is where we need to move toward.

Japan has two choices and only two. Choice number one is to lead. Japan has the capital to lead and should be leading aggressively toward a world of much more opportunity and much more stability. Choice number two is to be left behind and be controlled by technologies of the last century.

Does Japan want to lead or be left behind? I don't think there is any in-between choice, because decarbonization is happening at an exponential rate in many sectors, especially those in which Japan would participate.

Ms. Christiana Figueres

The Former Executive Secretary of UNFCCC



CDP Cities - Promoting climate change actions of local governments

Since 2011, the number of cities and regions reporting their environmental impact through CDP has continuously grown. In 2018 we saw a record number of 740 cities and regions disclosing to CDP.

CDP works with cities to help drive climate action towards a well-below 2 degrees future, as set out by the ground-breaking 2015 Paris Agreement..

Disclosure allows cities to gain data-driven insights into gaps and opportunities for policy-development, resource management and investment. Cities can track their progress against other cities in their country, state or globally and can learn from best practice – helping them in their transition towards a low-carbon, water-secure future.

Through CDP's network of over 6,800 companies, and over 650 investors with assets of US\$87 trillion, disclosing to CDP offers cities a unique opportunity to connect with other stakeholders who also benefit from working with cities to drive down emissions. .

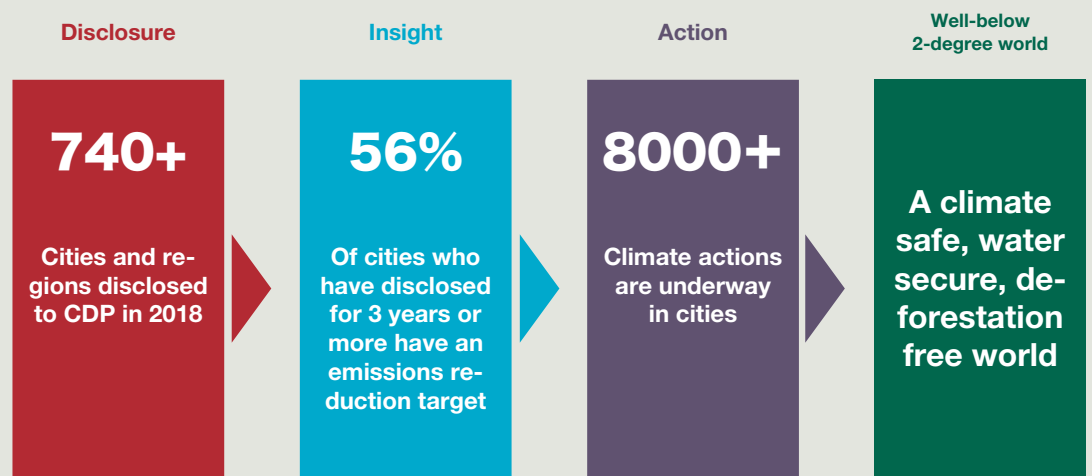
In 2017, we collaborated with our strong city

and investor networks to launch Matchmaker - a clearinghouse for cities to showcase planned climate infrastructure projects to the finance sector and better position them to mitigate against and adapt to climate change. Matchmaker bridges the divide between cities and potential investors through project information disclosure. In total, US\$58 billion was invested in the 1,143 projects which were reported to CDP by 381 cities in 2018.

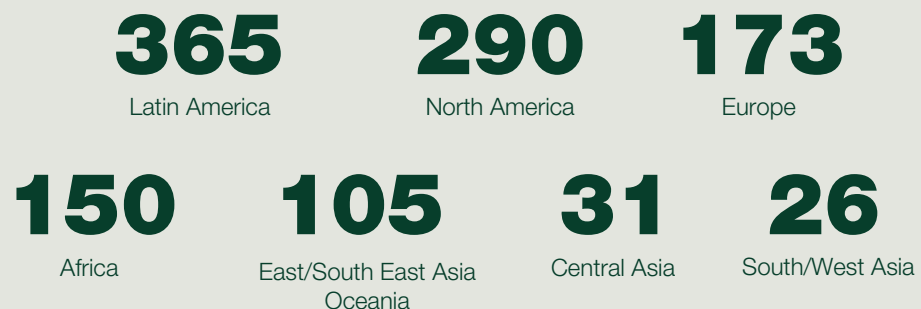
CDP Cities has partnerships with international networks including Global Covenant of Mayors and C40, and began collaborating with ICLEI in 2019.

To realize a sustainable low-carbon society it's necessary for countries, cities, companies and investors to work in tandem.

In Japan, only Tokyo Metropolitan Government, City of Yokohama and City of Nagoya responded to CDP Cities. We would like more cities to use this opportunity to share information and best practice, build networks, and attract investment and support, by disclosing to CDP.



Number of Projects by region





Message from Yoshiaki Harada Minister of the Environment Japan



We are now in a world where companies work to enhance corporate values by integrating climate change into their business strategies, rather than considering environmental actions simply as costs. I think it is crucial that we work to achieve a 2°C target for sure, and make further efforts to achieve a 1.5°C target.

The task before us is clear. We need to achieve an ambitious target to create a better and sustainable future for all, by tackling climate change that is a common challenge for all humankind. In order to achieve this, we need an economic system that can support sustainable prosperity of humans whilst safeguarding our planet.

Like any transformation, a transition to a decarbonized economy will pose us many challenges, but it will also generate business opportunities. If we act now, we can both enhance corporate values and lay the groundwork for an economy that works for people and the planet.

Since the adoption of the Sustainable Development Goals (SDGs) and the Paris Agreement in 2015, the world is heading to a decarbonized society. Businesses, mainly global corporations, recognize the risks and opportunities of climate change and are beginning to take actions to decarbonize their whole supply chains by setting medium to long term GHG reduction targets and committing to RE100. With the advancement of ESG financing, many wise corporate leaders are now aware that these actions raise corporate values.

Japan has decreased greenhouse gas emissions every year for the last four years, and with our vision of “Circulating and Ecological Economy – localizing SDGs” to achieve decarbonization as well as SDGs in regional communities, we aim to create a model of a virtuous cycle between the environment and growth. In order to implement this vision, decarbonization through businesses and a collaborative leadership of public and private sectors are essential. The Ministry of the Environment will fully support Japanese companies that take these actions and will also engage in calculating and reducing emissions from our own supply chain and using renewable energy ourselves.

As part of this effort, the Ministry of the Environment has decided to participate in CDP Supply Chain Program this year. Companies that take actions by setting medium to long term targets and disclosing information can achieve even higher target, for example, by reducing emissions from supply chains. Ministry of the Environment will make efforts to be the model for those companies by engaging in our supply chains.

In addition to the support for companies to calculate their emissions from their supply chains, in 2017, we started to support them in setting science-based targets. There are currently 33 Japanese companies

with science-based targets, compared to 5 before we started our support. Aiming for 100 companies with science-based targets by 2020, we will continue to provide support.

Considering the RE100 campaign, where the users of energy proactively choose renewables as an effective approach to expand the growth of renewable energy, the Ministry of the Environment decided in June 2018 to become the first government organization in the world to participate in RE100. We also promote investment for renewables, for example, by supporting the issuing of green bonds.

Furthermore, the Ministry of the Environment expressed support for the Taskforce on Climate Related Financial Disclosure (TCFD) in July 2018, and we have been providing support for companies to analyze scenarios in terms of climate risks and opportunities in line with TCFD. It includes technical support for scenario planning by experts so that companies can ensure sustainability by analyzing multiple scenarios and finding out climate change risks and opportunities for their businesses. We are also working on the world's first-ever platform for companies and investors to have a dialogue based on the information that companies disclose, including the information from CDP's questionnaires, with the participation of investors from both inside and outside Japan.

We are aiming for very high targets including the SDGs and the Paris Agreement. We believe that it is possible to create a virtuous cycle between the environment and economic growth. Achieving a decarbonized sustainable economic system is possible by having a good collaboration between the public and private sector all over the world.

