

CDP Japan Water Security Report 2019

On behalf of 525 institutional investors with assets of USD 96 trillion



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Please note that the names of companies in the text do not indicate their corporate status.

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CEO FOREWORD



This year needs to herald the start of a super decade of environmental and climate action. Limiting warming to 1.5°C means radically reducing industrial water demands and impacts.

Water is at the front line of the environmental crisis and has been for more than a decade, driven by increasing demand, worsening pollution, and poor governance of water from both public and private sectors. Climate change is shifting rainfall patterns and hydrological cycles, exacerbating the already perilous situation.

Places and profits felt the brunt of the water crisis in 2019. In Caracas, Chennai and Harare millions of people's taps ran dry and disease outbreaks often followed. In October, Anglo American, one of the world's largest miners, saw a 28% drop in copper production amid the worst drought to hit Chile in sixty years¹. Meanwhile, in Chennai, one of the fastest growing economies in the world, large companies had to pay 30% more for water to be trucked to their offices and factories².

Warnings conveying the urgency of the crisis are coming from all angles: the World Resources Institute has revised its predictions of the water supply-demand deficit to 56% by 2030³; Moody's rang the alarm over the economic threat that drought and water stress poses to New South Wales, Australia⁴, and the World Bank has called attention to the economic, health and environmental damage caused by contaminated water⁵.

Companies in the food, textile, energy, industrial, chemicals, pharmaceuticals and mining sectors wield enormous influence over freshwater use and pollution globally. How these companies choose to grow will have a significant impact on freshwater resources. Their activities will make or break our ability to deliver a water-secure, zero-carbon future.

2020 is a critical year. Five years on from the launch of the UN SDGs and the Paris Agreement, the time has come for companies to take deeper, faster and more ambitious action in response to the global water crisis and unleash the transformation needed before 2030. This year needs to herald the start of a super decade of environmental and climate action.

Limiting warming to 1.5°C means radically reducing industrial water demands and impacts.

We are already seeing great examples of water leadership. The number of the world's biggest companies to have reached CDP's Water A List has doubled in the past year. It's also encouraging to see a majority of responding companies now setting corporate level goals or targets.

Yet, action is missing on vital issues. Businesses are failing to make the transition required to address the unfolding crisis. Globally, it is estimated that around 80% of wastewater is released back into the environment untreated⁶. And our analysis indicates that less than half of respondents regularly meter and monitor the quality of their discharges, while just 12% have set a water pollution reduction goal or target. This is a missed opportunity, not only for managing regulatory, litigation and reputational risks linked to poor management of dirty water, but also because wastewater is a valuable resource, largely untapped.

Transparency is the foundation for meaningful water action and business credibility. In 2019, companies representing a quarter of global market capitalization disclosed water security information through CDP. Disclosure of quality data leads to smarter decisions and informs investors, companies and governments of the actions they need to take. Our data will be key to providing insight into how improvements in corporate governance mechanisms translate into action and impact.

But, growing corporate action alone is not enough. Governments must urgently step up their ambition to give businesses the clarity and confidence they need to invest in a water-secure future. Those who act first on water will seize the benefits of the transition. CDP will continue to play its part by setting the standard and providing the tools to help us make the transition together. 2020 must be the year we all step in, without delay, and ramp up global ambition on water security.

Paul Simpson
CDP CEO

¹ <https://www.reuters.com/article/us-anglo-american-results/anglo-american-output-held-back-by-chile-drought-diamond-weakness-idUSKBN1ZM0WN>

² Living Planet Report, 2018: Aiming higher, WWF

³ <https://www.reuters.com/article/us-global-water-breakingviews/breakingviews-an-ever-drier-world-will-unleash-investment-flood-idUSKBN1Z51MD>

⁴ <https://www.moody's.com/research/Moodys-Climate-related-risks-pose-long-term-credit-challenge-for-PBC-1211485>

⁵ World Bank, 2019, "Quality Unknown: The invisible Water Crisis".