Appendix: CDP 2018 Climate Change Japanese Company

Company ^a	Primary Questionnaire Sector ^b	2018 Score ^c	2017 Response status ^d	Scope 1 emissions	Scope 2 emissions ^e	No. of Scope 3 categories reported ^f	Verification / Assurance status ^g	SBT ^h	Carbon Pricing -regulation ⁱ	Internal Carbon Pricing ^j	Scenario Analysis ^k
Apparel											
Asics Corporation	General	B	AQ	4,428	L: 23,640 M: 20,968	15	VAA S1,S2,S3	Approved	Yes	2 years	quantitative qualitative
Citizen Watch Co.,Ltd.	General	B-	AQ	Non-public							
Toyobo Co., Ltd.	General	D	AQ	602,559	M:181,471	10		Not approved	No	No	No
Unitika Ltd.	General	D-	AQ	Non-public							
Wacoal Holdings Corp.	General	F	NR								
Biotech, Health Care & Pharmaceutical											
Hoya Corporation	General	F	AQ								
Asahi Intecc Co Ltd	General	F	NR								
Astellas Pharma Inc.	General	B	AQ	87,429	M:119,500	15	VAA S1,S2,S3	Approved	No	Yes	qualitative
Eisai Co., Ltd.	General	B	AQ	42,748	L: 92,279 M: 89,905	15	VAA S1,S2,S3	2 years	Yes	No	2 years
Otsuka Holdings Co., Ltd.	General	B	AQ	318,377	L: 280,620 M: 218,952	14	VAA S1,S2,S3	2 years	Yes	No	qualitative
Ono Pharmaceutical Co., Ltd.	General	A	AQ	8,488	L: 17,793 M: 21,825	15	VAA S1,S2,S3	2 years	Yes	2 years	2 years
Olympus Corporation	General	B	AQ	16,427	M: 97,664	15	VAA S1,S2,S3	2 years	Yes	No	2 years
Kaken Pharmaceutical Co., Ltd.	General	F	NR								
Kissei Pharmaceutical Co., Ltd.	General	F	NR								
Kyowa Hakko Kirin Co., Ltd.	General	SA	SA								
KYORIN Holdings, Inc.	General	F	NR								
Sawai Pharmaceutical Co., Ltd.	General	D	AQ	18,775	M: 51,760	15		No	No	No	
Santen Pharmaceutical Co., Ltd.	General	C	AQ	16,811	L: 16,559	13		No	No	No	qualitative
Shionogi & Co., Ltd.	General	C	AQ	38,694	L: 42,751 M: 43,319	8		No	No	No	qualitative
Sysmex Corporation	General	C	AQ	5,128	L: 20,034	14		2 years	No	No	2 years
Shimadzu Corporation	General	D	AQ	Non-public							
Daiichi Sankyo Co., Ltd.	General	B	AQ	108,106	M: 120,451	15	VAA S1,S2,S3	Approved	Yes	Yes	2 years
Taisho Pharmaceutical Co., Ltd.	General	F	NR								
Sumitomo Dainippon Pharma Co., Ltd.	General	C	AQ	23,741	L: 41,805	12		2 years	No	No	2 years
Takeda Pharmaceutical Company Limited	General	A-	AQ	160,776	L: 250,174 M: 206,093	14	VAA S1,S2,S3	Not approved	Yes	Yes	quantitative qualitative
Mitsubishi Tanabe Pharma Corporation	General	SA	SA								
Chugai Pharmaceutical Co., Ltd.	General	C	AQ	Non-public							
Tsumura & Co.	General	D	AQ	34,176	M: 53,228	3	VAR S1,S2,S3	2 years	No	No	2 years
Terumo Corporation	General	B	AQ	58,157	L: 221,301	15		2 years	No	No	quantitative
Nippon Shinyaku Co., Ltd.	General	F	NR								
Nipro Corporation	General	F	NR								
Nihon Kohden Corporation	General	B-	AQ	14,275	L: 3,335	10		2 years	No	2 years	2 years
Hamamatsu Photonics K.K.	General	B-	AQ	12,484	L: 49,457 M: 43,853	15	VAR S1,S2,S3	No	No	No	qualitative
Hisamitsu Pharmaceutical Co., Inc.	General	F	NR								

Company ^a	Primary Questionnaire Sector ^b	2018 Score ^c	2017 Response status ^d	Scope 1 emissions	Scope 2 emissions ^e	No. of Scope 3 categories reported ^f	Verification / Assurance status ^g	SBT ^h	Carbon Pricing -regulation ⁱ	Internal Carbon Pricing ^j	Scenario Analysis ^k
PeptiDream Inc	General	F	NR								
Miraca Holdings Inc.	General	F	NR								
Mochida Pharmaceutical Co., Ltd.	General	F	NR								
Rohto Pharmaceutical Co., Ltd.	General	F	NR								
Food, beverage & agriculture											
Asahi Group Holdings, Ltd.	FBT	A	AQ	360,681	L: 253,118 M: 258,766	15	VAA S1,S2 VAR S3	Approved	Yes	2 years	quantitative qualitative
Ajinomoto Co.Inc.	FBT	A-	AQ	1,244,676	L: 1,092,482 M: 1,072,248	15	VAA S1,S2,S3		Yes	Yes	quantitative qualitative
Ariake Japan	FBT	F	NR								
Ito En, Ltd.	FBT	D	NR	108,516	M: 15,948	5			No	No	
Itoham Yonekyu Holdings	FBT	F	NR								
Ezaki Glico Co., Ltd.	FBT	F	NR								
Kagome Co., Ltd.	FBT	B-	AQ	109,449	L: 53,978 M: 52,941	14		Not approved	No	2 years	2 years
Calbee, Inc.	FBT	D	AQ					Non-public			
Kikkoman Corporation	FBT	B-	AQ	86,625	L: 58,365	15	VAR S1,S2	2 years	Yes	No	qualitative
Kewpie Corporation	FBT	D	NR					Non-public			
Kirin Holdings Co Ltd	FBT	A-	AQ	406,181	L: 595,042 M: 593,877	15	VAA S1,S2,S3	Approved	Yes	2 years	quantitative qualitative
Coca-Cola Bottlers Japan Holdings Inc.	FBT	B-	AQ	379,225	L: 191,537	15		No	No	No	2 years
Sapporo Holdings Limited	FBT	C	AQ	103,962	L: 159,104	14	VAR S1,S2,S3	2 years	No	Yes	qualitative
Suntory Beverage & Food	FBT	A-	AQ	244,670	L: 238,838 M: 233,730	15	VAA S1,S2,S3	Approved	Yes	2 years	2 years
Sumitomo Forestry Co., Ltd.	P&F	A	AQ	249,996	L: 120,377 M: 119,789	15	VAA S1,S2,S3	Approved	Yes	No	2 years
Takara Holdings Inc.	FBT	F	NR								
Toyo Suisan Kaisha, Ltd.	FBT	F	AQ								
Nichirei Corporation	FBT	B	AQ	94,228	L: 305,383 M: 307,501	15	VAF S1,S2 VAR S3	No	Yes	No	qualitative
Nissin Foods Holdings Co., Ltd.	FBT	F	DP								
Nisshin Seifun Group Inc.	FBT	F	NR								
Nippon Suisan Kaisha Ltd	FBT	D	AQ					Non-public			
NH Foods Ltd.	FBT	C	AQ	289,347	L: 298,018	15	VAR S1,S2,S3	2 years	No	No	2 years
Japan Tobacco Inc.	FBT	A-	AQ	354,879	M: 338,722	15	VAA S1,S2,S3	2 years	Yes	Yes	quantitative qualitative
HOUSE FOODS GROUP INC.	FBT	F	NR								
FUJI OIL HOLDINGS INC.	FBT	B	AQ	249,441	L: 221,558	14	VAA S1 -,S2	2 years	Yes	2 years	2 years
Marubeni Corporation	FBT	B	AQ					Non-public			
Mitsubishi Corporation	General	C	AQ	5,628,117	L: 2,510,425 M: 2,414,305	13	VAA S1,S3	No	Yes	No	qualitative
Mitsubishi Shokuhin Co., Ltd.	FBT	SA	SA								
Meiji Holdings Co Ltd	FBT	C	AQ	264,000	M: 372,000	13	VAR S1,S2	No	Yes	No	qualitative
Morinaga & Company Ltd	FBT	F									
Morinaga Milk Industry Co., Ltd.	FBT	N/S						Non-public			

Company ^a	Primary Questionnaire Sector ^b	2018 Score ^c	2017 Response status ^d	Scope 1 emissions	Scope 2 emissions ^e	No. of Scope 3 categories reported ^f	Verification / Assurance status ^g	SBT ^h	Carbon Pricing -regulation ⁱ	Internal Carbon Pricing ^j	Scenario Analysis ^k
Yakult Honsha Co Ltd.	FBT	F	NR								
Yamazaki Baking Co., Ltd.	FBT	F	NR								
MEGMILK SNOW BRAND Co., Ltd.	FBT	D	NR	120,461	M: 114,973	1		No	Yes	No	No
Fossil fuels											
JXTG Holdings, Inc.	O&G	D	AQ	29,620,000	L: 6,000 M: 3,130,000	14	VAR S1,S2,S3	2 years	Yes	No	2 years
Idemitsu Kosan Co., Ltd.	O&G	Private	NR				Non-public				
Inpex Corporation	O&G	C	AQ	584,309	L: 2,185 M: 42,010	15	VAR S1,S2,S3	No	Yes	Yes	qualitative
Cosmo Energy Holdings Co., Ltd.	O&G	C	AQ	6,236,800	M: 494,000	15	VAA S1,S2,S3	No	No	No	quantitative
Showa Shell Sekiyu K. K.	O&G	C	AQ				Non-public				
Japan Petroleum Exploration Co., Ltd.	O&G	F	NR								
Hospitality											
Oriental Land Co Ltd.	General	F	NR								
Skylark Co., Ltd.	General	F	NR								
Seibu Holdings Inc.	General	F	NR								
Zensho Holdings Co., Ltd.	General	F	NR								
McDonald's Holdings Company (Japan), Ltd.	General	SA	SA								
Resorttrust Inc	General	F	NR								
Infrastructure											
Nippo Corporation	General	F	NR								
NTT Urban Development Corporation	General	C	AQ	6,939	M: 86,027	14	VAR S1,S2	No	Yes	No	No
Iida Group Holdings	General	F	NR								
Aeon Mall Co., Ltd.	General	B	AQ				Non-public				
Ichigo Group Holdings Co Ltd	General	F	NR								
Osaka Gas Co., Ltd.	O&G	A-	AQ	4,089,715	L: 273,109 M: 193,666	15	VAA S1,S2,S3	No	Yes	Yes	quantitative qualitative
Obayashi Corporation	General	B-	AQ	228,481	M: 87,057	15		Not approved	3 years	No	quantitative
Kajima Corporation	General	B	AQ	189,751	M: 98,369	15	VAA S1,S2,S3	Not approved	3 years	2 years	quantitative
Kandenko Co., Ltd	General	N/S	NR	0		0					
KYUDENKO	General	F	NR								
Kinden Corporation	General	D-	AQ				Non-public				
GLOBAL ENGINEERING Co., Ltd.	EU	D-	AQ	30	M: 0.02	0			No	2 years	
Comsys Holdings Corporation	General	F	NR								
JENEX Co., LTD.	General	N/S		35	L: 49 M: 46	14		Not approved			
Shimizu Corporation	General	B	AQ	200,467	L: 4,1431 M: 8,302	15	VAA S1,S2,S3	Not approved	Yes	Yes	quantitative
Sumitomo Realty & Development Co., Ltd.	General	F	NR								
Sekisui Chemical Co., Ltd.	General	A	AQ	188,541	L: 697,544 M: 705,856	15	VAA S1,S2,S3	Approved	Yes	Yes	quantitative
Sekisui House, Ltd.	General	A	AQ	77,225	L: 44,884 M: 63,200	15	VAA S1,S2,S3	Approved	Yes	Yes	quantitative qualitative

Company ^a	Primary Questionnaire Sector ^b	2018 Score ^c	2017 Response status ^d	Scope 1 emissions	Scope 2 emissions ^e	No. of Scope 3 categories reported ^f	Verification / Assurance status ^g	SBT ^h	Carbon Pricing -regulation ⁱ	Internal Carbon Pricing ^j	Scenario Analysis ^k
Daikyo Incorporated	General	F	NR								
Taisei Corporation	General	A-	AQ	225,600	L: 89,481 M: 89,359	12	VAA S1,S2,S3	Not approved	Yes	Yes	qualitative
Daiwa House Industry Co., Ltd.	General	A	AQ	250,325	L: 251,439	15	VAA S1,S2,S3	Approved	Yes	Yes	quantitative qualitative
Chiyoda Corporation	General	F	NR								
Tokyo Gas Co., Ltd.	O&G	B	AQ	3,712,000	L: 320,885 M: 308,000	15	VAA S1,S2,S3	2 years	Yes	Yes	quantitative qualitative
Tokyo Tatemono Co., Ltd.	General	B	NR	4,129	L: 41,451 M: 39,745	5	VAA S1,S2	No	Yes	No	No
Toho Gas Co., Ltd.	O&G	D	AQ				Non-public				
Toda Corporation	General	A	AQ	51,132	L: 22,670 M: 22,645	15	VAA S1,S2,S3	Approved	Yes	2 years	quantitative qualitative
Nishimatsu Construction Co Ltd	General	B		43,420	L: 31853	14	VAA S1,S2,S3	Not approved	No	No	quantitative qualitative
JGC Corporation	General	F	NR								
Nomura Real Estate Holdings, Inc.	General	F	NR								
Haseko Corporation	General	F	NR								
Hulic Co., Ltd.	General	F									
MAEDA CORPORATION	General	F									
Maeda Road Construction Co.,Ltd	General	F	NR								
Mitsui Fudosan Co., Ltd.	General	C	AQ				Non-public				
Mitsubishi Estate Co., Ltd.	General	B	AQ				Non-public				
Miyakoda Construction Co Ltd	General	N/S		96	L: 113 M: 107	5		Not approved			
Leopalace21 Corporation	General	F	NR								
Manufacturing											
DIC Corporation	CH	B	AQ	274,920	L: 373,576 M: 370,531	10	VAA S1,S2,S3	2 years	3 years	2 years	2 years
DMG Mori Seiki Co., Ltd.	General	F	NR								
IHI Corporation	EPM	B	AQ	82,214	L: 238,295 M: 247,147	15	VAA S1-,S2-	2 years	Yes	No	2 years
JSR Corporation	CH	B	AQ	458,843	L: 1,091,761 M: 977,662	15	VAR S1,S2,S3	2 years	No	Yes	2 years
Nissha Co., Ltd.	General	B	AQ				Non-public				
NOK Corporation	General	C	AQ	4,927	L: 204,499 M: 41,212	12		2 years	3 years	2 years	2 years
NTN Corporation	General	B	AQ	102,842	L: 301,449 M: 237,494	15	VAA S1,S2,S3	2 years	No	No	2 years
Sankyo Co., Ltd.	General	F	NR								
SCREEN Holdings CO., Ltd.	General	B	AQ	12,234	L: 42,878 M: 42,542	14	VAA S1,S2,S3	No	No	No	quantitative qualitative
SMC Corporation	General	N/S	NR				Non-public				
SUBARU CORPORATION	OEMs	B	AQ	351,328	M: 340,262	15	VAR S1 VAA S2-	2 years	Yes	2 years	quantitative qualitative
Sumco Corporation	General	F	AQ								
TBM,. LTD	General	C	AQ	306	L: 647 M: 647	9			Yes	No	qualitative
TDK Corporation	General	D	AQ	126,826	L: 1,520,270	3		2 years	No	No	qualitative
THK Co., Ltd.	General	D	AQ	24,745	M: 172,623	0		No	No	No	No
Toto Ltd.	General	B	AQ	176,127	L: 171,511 M: 186,989	15	VAA S1,S2,S3	No	Yes	Yes	quantitative qualitative