⁶ https://unesdoc.unesco.org/ark:/48223/pf0000247153_eng

Message from report writer

KPMG AZSA Sustainability Co., Ltd



The process of responding to CDP's Water Security questionnaire will not only help to provide more useful information to investors but will also be instrumental for companies themselves to keep up with the current global discussions related to water.

In 2019, many areas including Australia and Chennai, India, suffered from severe droughts, while countless other parts of the world, including Japan and the US Midwest, were hit by floods. While the freshwater resources available to us are finite, many factors, including population growth, economic growth, and changes in consumer tastes and consumption patterns are expected to boost the demand for freshwater worldwide in future. Another concern is that shifting rainfall patterns due to climate change, together with spreading urbanization and changes in land uses, make many areas more prone to floods. It can be said that in the words of Mr. Peter Bakker, CEO of the World Business Council for Sustainable Development (WBCSD), the "planet is screaming at us, and the language it uses is water."

Freshwater resources are essential for many companies to produce products and for the production of the raw materials they procure, therefore, a widening gap between freshwater demand and supply will inevitably affect companies' profits. Torrential rain and flood will not only have direct physical impact on companies' manufacturing facilities, but also indirectly affect their production activities through disruptions in supply chain and transport networks. In fact, there has been a rising interest among institutional investors concerning the impacts of water on companies' financial performance.

Before the launch of CDP's Water Security program, the means for investors and other company stakeholders to understand individual companies' water risks were very limited. CDP's Water Security program has now become a valuable source of information for institutional investors to obtain an understanding of companies' water-related risks and opportunities. CDP's global Water Security program is in its tenth year, and the CDP Japan Water Security program targeting Japanese companies is in its sixth year. We at KPMG Japan are honored to be able to contribute to CDP Japan's Water Security program for the sixth consecutive year.

This year, responses were obtained from 194 companies (61%) out of the 320 companies invited to respond to the water questionnaire, and voluntary responses were obtained from 11 companies.

There is still more to be discussed about how companies should assess risks, what actions should be taken, and what information should be disclosed. We expect, as such discussions progress, some consensus on the approach to water risk assessment, actions, and disclosure will be formed in due course. Discussion on how water targets should be set will also intensify, and we will see more and more companies starting to set water targets that are informed by catchment context.

The process of responding to CDP's Water Security questionnaire will not only help to provide more useful information to investors but will also be instrumental for companies themselves to keep up with the current global discussions related to water.

KPMG leverages its professionals' expertise and experience to assist companies in responding to sustainability challenges such as water and climate change, through its Climate Change and Sustainability Services (CC&S) network. We, as the CC&S practice in Japan, will provide Japanese companies with assistance in identifying and evaluating water risks, establishing and implementing water policy and strategy, and reporting on performance, while providing continued support to CDP's Water Security program.

Kazuhiko Saito
Managing Partner
KPMG AZSA Sustainability Co., Ltd

Water Security A List 2019

- 72 companies worldwide made the Water Security A List
- The number of A-list companies in Japan is 23, the highest in the world.

Company	Country
Biotech, Health Care & Pharma	
Shionogi & Co.	Japan
AstraZeneca	UK
Bayer AG	Germany
Johnson & Johnson	USA
Koninklijke Philips NV	Netherlands
Novartis	Switzerland
Food, Beverage & Agriculture	
Asahi Group Holdings	Japan
Japan Tobacco Inc.	Japan
Kikkoman Corporation	Japan
Kirin Holdings Co Ltd	Japan
Suntory Beverage & Food	Japan
Altria Group, Inc.	USA
Anheuser Busch InBev	Belgium
Coca-Cola European Partners	UK
Coca-Cola HBC AG	Switzerland
Danone	France
Diageo Plc	UK
General Mills Inc.	USA
Philip Morris International	USA
Vina Concha y Toro S A	Chile
Hospitality	
Las Vegas Sands Corporation	USA
Infrastructure	
Tokyo Gas Co.	Japan
City Developments Limited	Singapore
Manufacturing	
Hitachi	Japan
Kubota Corporation	Japan
Mitsubishi Electric Corporation	Japan
Nissan Motor Co.	Japan
Sony Corporation	Japan
Toyota Boshoku Corporation	Japan
Toyota Motor Corporation	Japan
Yokogawa Electric Corporation	Japan
Brembo SpA	Italy
CNH Industrial NV	UK
Ford Motor Company	USA
General Motors Company	USA
HP Inc	USA
Hyundai Motor Co	Republic of Korea