Company ^a	Primary Questionnaire Sector ^b	2018 Score ^c	2017 Response status ^d	Scope 1 emissions	Scope 2 emissions ^e	No. of Scope 3 categories reported ^f	Verification / Assurance status ^g	SBT ^h	Carbon Pricing -regulation ⁱ	Internal Carbon Pricing ^j	Scenario Analysis ^k
Aica Kogyo Co Ltd	CH	D	NR	52,787	L: 46,690	10		Not approved	No	No	qualitative
Aisin Seiki Co., Ltd.	General	D	AQ	654,237	L: 1,758,975	8		2 years	3 years	2 years	qualitative
Asahi Kasei Corporation	CH	A-	AQ	3,124,636	L: 1,107,423 M: 1,105,718	15	VAA S1,S2,S3	2 years	Yes	Yes	quantitative qualitative
Azbil Corporation	General	C	AQ	4,735	L: 14,875	15	VAA S1-,S2-,S3	2 years	No	No	定性
Advantest Corporation	General	C	AQ	3,672	M: 31,596	3		No	No	No	2 years
Amada Holdings, Ltd.	General	B	AQ	Non-public							
ULVAC, Inc.	General	F									
Alps Electric Co., Ltd.	General	C	AQ	Non-public							
Anritsu Corporation	General	B	AQ	1,591	L: 12,354 M: 11,206	14	VAA S1-,S2-,S3	2 years	No	2 years	quantitative qualitative
Isuzu Motors Limited	OEMs	A-	AQ	132,181	L: 91,586 M: 85,928	15	VAA S1,S2,S3	2 years	Yes	2 years	2 years
Ibiden Co., Ltd.	General	C	AQ	133,600	L: 683,500	9	VAR S1,S2,S3	No	Yes	No	No
Ushio Inc.	General	C	AQ	4,128	L: 35,771	15		2 years	Yes	No	2 years
Ube Industries, Ltd.	CH	D	AQ	11,330,000	L: 760,000 M: 770,000	15	VAR S1,S2,S3	No	Yes	Yes	qualitative
Air Water Inc.	CH	B-	AQ	Non-public							
EXEDY Corporation	General	B-	AQ	Non-public							
Ebara Corporation	General	C	AQ	73,309	L: 76,966 M: 74,412	5		2 years	Yes	No	2 years
FP Corporation	CH	C	AQ	8,818	L: 187,544 M: 0	13		2 years	No	No	2 years
Oji Holdings Corporation	P&F	B	AQ	Non-public							
OSG Corporation	General	F	NR								
Okuma Corporation	General	F	NR								
OMRON Corporation	General	B	AQ	65,390	L: 55,554 M: 138,220	15	VAA S1,S2,S3	Not approved	3 years	Yes	quantitative qualitative
KAO Corporation	General	A-	AQ	653,145	L: 447,267 M: 404,968	15	VAA S1,S2,S3	2 years	Yes	Yes	quantitative
Casio Computer Co., Ltd.	General	C	AQ	5,076	L: 31,606	13	VAR S1,S2,S3	2 years	No	No	qualitative
Kaneka Corporation	CH	B	AQ	Non-public							
Calsonic Kansei Corporation	General	B	AQ	Non-public							
Kawasaki Heavy Industries, Ltd.	General	C	AQ	175,879	L: 106,375 M: 219,756	0	VAR S1,S2,S3	2 years	No	No	2 years
Kansai Paint Co., Ltd.	CH	F	NR								
Keyence Corporation	General	F	NR								
Canon Inc.	General	A-	AQ	174,342	L: 1,061,341 M: 987,485	15	VAA S1,S2,S3	2 years	Yes	Yes	quantitative qualitative
Kyocera Corporation	General	A-	AQ	Non-public							
Kubota Corporation	General	A-	AQ	298,888	L: 366,343 M: 345,818	14	VAA S1,S2,S3	No	Yes	Yes	quantitative qualitative
Kuraray Co., Ltd.	CH	D	AQ	1,224,000	M: 1,122,000	9		No	No	No	No
Kurita Water Industries Ltd.	General	C	AQ	30,013	M: 161,466	6	VAR S1,S2	2 years	No	No	2 years
Glory Ltd.	General	B	AQ	1,059	M: 15,657	15		No	No	No	quantitative qualitative
Koito Manufacturing Co., Ltd.	General	C	AQ	Non-public							
KOSE Corporation	General	N/S	NR	6,314	L: 11,340	1					
Kokuyo Co., Ltd.	General	C	AQ	8,798	L: 34,952 M: 34,328	13	VAA S1,S2,S3	2 years	Yes	Yes	No

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Konica Minolta, Inc.	General	A-	AQ	175,266	L: 198,174 M: 212,755	15	VAA S1,S2,S3	Approved	Yes	Yes	quantitative
Kobayashi Pharmaceutical Co., Ltd.	General	F	NR								
Komatsu Ltd.	General	A	AQ	qualitative 116,237	L: 331,529 M: 398,794	15	VAA S1,S2,S3	Approved	Yes	2 years	quantitative qualitative
Sanwa Holdings Corporation	General	F	NR								
GS Yuasa Corporation	General	B-	AQ	76,712	L: 537,123	7	VAR S1,S2	2 years	No	No	2 years
JTEKT Corporation	EPM	A-	AQ	116,200	L: 669,800	15	VAA S1,S2,S3	2 years	Yes	Yes	2 years
Shiseido Co., Ltd.	General	B	AQ	56,603	L: 54,002	15	VAA S1-,S2-,S3	2 years	Yes	2 years	quantitative qualitative
Shimano, Inc.	General	F	NR								
Sharp Corporation	General	C	AQ	264,365	M: 686,976	15		2 years	No	No	quantitative qualitative
Japan Display Inc.	General	C	AQ	119,633	L: 609,619	4		2 years	No	No	
Showa Denko K.K.	CH	B	AQ	Non-public							
Shin-Etsu Chemical Co., Ltd.	CH	C	AQ	1,716,234	L: 4,643,485	15	VAR S1,S2,S3	2 years	No	No	2 years
Suzuki Motor Corporation	OEMs	C	AQ	Non-public							
Stanley Electric Co., Ltd.	General	F	AQ								
Sumitomo Chemical Co., Ltd.	CH	A	AQ	6,677,605	L: 1,256,000 M: 1,080,477	15	VAA S1,S2-,S3	Approved	Yes	Yes	quantitative qualitative
Sumitomo Heavy Industries. Ltd.	General	B-	AQ	36,591	M: 150,429	9		2 years	No	No	2 years
Sumitomo Electric Industries, Ltd.	General	B	AQ	193,937	L: 1,302,608	9	VAA S1,S2,S3	2 years	Yes	2 years	quantitative qualitative
Seiko Epson Corporation	General	C	AQ	136,734	M: 455,110	14	VAR S1,S2,S3	Approved	Yes	Yes	2 years
Sony Corporation	General	A	AQ	234,291	L: 1,195,554 M: 1,184,171	15	VAA S1,S2,S3	Approved	Yes	Yes	qualitative
Daiichikosho Co.,Ltd.	General	F	NR								
Daikin Industries, Ltd.	General	B	AQ	755,771	L: 718,039 M: 612,877	15	VAA S1,S2,S3	Not approved	Yes	Yes	qualitative
Daicel Corporation	CH	D	AQ	Non-public							
Daihatsu Motor Co., Ltd.	OEMs	D	AQ	Non-public							
Daifuku Co., Ltd.	General	A-	AQ	9,242	L: 32,689 M: 32,542	14	VAA S1,S2,S3	2 years	Yes	2 years	2 years
Taiyo Nippon Sanso Corporation	CH	SA	SA								
Taiyo Yuden Co., Ltd.	General	F	AQ								
Tadano Ltd	General	F	NR								
TANAX, INC.	P&F	D	AQ	1,338	L: 2,030 M: 2,004	3		No	No	No	quantitative qualitative
TS Tech Co.,Ltd.	General	B	AQ	8,231	L: 85,193	14	VAA S1-,S2-,S3	2 years	No	No	2 years
Teijin Ltd.	CH	D	AQ	Non-public							
DISCO Corporation	General	C	AQ	6,621	L: 41055	15	VAR S1,S2	Not approved	Yes	Yes	No
Denka Company Limited	CH	B	AQ	1,821,437	L: 566,887 M: 612,066	15	VAR S1,S2,S3	2 years	Yes	Yes	qualitative
Denso Corporation	General	B-	AQ	Non-public							
Tokai Rika Co., Ltd.	General	C	AQ	102,572	L: 109,248	11		No	No	2 years	No
Tokyo Electron Ltd.	General	B-	AQ	9,061	L: 30,717 M: 112,245	15		2 years	3 years	Yes	quantitative qualitative
Toshiba Corporation	General	B	AQ	333,960	L: 940,600	14	VAA S1,S2,S3	No	Yes	No	qualitative

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Tosoh Corporation	CH	C	NR	7,710,340	L: 438,114 M: 438,114	14		No	Yes	Yes	2 years
Toyo Seikan Group Holdings, Ltd.	General	C	AQ	491,998	L: 1,108,718 M: 1,177,883	15		2 years	Yes	No	2 years
Toray Industries, Inc.	CH	B	AQ	3,200,415	L: 2,275,962 M: 2,270,821	15	VAA S1-,S2-,S3	2 years	Yes	Yes	quantitative qualitative
Tokuyama Corporation	CH	D	AQ	Non-public							
Toda Kogyo Corp	CH	D	AQ	16,116	M: 85,114	2		2 years	No	No	2 years
Topcon Corp	General	F	NR								
Toyoda Gosei	General	B	AQ	147,383	L: 416,949	15	VAA S1,S2,S3	No	Yes	Yes	2 years
Toyota Motor Corporation	OEMs	A-	AQ	2,604,655	L: 5,265,425	15	VAA S1,S2,S3	2 years	Yes	2 years	quantitative qualitative
Toyota Industries Corporation	OEMs	A	AQ	236,043	L: 698,440 M: 678,048	15	VAA S1,S2,S3	2 years	3 years	2 years	qualitative
Toyota Boshoku Corporation	General	B	AQ	Non-public							
Nabtesco Corporation	General	A	AQ	8,686	L: 62,929 M: 61,538	15	VAA S1,S2,S3	Approved	Yes	Yes	quantitative
Nikon Corporation	General	A-	AQ	28,987	L: 189,030 M: 181,712	15	VAA S1-,S2-,S3	2 years	Yes	2 years	qualitative
NOF CORPORATION	CH	F									
Nissan Chemical Industries, Ltd.	CH	B	AQ	272,954	M: 124,460	15		2 years	Yes	No	2 years
Nissan Motor Co., Ltd.	OEMs	A-	AQ	912,476	L: 2,563,866 M: 2,394,109	15	VAA S1,S2,S3	Not approved	Yes	Yes	quantitative qualitative
Nissan Shatai Co., Ltd.	OEMs	F	NR								
Nisshinbo Holdings Inc.	General	C	AQ	292,898	L: 396,360 M: 384,916	15		2 years	3 years	2 years	quantitative
Nitto Denko Corporation	CH	B	AQ	380,422	M: 449,446	13	VAA S1,S2,S3	2 years	Yes	2 years	2 years
Nippon Kayaku Co., Ltd.	CH	B-	AQ	37,624	L: 98,675 M: 98,675	12		2 years	3 years	2 years	qualitative
Nippon Light Metal Holdings Company, Ltd	General	C	AQ	363,701	L: 566,275	10	VAR S1,S2,S3	No	Yes	No	No
Nippon Shokubai Co., Ltd.	CH	D	AQ	Non-public							
NSK Ltd.	General	B	AQ	143,039	L: 854,284 M: 842,119	13	VAA S1,S2,S3	2 years	Yes	2 years	2 years
Zeon Corporation	CH	D	AQ	560,932	L: 60,755	14	VAR S1,S2,S3	2 years	No	No	2 years
Nippon Electric Glass Co., Ltd.	General	F	NR								
NGK Spark Plug Co., Ltd.	General	D	AQ	67,558	L: 263,707	13	VAR S1,S2	2 years	3 years	No	quantitative qualitative
NHK Spring Co., Ltd.	General	F	AQ								
Nippon Paint Holdings Co., Ltd.	CH	F	NR								
Nifco Inc.	General	N/S	NR	118		0					
NGK Insulators, Ltd.	General	B	AQ	Non-public							
Japan Aviation Electronics Industry, Limited	General	F	NR								
The Japan Steel Works, Ltd.	General	F	NR								
Nidec Corporation	General	D	AQ	92,324	L: 612,745	7		2 years		2 years	2 years
Noritz Corporation	General	C	AQ	8,484	L: 18,034	15		2 years	Yes	2 years	2 years
Pioneer Corporation	General	C	AQ	9,226	L: 76,326	15		2 years	Yes	2 years	quantitative
Panasonic Corporation	General	A-	AQ	458,043	L: 1,950,378	15	VAA S1,S2,S3	Approved	No	2 years	qualitative
VALQUA,LTD.	CH	C	AQ	2,126	L: 18,145	13		2 years	No	No	2 years

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Pigeon Corp	General	F	NR								
Hitachi Chemical Company, Ltd.	CH	B-	AQ	191,109	L: 656,703 M: 656,703	15	VAA S1-,S2	Not approved	No	Yes	quantitative
Hitachi Construction Machinery Co., Ltd.	General	B	AQ	51,188	L: 66,284 M: 70,950	15	VAA S1,S2,S3	Not approved	Yes	No	quantitative
Hitachi Kokusai Electric Inc	General	D	AQ	1,115	L: 21,625	12	VAR S1,S2	2 years	No	No	2 years
Hitachi, Ltd.	General	A-	AQ	2,117,169	L: 2,600,654 M: 3,127,572	15	VAA S1,S2,S3	2 years	Yes	2 years	quantitative
Hitachi High-Technologies Corporation	General	C	AQ	5,482	L: 9,565 M: 43,155	12	VAR S1,S2	2 years	No	2 years	quantitative
Hino Motors, Ltd.	OEMs	B-	AQ	149,000	L: 219,920	15		2 years	Yes	2 years	2 years
Hirose Electric Co., Ltd.	General	F	AQ								
Fanuc Corporation	General	D	AQ								
Fujikura Ltd.	General	B	AQ	25,518	L: 143,654 M: 146,315	14	VAA S1,S2,S3	Not approved	Yes	Yes	quantitative
Fujitsu General Limited	General	Private	NR								
Fuji Electric Co., Ltd.	General	B	AQ	110,708	L: 218,289 M: 217,677	15	VAA S1,S2	No	Yes	No	qualitative
FUJIFILM Holdings Corporation	General	B	AQ	636,035	M: 541,481	15	VAR S1,S2,S3	Approved	Yes	2 years	qualitative
Brother Industries, Ltd.	General	B	AQ	67,068	L: 122,220 M: 118,524	15	VAA S1,S2,S3	Approved	Yes	Yes	quantitative
Furukawa Electric Co., Ltd.	General	B-	AQ	234,938	L: 395,339 M: 269,620	15	VAA S1,S2,S3	2 years	No	2 years	2 years
Heiwa Corporation	General	F	NR								
Pola Orbis Holdings Inc.	General	B	AQ	5,276	L: 10,632 M: 10,302	12		2 years	3 years	No	quantitative
Hoshizaki Electric Co., Ltd.	General	F	NR								
HORIBA, Ltd.	General	C	AQ	3,738	L: 12,166	5		2 years	No	2 years	2 years
Honda Motor Company	OEMs	A-	AQ	1,350,000	L: 3,790,000 M: 4,100,000	14	VAA S1,S2,S3	2 years	Yes	2 years	quantitative
Makita Corporation	General	F	NR								
Mazda Motor Corporation	OEMs	B	AQ	135,880	L: 616,360	15	VAA S1,S2,S3	2 years	3 years	No	quantitative
Mabuchi Motor Co., Ltd.	General	F	NR								
Miura Co., Ltd.	General	F	NR								
Mitsui Engineering & Shipbuilding Co Ltd	OEMs	F	NR								
Mitsui Chemicals, Inc.	CH	B	AQ	4,100,000	L: 1,320,000 M: 930,000	13	VAA S1,S2,S3	2 years	Yes	Yes	qualitative
Mitsui Mining & Smelting Co., Ltd.	General	D	AQ	788,636	M: 1,012,191	5	VAR S1,S2	2 years	No	No	2 years
Mitsubishi Gas Chemical Company, Inc.	CH	B	AQ	843,813	L: 710,500 M: 699,564	15	VAA S1,S2-	No	Yes	No	2 years
Mitsubishi Chemical Holdings Corporation	CH	B	AQ	7,470,000	L: 7,345,000 M: 7,345,000	15	VAA S1,S2,S3	2 years	Yes	2 years	quantitative
Mitsubishi Motors Corporation	OEMs	B	AQ	120,063	L: 410,151 M: 419,856	15		2 years	Yes	2 years	2 years
Mitsubishi Heavy Industries, Ltd.	General	B	AQ	185,534	L: 682,543 M: 698,829	10	VAA S1,S2	No	Yes	2 years	2 years
Mitsubishi Electric Corporation	General	A	AQ	311,850	L: 967,548 M: 982,700	15	VAA S1,S2,S3	Not approved	Yes	Yes	quantitative
MinebeaMitsumi Inc.	General	B	NR	37,794	L: 656,943 M: 77,049	6		2 years	Yes	2 years	2 years