Company	Country
Klabin S/A	Brazil
Mondi PLC	UK
SK Hynix	Republic of Korea
Stanley Black & Decker, Inc.	USA
Volkswagen AG	Germany
Materials	
AGC	Japan
KAO Corporation	Japan
LIXIL Group Corporation	Japan
Nissan Chemical Industries	Japan
Toray Industries	Japan
Air Liquide	France
Anglo American Platinum	South Africa
BASF SE	Germany
Braskem S/A	Brazil
Empresas CMPC	Chile
ETİ SODA A.Ş.	Turkey
FIRMENICH SA	Switzerland
Givaudan SA	Switzerland
Impala Platinum Holdings	South Africa
International Flavors & Fragrances Inc.	USA
Lonmin	South Africa
L'Oréal	France
Owens Corning	USA
Symrise AG	Germany
Unilever plc	UK
UPM-Kymmene Corporation	Finland
Power generation	
Companhia Energetica Minas Gerais - CEMIG	Brazil
Dominion Energy	USA
EDP - Energias de Portugal S.A.	Portugal
Pinnacle West Capital Corporation	USA
Retail	
Sumitomo Corporation	Japan
J Sainsbury Plc	UK
Services	
Fujitsu Limited	Japan
NEC Corporation	Japan
Ecolab Inc.	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.

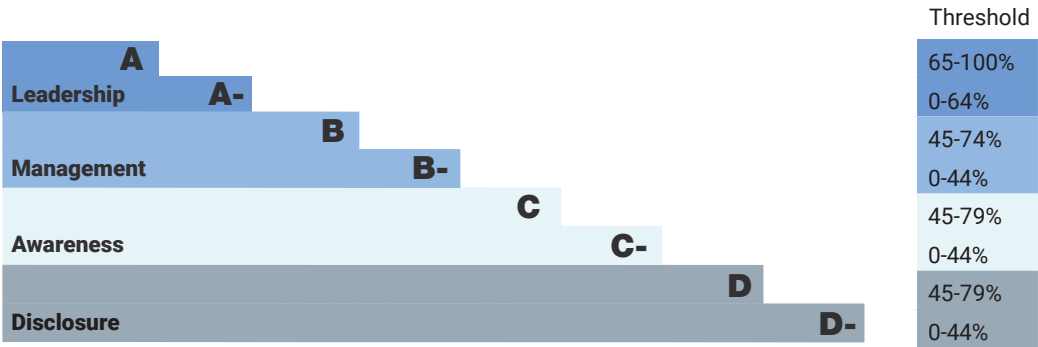
CDP's 2018 questionnaires take a sector focused approach, under this new approach, each of CDP's questionnaires has general questions alongside sectorspecific question aimed at high impact sectors.

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 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-confictof-interest>.



F: Failure to provide sufficient information to CDP to be evaluated for this purpose²

² 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.

Kao Corporation

Chemicals and Cosmetics, Japan



We're facing the greatest threats in history, global challenges like climate change, resource scarcity and plastic pollution are leading consumers around the world to seek a more sustainable way of living. Through our products and presence in everyday life, we know that we have an increasingly important role to play in delivering more sustainable products and empowering consumers to live more sustainable lifestyles.



Kirei — Making Life Beautiful



Tips for success

- ▼ Committing to a consumer-centric ESG strategy (The Kirei Lifestyle Plan) that focuses on both the individual and society as a whole
- ▼ Set ambitious long-term commitments that are focused on your material issues and aligned with your corporate purpose.
- ▼ Collaborate with key partners to share goals and develop joint initiatives to reduce your emissions and accelerate progress on other targets.
- ▼ Support your sustainability strategy with clear targets for each division in your organization, and activities that outline how your employees can contribute towards these
- ▼ Commit to research and development to meet the increasing demand for sustainable living.