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Murata Mfg. Co.	General	B	AQ	251,000	L: 1,149,000 M: 1,295,000	15	VAA S1,S2,S3	Not approved	3 years	2 years	quantitative
Meidensha Corporation	General	C		27,197	L: 27,309 M: 25,868	15	VAR S1,S2	2 years	3 years	No	2 years
Yaskawa Electric Corporation	General	B	AQ	3,645	L: 16,897 M: 15,467	11	VAA S1,S2,S3	2 years	No	No	2 years
Yamaha Corporation	General	B	AQ	23,099	L: 136,773 M: 135,303	15	VAA S1,S2,S3	Not approved	No	Yes	quantitative qualitative
Yamaha Motor Co., Ltd.	OEMs	B	AQ	151,110	L: 401,484 M: 428,097	14	VAA S1,S2,S3	2 years	Yes	Yes	quantitative
Uni-Charm Corporation	General	B	AQ	46,432	L: 388,825 M: 406,450	15	VAA S1,S2	Approved	3 years	2 years	quantitative qualitative
Unipres Corporation	General	C	AQ	Non-public							
Yokogawa Electric Corporation	General	B	AQ	15,412	L: 70,512 M: 69,470	15	VAA S1,S2	Not approved	No	No	quantitative qualitative
Lion Corporation	General	B	AQ	59,489	M: 108,512	14	VAA S1-,S2-	2 years	Yes	2 years	2 years
Ricoh Co., Ltd.	General	A-	AQ	173,463	L: 307,441 M: 298,565	15	VAA S1,S2,S3	Approved	Yes	Yes	qualitative
Lintec Corporation	CH	D	AQ	90,565		4	VAR S1,S2	No	No	No	
Rinnai Corporation	General	F	AQ								
Renesas Electronics Corporation	General	F	AQ								
Rengo Co., Ltd.	P&F	B-	AQ	942,111	M: 385,365	15	VAR S1,S2,S3	No	Yes	No	No
Rohm Co., Ltd.	General	B	AQ	143,010	L: 559,484	10	VAA S1-,S2-,S3	2 years	No	2 years	2 years
Materials											
AGC Inc.	General	B	AQ	5,074,000	L: 5,399,000	15	VAA S1,S2,S3	2 years	Yes	2 years	2 years
Dowa Holdings Co., Ltd.	M&M	D	AQ	Non-public							
LIXIL Group Corporation	General	B	AQ	580,868	L: 617,849 M: 575,066	15	VAF S1,S2,S3	Approved	Yes	Yes	quantitative qualitative
Toyo Tire & Rubber Co Ltd	General	B-	AQ	321,290	L: 352,275	15		Approved	Yes	No	2 years
Kobe Steel., Ltd.	Steel	D	AQ	Non-public							
JFE Holdings, Inc.	Steel	D	AQ	Non-public							
Nippon Steel & Sumitomo Metal Corporation	Steel	B	AQ	Non-public							
Sumitomo Osaka Cement Co., Ltd.	Cement	D	AQ	7,540,000	L: 159,000	0			No	No	
Sumitomo Metal Mining Co., Ltd.	M&M	B	AQ	1,857,796	L: 58,223 M: 903,969	11	VAA S1,S2,S3	No	Yes	No	No
Sumitomo Rubber Industries, Ltd.	General	C	AQ	372,302	L: 680,921	15	VAR S1,S2	2 years	No	No	2 years
Daiki Aluminium Industry Co., Ltd.	M&M	N/S		Non-public							
Daido Steel Co., Ltd.	Steel	F	NR								
Taiheiyo Cement Corporation	Cement	D	AQ	Non-public							
Tokyo Steel Manufacturing Co., Ltd.	Steel	A-	AQ	Non-public							
Nisshin Steel Holdings Co., Ltd.	Steel	F	NR								
Nippon Sheet Glass Company, Ltd	General	B	AQ	Non-public							
Nippon Paper Industries Co Ltd	P&F	D	AQ	Non-public							

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Hitachi Metals, Ltd.	Steel	B	AQ				Non-public				
Bridgestone Corporation	General	A-	AQ	1,921,690	L: 2,349,337 M: 2,335,966	15	VAA S1,S2,S3	2 years	Yes	Yes	2 years
Maruichi Steel Tube Ltd.	M&M	F	NR								
Yamato Kogyo Co., Ltd.	Steel	F	NR								
Yokohama Rubber Company, Limited	General	B	AQ	362,510	L: 353,778	15	VAA S1,S2,S3	2 years	Yes	2 years	quantitative
Mineral extraction											
Mitsubishi Materials Corporation	M&M	B	AQ	10,059,546	L: 1,717,000 M: 1,745,008	15	VAA S1,S2	2 years	Yes	2 years	2 years
Power generation											
Ene-Vision Corporation	EU	N/S		22	M: 23	0					
The Kansai Electric Power Co., Inc.	EU	D	AQ	32,836,251	M: 9,846	9		No	Yes	Yes	quantitative qualitative
Kyushu Electric Power Co Inc	EU	B	DP				Non-public				
Shikoku Electric Power Co., Inc.	EU	F	NR								
The Chugoku Electric Power Company	EU	F	NR								
Chubu Electric Power Co., Inc.	EU	D	NR	56,398,804	M:68,534	15		No	Yes	Yes	quantitative qualitative
Electric Power Development Co.,Ltd (J-POWER)	EU	C	AQ	57,817,299	L: 92,468	14	VAR S1,S2	No	Yes	Yes	qualitative
The Tokyo Electric Power Company Holdings, Inc (TEPCO)	EU	B	AQ	89,046,000	L: 3,800,000 M: 3,700,000	15	VAR S1,S2	No	Yes	Yes	quantitative
Tohoku Electric Power Co., Inc.	EU	B	NR	31,861,100	L: 0 M: 0	15		No	Yes	Yes	No
Hokuriku Electric Power Company	EU	F	NR								
Hokkaido Electric Power Co., Inc.	EU	F	NR								
Retail											
J. Front Retailing Co., Ltd.	General	D-	AQ	12,994	M: 134,198	0		2 years	No	No	2 years
Monotaro Co Ltd	General	F	NR								
Start Today Co., Ltd.	General	F	NR								
Ain Holdings Inc	General	F	NR								
Aoyama Trading Co., Ltd.	General	N/S	NR	46	M:71,722	6		No			
Askul	General	A-	AQ	3,058	L: 22,021	15	VAA S1-,S2,S3	Approved	3 years	2 years	quantitative qualitative
Aeon Co., Ltd.	General	B	AQ	237,424	L: 2,958,545	15	VAA S1-,S2-,S3		Yes	2 years	quantitative
Izumi Co., Ltd.	General	F	NR								
Welcia Holdings Co Ltd	General	F	NR								
H2O Retailing Corporation	General	F	NR								
ABC-Mart, Inc.	General	F	NR								
Odakyu Electric Railway Co., Ltd.	General	F	NR								
Kusuri No Aoki Holdings	General	F	NR								
Keio Corporation	General	F	NR								
K's Holdings Corporation	General	F	NR								
COSMOS Pharmaceutical Corporation	General	F	NR								

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Komeri Co., Ltd.	General	F	NR								
Sundrug Co., Ltd.	General	F	NR								
Sanrio Company, Ltd.	General	F	NR								
Shimachu Co., Ltd.	General	F	NR								
Shimamura Co., Ltd.	General	F	NR								
Sugi Holdings Co., Ltd.	General	F	NR								
Seven & I Holdings Co., Ltd.	General	C	AQ	125,201	L: 3,795,825 M: 3,343,981	14	VAR S1,S2,S3	No	Yes	No	quantitative
Sotetsu Holdings, Inc.	General	F	NR								
Takashimaya Company, Limited	General	F	NR								
Tsuruha Holdings Inc.	General	N/S	NR				Non-public				
Don Quijote Holdings Co., Ltd.	General	N/S	NR				Non-public				
Nitori Holdings Co., Ltd.	General	F	NR								
Japan Airport Terminal Co., Ltd.	General	F	NR								
Pilot Corp	General	F	NR								
Bic Camera Inc	General	D-	AQ	0		0		2 years	Yes	No	
Fast Retailing Co., Ltd.	General	B	AQ	13,209	L: 166,071 M: 146,829	15		Not approved	Yes	No	2 years
Matsumotokiyoshi Holdings Co., Ltd.	General	F	NR								
Marui Group Co., Ltd.	General	A	AQ	13,818	L: 106,122 M: 99,286	15	VAA S1,S2,S3	Approved	Yes	Yes	quantitative qualitative
Isetan Mitsukoshi Holdings Ltd.	General	B	NR	35,868	M: 129,427	15	VAA S1-,S2-	2 years	Yes	2 years	2 years
Yamada Denki Co., Ltd.	General	F	NR								
USS Co., Ltd.	General	F	NR								
FamilyMart UNY Holdings Co., Ltd.	General	N/S	NR	82,727	M:2,017,408	5					
Rakuten,Inc.	General	D	AQ				Non-public				
Ryohin Keikaku Co., Ltd.	General	F	NR								
Lawson, Inc.	General	F	AQ								
Services											
GMO Payment Gateway	General	F	NR								
KDDI Corporation	General	C	AQ	22,593	L: 238,509 M:1,198,724	15	VAR S1,S2,S3	2 years	Yes	No	quantitative qualitative
LINE Corporation	General	F	NR								
MS&AD Insurance Group Holdings, Inc.	General	A	AQ	27,948	M:76,721	15	VAA S1,S2,S3	Not approved	Yes	2 years	qualitative
NTT Data Corporation	General	A-	AQ	8,802	L: 328,397 M: 309,063	15	VAA S1,S2,S3	2 years	Yes	2 years	2 years
NTT DOCOMO, INC.	General	A-	AQ	58,686	L: 1,526,744 M: 1,524,638	15	VAA S1-,S2-,S3	2 years	Yes	2 years	2 years
Paltac	General	F									
SBI Holdings, Inc.	General	F	AQ								
SCSK Corporation	General	C	AQ	170	L: 42,614	15		2 years	No	No	No
Sompo Holdings, Inc	General	A	AQ	21,164	L: 78,290 M: 75,207	15	VAA S1,S2,S3	Not approved	Yes	No	quantitative
T&D Holdings, Inc.	General	B	AQ	1,997	M: 55,531	5	VAA S1,S2,S3	No	No	No	2 years
TIS Inc.	General	F	NR								