The world is changing fast, so the way we work needs to change even faster. We're facing the greatest threats in history: global challenges like climate change, resource scarcity and plastic pollution are leading consumers around the world to seek a more sustainable way of living. Through our products and presence in everyday life, we know that we have an increasingly important role to play in delivering more sustainable products and empowering consumers to live more sustainable lifestyles.

Since we were founded in 1887, Kao has been committed to serving people, their families, their communities and our planet, while helping them live more sustainably – we call this philosophy the Kao Way. It's why we have developed and committed ourselves to a new ESG (Environmental, Social, and Governance) strategy called the Kirei Lifestyle Plan. 'Kirei' means beautiful and clean, both on the outside and on the inside.

As part of achieving this, we've developed a highly concentrated liquid detergent with high washing power which means only one rinse cycle is needed, reducing water and cutting energy use. Similarly, we make our dishwashing detergents with foams that lather and rinse quicker, helping our consumers reduce the amount of water they use by 20%.

Working within the beauty and personal care industry, we're also acutely aware of the serious impact of plastics on our natural environment and the need for urgent action to reduce their level of use and ensure that those we do use are always re-used or recycled. That's why we have launched refill packaging for almost 300 of our products, resulting in a 73% decrease in plastic packaging use in personal care and household in 2018, compared to a 'do nothing' scenario.

To decrease our environmental impact and reduce our carbon emissions even further, we're now using 100% renewable electricity in our manufacturing sites across Europe and the US, as well as in Ehime in Japan, and have committed to purchasing 100% renewable electricity supplies across all our sites by 2030. Through such measures, renewable energy now accounts for 20% of our global power consumption. This has resulted in an approximate 65,000-ton annual reduction in our CO2 emissions (2018).

Another key issue we are dedicated to addressing through the Kirei Lifestyle Plan is deforestation. We have already achieved 100% in traceable paper and pulp use in Kao consumer products and packaging. And by 2020, we aim to purchase only recycled or sustainably sourced paper for use in our products, our packaging materials and our offices.

Additionally, we use questions from the CDP programme to assess our suppliers, evaluate the sustainability of their practices and provide consultation to help them improve their management of these commodities. We are now in our second year of this CDP SC Forest assessment process and believe it provides suppliers with concrete ideas for building change.

Moving forward, we will continue improving our operations and reducing our environmental impacts by:


- ▼ building innovative partnerships to improve traceability of commodities that are used across our product line, such as palm oil;
- ▼ working more closely with the smallholder farmers who supply us to ensure their practices are environmentally responsible and sustainable;
- ▼ and driving further innovation in water and materials efficiency through our products, operations and supply chain.

We dedicate all our operations to enabling our consumers to live more sustainably and make a positive contribution to the world, as envisioned by the United Nations Sustainable Development Goals. Through our Kirei Lifestyle Plan, we will continue to realise our commitment to making every day more beautiful, making thoughtful choices for society, and making the world healthier and cleaner.


Dave Muenz, Executive Officer, ESG Global, Kao Corporation

Japan Tobacco Inc.

Food, Beverage & Agriculture, Japan



To create a sustainable and inclusive future, we consider the respective interests of consumers, shareholders, employees, and wider society.



Tips for success

- ▼ Consider various stakeholders: our 4S model places the expectations of our stakeholder groups (consumers, shareholders, employees, society) at the heart of everything we do.
- ▼ Focus on the important topics: we have identified and prioritized sustainability issues material to our business and our stakeholders.
- ▼ Establish a sustainability strategy with long-term targets: we look beyond our usual planning cycle to consider the longevity of our business as well as the future of our planet.
- ▼ Develop clear plans and metrics to achieve your strategy: we implemented the JT Group Environment Plan 2030 to further reduce the environmental impacts of our business.
- ▼ Promote initiatives by forming cross-functional teams: crossfunctional approaches provide us with different perspectives to address risks and realize opportunities.

JT Group has offices and factories in more than 70 countries and regions and we sell our products in more than 130. In addition to our tobacco business, we have pharmaceutical and processed food businesses.

Our management principles and our approach to sustainability are governed by our 4S model. Through this, we strive to fulfill our responsibilities to our valued consumers, shareholders, employees, and the wider society. We carefully consider the respective interests of these four key stakeholder groups, and exceed their expectations wherever we can. JT Group's CEO, Masamichi Terabatake explains: "Sustainability calls for our management to have a broad long-term perspective, and to ensure the business continues to create value, thus ensuring the sustainability of our business and of society, over the long term."

With sustainability at the heart of our management approach, we reviewed our organizational structure in early 2019. We created a Sustainability Management Division at the JT Group head office in Tokyo and appointed a dedicated Senior Vice President for Sustainability. This followed the launch of our Sustainability Strategy in 2018.

Our strategy is underpinned by three 'absolute requirements' for sustainability which apply to the whole Group: Respect for Human Rights, An Improved Social and Environmental Impact, and Good Governance and Business Standards. We then identified key focus areas through materiality assessments and engagement with stakeholders. Our core business, tobacco, has already set out its four focus areas and specific targets, which provide a solid basis for measuring and benchmarking our sustainability performance, and support the sustainability of the JT Group. As of December 2019, our pharmaceutical division and processed food business are currently defining their respective approaches.

In addition, we have determined how our approach to sustainability is aligned with the United Nations Sustainable Development Goals (SDGs), which form the blueprint for the world to achieve a more sustainable future. We mapped the activities of our tobacco business against all 17 SDGs and concluded that the business contributes most significantly to nine of them. We intend to undertake the same process for the other two businesses in the Group.

To translate into action the absolute requirement for 'Improved environmental impact', we have published a new Group Environmental Policy. This outlines our overall intention and direction in relation to how we manage our environmental impact. In turn, the Policy is supported by our new 'JT Group Environment Plan 2030' which we launched in mid-2019.

To develop the plan, we identified our key environmental risks and opportunities. From these, we established the focus areas, namely "Energy and Emissions", "Natural Resources" (water and forestry) and "Waste". Our Plan contains longer-term objectives for energy and emissions, along with quantified targets to be achieved by 2030 for all focus areas. It also sets out a commitment to transition our operations to net zero carbon energy supply. To help track our performance, we have also set a long-term Greenhouse Gas emissions reduction target, in line with the Paris Agreement and which was validated by the Science Based Targets initiative (SBTi) in February 2019. Going forward, we will be conducting climate scenario analysis to provide a longer-term perspective on risks from climate change and how we need to manage those risks.

Within an organization of the scale and complexity of the JT Group, no single function can implement our Sustainability Strategy and Group Environment Plan alone. We promote cross-functional working in terms of geographies, businesses and departments. By doing this, we better identify our risks and opportunities, implement robust action plans to address these, and share learnings and good practices. These are all essential to deliver on our sustainability commitments.

Executive Summary

61%

Response rate of
Japanese Companies
(194/320)



Companies will be expected to redouble their efforts in tackling water issues in order to respond to ever more accelerated investment activities of investors in relation to water.



This year marks the sixth year of CDP's Water Security program for Japanese companies. In 2019, CDP's Water Security questionnaire was sent to 320 Japanese companies, selected based on market capitalization, and out of these, 194 companies (61%) responded, including four companies whose parent company responded on their behalf. An additional 11 companies voluntarily provided responses to CDP's Water Security questionnaire. This report outlines the results of the analysis of information provided by these 201 companies, including voluntary responses from those 11 companies.

Key Findings

Response rate of Japanese companies

Of the 320 companies invited to respond, 194 (61%) did so. The response rate remained in line with the 60% seen last year. Voluntary responses were received from 11 companies, which remained the same as the previous year. Among the Industries such as Materials (Chemicals and Metals and mining are included), Food, beverage & agriculture, Power generation and Fossil fuels, which are generally considered to be most exposed to water risks, the response rates of the Materials and Fossil fuels are high – 71% and 80% respectively – but that of Food, beverage and agriculture is around average – 60% and that of the Power generation is below the overall response rate – 20%. Given that the information needs of investors related to water are expected to be higher for these sectors, it is hoped that response rates will improve in these sectors.