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AIFUL Corporation	General	F	NR								
Aozora Bank, Ltd.	General	F	NR								
Acom Co., Ltd.	General	F	NR								
Aplus Financial Co., Ltd.	General	F	NR								
Alfresa Holdings Corporation	General	N/S	NR				Non-public				
The Awa Bank, Ltd.	General	F	NR								
Aeon Financial Service	General	SA	SA								
ITOCHU Corporation	General	B	AQ				Non-public				
Itochu Techno-Solutions Corporation	General	SA	SA								
The Iyo Bank, Ltd.	General	F	NR								
M3, Inc.	General	F	NR								
Otsuka Corporation	General	F	NR								
Autobacs Seven Co., Ltd.	General	F	NR								
OBIC Co., Ltd.	General	F	NR								
OBIC Business Consultants Co., Ltd.	General	F	NR								
Orient Corporation	General	F	NR								
ORIX Corporation	General	D	AQ				Non-public				
Kakaku.com, Inc.	General	N/S	NR				Non-public				
Capcom Co., Ltd.	General	N/S	NR				Non-public				
GungHo Online Entertainment, Inc.	General	F	NR								
Japan Post Insurance	General	F	NR								
Canon Marketing Japan Inc.	General	SA	SA								
Kyushu Financial Group	General	F	NR								
The Bank of Kyoto, Ltd.	General	F	NR								
GREE, Inc.	General	F	NR								
Credit Saison Co., Ltd.	General	F	NR								
The Gunma Bank, Ltd.	General	F	NR								
The Keiyo Bank, Ltd.	General	F	NR								
Tecmo Koei Holdings	General	F	NR								
Konami Holdings Corporation	General	F	NR								
COLOPL Inc	General	F	NR								
Concordia Financial Group	General	F	NR								
CyberAgent, Inc.	General	D-	AQ			0			No	No	
The San-in Godo Bank, Ltd.	General	F	NR								
Sun Messe Co., Ltd.	General	C	AQ	2,889	L: 6,485	14		Not approved	Yes	2 years	quantitative qualitative
Shiga Bank, Ltd.	General	D	NR				Non-public				
The Shizuoka Bank, Ltd.	General	F	NR								
The 77 Bank, Ltd.	General	F	NR								
Japan Real Estate Investment	General	B					Non-public				
Jafco Co., Ltd.	General	F	NR								
The Juroku Bank, Ltd.	General	F	NR								
Shochiku Co., Ltd.	General	F	NR								
Shinsei Bank Ltd	General	F	NR								

Company ^a	Primary Questionnaire Sector ^b	2018 Score ^c	2017 Response status ^d	Scope 1 emissions	Scope 2 emissions ^e	No. of Scope 3 categories reported ^f	Verification / Assurance status ^g	SBT ^h	Carbon Pricing -regulation ⁱ	Internal Carbon Pricing ^j	Scenario Analysis ^k
NS Solutions Corporation	General	F	NR								
SKY Perfect JSAT Holdings Inc.	General	F	NR								
SQUARE ENIX Holdings CO., Ltd.	General	F	NR								
Suzuken Co., Ltd.	General	F	NR								
Sumitomo Corporation	General	B	AQ					Non-public			
The Suruga Bank, Ltd.	General	F	NR								
Sega Sammy Holdings Inc.	General	D-	AQ	10,239	L: 85,140	0		No	No	No	qualitative
Secom Co., Ltd.	General	B	AQ	53,260	L: 36,362	14	VAA S1,S2,S3	2 years	Yes	2 years	qualitative
Seven Bank, Ltd.	General	F	AQ								
Zenkoku Hosho Co Ltd	General	F	NR								
Sohgo Security Services Co., Ltd.	General	D	AQ	22,360	M:13,931	4		2 years	No	No	qualitative
Sojitz Corporation	General	B	AQ	698,098	L: 43,235	14	VAA S1,S2,S3	No	Yes	Yes	quantitative qualitative
Sony Financial Holdings Inc.	General	SA	SA								
SoftBank Group Corp	General	F	AQ								
Dai-ichi Life Holdings, Inc.	General	B	AQ	13,600	L: 152,400	14	VAA S1,S2,S3	2 years	No	No	2 years
The Daishi Bank, Ltd.	General	F	NR								
Daito Trust Construction Co., Ltd.	General	B	AQ	35,169	L: 24,264 M: 28,341	14	VAA S1,S2,S3	Not approved	Yes	Yes	2 years
Dai Nippon Printing Co., Ltd.	General	A-	AQ	269,055	L: 623,232 M: 762,569	15	VAA S1,S2,S3	Approved	Yes	Yes	quantitative qualitative
Daiwa Securities Group Inc.	General	C	AQ	1,000	L: 440 M: 32,707	10	VAR S1,S2,S3	Not approved	No	2 years	qualitative
The Chiba Bank, Ltd.	General	F	NR								
The Chugoku Bank, Ltd.	General	F	NR								
DeNA Co., Ltd.	General	F	NR								
TV Asahi Holdings Corporation	General	F	NR								
Dentsu Inc.	General	C	AQ	5,611	L: 52,396 M: 48,573	5	VAR S1,S2,S3	Approved	Yes	2 years	quantitative qualitative
Tokai Tokyo Financial Holdings, Inc.	General	F	NR								
Tokyu Fudosan Holdings Corporation	General	A-	AQ					Non-public			
Tokio Marine Holdings, Inc.	General	B	AQ	14,474	L: 72,069 M: 68,548	15	VAA S1,S2,S3	Not approved	Yes	Yes	quantitative qualitative
Tokyo Century Corporation	General	D	AQ	191		0			No	No	2 years
Tokyo Broadcasting System Holdings, Inc.	General	F	NR								
Toho Co., Ltd.	General	F	NR								
Toppan Forms Co., Ltd.	General	SA	SA								
Toppan Printing Co., Ltd.	General	B	AQ	236,105	M: 937,324	15	VAA S1,S2,S3	2 years	Yes	Yes	2 years
Toyota Tsusho Corporation	General	B	AQ					Non-public			
Trend Micro Incorporated.	General	F	NR								
Nagase & Co., Ltd.	General	D	AQ	0	L: 3,070	1		No	No	No	2 years
Nishi-Nippon Financial Holdings, Inc.	General	F	NR								
Nippon Television Holdings	General	F	NR								
NEC Corporation	General	A-	AQ	58,332	L: 479,287 M: 410,244	15	VAA S1,S2-,S3	Approved	Yes	Yes	qualitative