Engagement with value-chain partners

Of those Japanese companies that recognize the importance of water availability for indirect use, 76% engage with their value-chain partners, such as suppliers, on water-related issues. Among all sectors, as many as 76% of the companies in the Food, beverage & tobacco sector are engaging with value-chain partners. Their engagement may be prompted mostly by a desire to ensure stable sourcing of agricultural raw materials, but there are also companies that provide producers with support in order to minimize damages to the environment associated with the production of the agricultural commodities they purchase.

Awareness of water risks and opportunities

Based on results of water risk assessments, 71% of respondents identify “water-related risks with the potential to have a substantive impact on business” either in direct operations or value chains, or in both. This is a 5-point increase from the previous year. The companies that are aware of water-related opportunities also increased 1

point to 74%.

In response to water risks identified in direct operations, many companies have adopted water efficiency, reuse, recycling, and conservation practices, or have developed flood emergency plans. On the other hand, supplier diversification and the amending of business continuity plans are commonly reported as primary responses to risks in value chains.

Governance and strategies

78% of respondents have a documented water policy that is publicly available and 87% report that there is board-level oversight of water-related issues within the company. Only a fraction of companies fully uses scenario analysis and internal pricing on water.

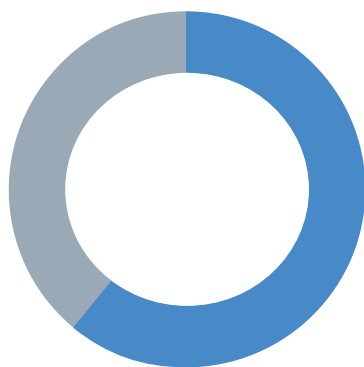
Quantitative targets and qualitative goals

148 companies (74%) set both quantitative targets and qualitative goals, while only 22 companies (11%) have neither. Most companies have quantitative targets concerning water use.

Conclusion

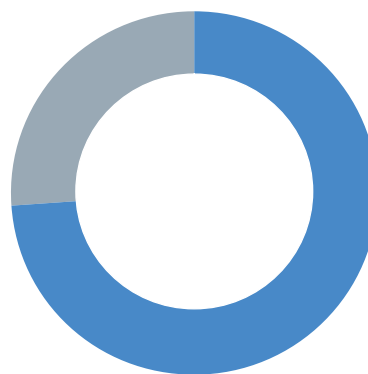
With an increase in water-related extreme events such as droughts and floods in recent years, the total annual cost of damages worldwide is projected to soar. In the future, there will be more cases where the business performance of a company is greatly affected by the manifestation of water risks. Against this backdrop, institutional investors' interest in the impact of water on a company's bottom line is rising.

Companies will be expected to redouble their efforts in tackling water issues in order to respond to ever more accelerated investment activities of investors in relation to water. Such efforts would include in-depth water risk assessments in proportion to the level of potential water risks, target setting considering properties of the watershed in which a company site is located, engagement with stakeholders and value-chain partners, the use of internal pricing on water, and contribution to solving water-related social challenges through products and services. In fact, quite a few Japanese companies are taking a forward-looking approach, as seen in the examples cited in this report. Using those examples as a reference, companies should make further efforts in the assessment of risks and opportunities, target setting, responses to risks and opportunities, and disclosure of information in proportion to their level of water-related risks and opportunities.



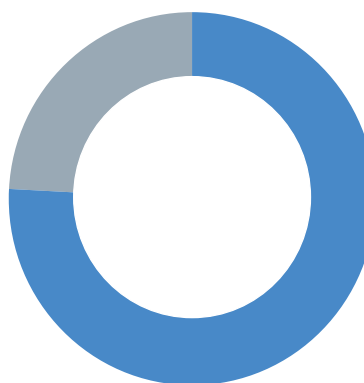
61%

Response rate of Japanese companies
(194/320)