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Nippon Telegraph & Telephone Corporation (NTT)	General	B	AQ	203,526	L: 5,788,453 M: 5,287,503	15	VAA S1-,S2-,S3	No	Yes	No	2 years
Japan Exchange Group	General	F	NR								
Japan Post Holdings	General	Private	NR								
Japan Retail Fund Investment	General	C	AQ	17,343	L: 179,860 M: 177,893	7	VAR S1,S2	2 years	Yes	2 years	2 years
Nihon M&A Center Inc	General	F	NR								
Oracle Corporation Japan	General	SA	SA								
Nintendo Co., Ltd.	General	F	NR								
NEXON Co., Ltd.	General	F	NR								
Nomura Research Institute, Ltd.	General	B	AQ	1,614	L: 73,997 M: 73,695	15	VAA S1,S2,S3	Not approved	Yes	2 years	2 years
Nomura Holdings, Inc.	General	A-	AQ	2,992	L: 70,644 M: 57,591	15	VAA S1,S2,S3	2 years	Yes	Yes	2 years
Persol Holdings Co Ltd	General	F	AQ								
Hakuhodo DY Holdings Incorporated	General	B	AQ	262	L: 8,548 M: 7,797	15		2 years	Yes	No	qualitative
The Hachijuni Bank, Ltd.	General	B	AQ	2,773	M: 9,413	15	VAA S1,S2,S3	No	No	2 years	No
BANDAI NAMCO Holdings Inc.	General	D	AQ	1,843		0	VAR S1,S2	No	No	No	
Hikari Tsushin, Inc.	General	F	NR								
Hitachi Capital Corporation	General	B-	AQ	2,660	L: 5,920	14	VAR S1,S2,S3	2 years	3 years	2 years	
The Hiroshima Bank, Ltd.	General	F	NR								
Fukuoka Financial Group, Inc.	General	F	NR								
FUJII MEDIA HOLDINGS, INC.	General	F									
Fujitsu Ltd.	General	A	AQ	198,200	L: 938,600 M: 912,100	15	VAA S1,S2,S3	Approved	Yes	Yes	quantitative
Fuyo General Lease Co Ltd	General	D	AQ	127	M: 800	4	VAR S1,S2,S3	2 years	No	No	qualitative
Benesse Holdings, Inc.	General	A	AQ	1,794	L: 8,233 M: 7,054	15	VAA S1,S2,S3	Not approved	Yes	No	quantitative
Hokuhoku Financial Group, Inc.	General	F	NR								
North Pacific Bank, Ltd.	General	F	NR								
Matsui Securities Co., Ltd	General	F	AQ								
Mizuho Financial Group, Inc.	General	B-	AQ	16,028	L: 211,283 M: 202,780	15	VAR S1,S2	2 years	Yes	Yes	2 years
Misumi Group Inc.	General	F	NR								
Sumitomo Mitsui Trust Holdings, Inc.	General	C	AQ	4,575	L: 33,348 M: 32,494	5	VAR S1,S2	2 years	Yes	Yes	qualitative
Sumitomo Mitsui Financial Group	General	C	AQ	15,671	L: 163,409	12	VAR S1,S2,S3	2 years	3 years	No	2 years
Mitsui & Co., Ltd.	General	B-	AQ								
Mitsubishi UFJ Financial Group, Inc.	General	C	AQ	11,836	L: 202,004	2	VAR S2	2 years	No	Yes	2 years
Mitsubishi UFJ Lease & Finance Co., Ltd.	General	F	NR								
MEDIPAL Holdings CORPORATION	General	F	NR								
Mebuki Financial Group Inc	General	F									
Yahoo Japan Corporation	General	F	NR								
Yamaguchi Financial Group, Inc.	General	F	NR								
Japan Post Bank	General	F	NR								

Company ^a	Primary Questionnaire Sector ^b	2018 Score ^c	2017 Response status ^d	Scope 1 emissions	Scope 2 emissions ^e	No. of Scope 3 categories reported ^f	Verification / Assurance status ^g	SBT ^h	Carbon Pricing -regulation ⁱ	Internal Carbon Pricing ^j	Scenario Analysis ^k
The Bank of Yokohama, Ltd.	General	D-	AQ	751	M: 20,239	0			No	No	
Recruit Holdings Co.,Ltd.	General	Private	DP	Non-public							
Ricoh Leasing Co., Ltd.	General	B	AQ	440	M: 599	15	VAA S1,S2,S3	Not approved	Yes	No	quantitative qualitative
Resona Holdings, Inc.	General	B	AQ	2,842	L: 62,332 M: 59,043	14		2 years	Yes	No	2 years
Relo Group, Inc	General	F	NR								
Transportation services											
ANA Holdings Inc.	TS	B	AQ	11,177,181	L: 82,581 M: 82,581	3	VAA S1-,S2,S3	2 years	Yes	No	quantitative qualitative
H.I.S.Co.,Ltd.	General	F	NR								
Kamigumi Co., Ltd.	General	F	NR								
Kawasaki Kisen Kaisha, Ltd.	TS	A	AQ	13,417,625	L: 30,505 M: 25,019	15	VAA S1,S2,S3	Approved	Yes	Yes	quantitative qualitative
Kyushu Railway	TS	N/S	NR	52,118	M: 311,190	0					
Kintetsu Group Holdings Co.,Ltd.	General	C	AQ	59,772	L: 648,418 M: 562,257	15		No	No	No	No
Keisei Electric Railway Co., Ltd.	TS	F	NR								
Keihan Electric Railway Co., Ltd.	TS	F	NR								
Keikyu Corporation	TS	F	NR								
Sankyu Inc.	General	N/S	NR	Non-public							
Mitsui O.S.K. Lines Ltd	TS	B	AQ	Non-public							
Seino Holdings Co., Ltd.	General	F	NR								
Central Japan Railway Company	TS	B-	AQ	Non-public							
Tokyu Corporation	TS	N/S	NR	Non-public							
Tobu Railway Co., Ltd.	TS	F	NR								
Nagoya Railroad Co., Ltd.	TS	F	NR								
Nankai Electric Railway Co., Ltd.	TS	B	AQ	102,183	L: 207,321 M: 206,117	15		2 years	Yes	2 years	2 years
Nishi-Nippon Railroad Co., Ltd.	General	F	NR								
West Japan Railway Company	TS	B-	AQ	91,200	M: 1,819,000	15		No	No	No	2 years
Nippon Express Co., Ltd.	General	B	AQ	700,798	L: 213,090 M: 217,590	15	VAA S1,S2,S3	Not approved	Yes	No	quantitative qualitative
Nippon Yusen Kaisha Line	TS	A	AQ	20,918,985	L: 66,535 M: 65,401	14	VAA S1,S2,S3	Approved	Yes	2 years	quantitative qualitative
Japan Airlines Corporation	TS	D	AQ	9,071,163	L: 67,000	0	VAR S2	Approved	Yes	Yes	2 years
PARK24 Co., Ltd.	General	F	AQ								
Hankyu Hanshin Holdings, Inc.	TS	Private	NR	Non-public							
East Japan Railway Company	TS	B	AQ	1,380,000	M:1,360,000	13	VAA S1,S2	No	Yes	Yes	No
Hitachi Transport System, Ltd.	General	F	NR								
Fukuyama Transporting Co., Ltd.	TS	F	NR								
Mitsubishi Logistics Corporation	General	F	NR								
Yamato Holdings Co., Ltd.	General	D	AQ	657,358	M:278,898	10		2 years	No	2 years	No

- a Listed in Japanese syllabary order by major business. Legal personality omitted.
- b CH: Chemicals
 FBT: Food, Beverage & Tobacco
 EPM: Transport Engine Part Manufacturers
 EU: Electric Utilities
 FBT: Food, Beverage & Tobacco
 M&M: Metals & Mining
 O&G: Oil & Gas
 OEMs: Transport Original Equipment Manufacturer
 P&F: Paper & Forestry
 TS: Transport Services
- c N/S: Not Scored
 Private: Score is not public
 SA: See Another
- d AQ: Answered Questionnaire
 DP: Declined to Participate
 NR: Not Responded
 SA: See Another
- e L: Location-based emissions
 M: Market-based emissions
- f Number of the Scope 3 categories that companies responded as:
 -'Relevant, calculated' and report evaluation methodology and emission data.
 -'Not relevant, calculated' and report evaluation methodology and emission data.
 -'Not relevant, explanation provided' and explain why not relevant.
- g VAR: Verification/Assurance reported; companies have reported that they have verification complete or underway with last year's statement available but the verification statement provided has not been awarded the full performance points available, or they have not been scored and therefore their verification statement has not been assessed.
 VAF: Verification/Assurance reported as underway, first year; companies have reported that they have verification underway but that it is the first year they have undertaken verification. In this case there is no verification statement available for assessment.
 VAA: Verification/Assurance approved; companies have reported that they have verification complete or underway with last year's certificate available and they have been awarded the full performance points available for their statement.
 S1: Scope 1; verification/assurance applies to Scope 1 emissions.
 S2: Scope 2; verification/assurance applies to Scope 2 emissions.
 S3: Scope 3; verification/assurance applies to Scope 3 emissions
 -: Less than 70% of the reported emission is verified.
- h Approved: Approved as SBT
 Not approved: Not approved as SBT
 2 years: haven't set SBT but setting one in the next two years
 No: don't set SBT or anticipate setting one in the next two years.
- i Yes: regulated by a carbon pricing system.
 3 years: not regulated by a carbon pricing system, but anticipate to be so in the next three years.
 No: not regulated, and not anticipate to be so in the next three years.
- j Yes: use an internal price on carbon
 2 years: don't use an internal price on carbon, but anticipate to do so in the next two years.
 No: don't use an internal price on carbon, and not anticipate to do so in the next two years.
- k quantitative/qualitative: use scenario analysis quantitatively and qualitatively.
 quantitative: use scenario analysis quantitatively.
 qualitative: use scenario analysis qualitatively.
 2 years: don't use scenario analysis but anticipate doing so in the next two years.
 No: don't use scenario analysis, and don't anticipate doing so in the next two years.

Report writer and Scoring partner



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