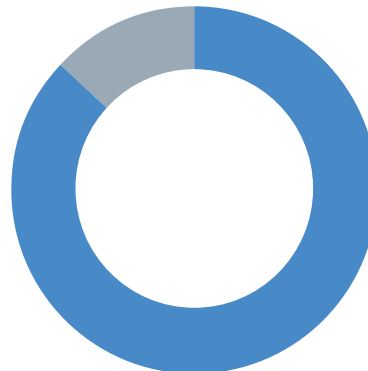
74%

Proportion of companies identifying water-related opportunities with the potential to have a substantive impact on business
(149/201)



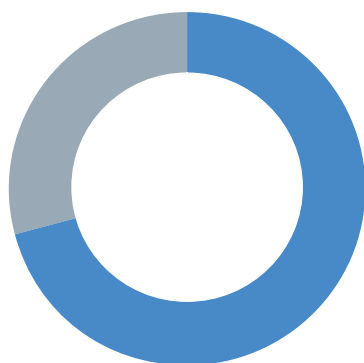
76%

Proportion of companies engaging with value chain
(131/172)



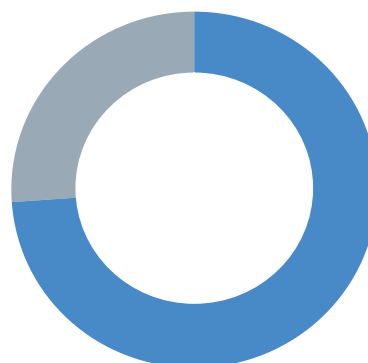
87%

Proportion of companies having board level oversight of water-related issues
(174/201)



71%

Proportion of companies identifying water risks with the potential to have a substantive impact on business
(142/201)



74%

Proportion of companies having both quantitative targets and qualitative goals
(148/201)

Response to CDP's Water Security Questionnaire

Overview of responses

The response rate of Japanese companies was 61%

Of the 320 invited companies, 194 (61%) responded to the questionnaire, including four companies whose parent company responded on their behalf. Voluntary responses were received from 11 companies, which remained the same as the previous year.

Difference in attitudes toward water disclosure

Among the Industries such as Materials (Chemicals and Metals and mining are included), Food, beverage & agriculture, Power generation and Fossil fuels, which are generally considered to be most exposed to water risks, the response rates of the Materials and Fossil fuels are high – 71% and 80% respectively – but that of Food, beverage and agriculture is around average – 60% and that of the Power generation is below the overall response rate – 20% (Table 1). This could probably be explained by country-specific factors. For example, electric utilities in Japan, which typically use seawater as cooling water, face lower water risks than their peers overseas whose power plants are located inland. Given that the information needs of investors related to water are expected to be higher for these sectors, it is hoped that response rates will improve in these sectors.

Unless otherwise noted, the following sections outline the results of an analysis of information provided by 201 companies, including voluntary responses from 11 companies.

Importance of Water

Freshwater availability for direct/indirect use is important for many companies

Japanese companies that report having sufficient amounts of high quality freshwater available for use is important ("Vital" or "Important") are 86% for direct use and 80% for indirect use. Freshwater availability for direct/indirect use is important for many companies.

Engagement with Value-chain partners

Engagement with Value-chain partners

Of those Japanese companies that recognize the importance of water availability for indirect use, 76% engage with their value-chain partners, such as suppliers, on water-related issues. Of those companies, 27% engage with suppliers and partners in other stages of the value chain, 35% only with suppliers, and 14% only with partners in other stages of the value chain.

Among all sectors, as many as 76% of the companies in the Food, beverage & tobacco sector are engaging with value-chain partners. One of the possible reasons for this high percentage would be that, while it is crucial for the operations of companies in this sector

to secure stable sourcing of agricultural raw materials, there is also an increased risk of crop yields being affected by droughts and floods with the acceleration of climate change. It should also be noted that there are companies that provide producers with support in order to minimize damages to the environment associated with the production of the agricultural commodities they purchase. **The Fuji Oil Group**, for example, is working with NGOs to provide training to small palm producers operating in ecologically rich riverine areas in the Sabah state of Malaysia in an effort to improve the producers' productivity and to prevent an overapplication of fertilizer, which causes soil and water pollution.

Monitoring

All companies monitor water withdrawals, but 8% do not specifically monitor withdrawals from water-stressed areas

Of those Japanese companies that to some extent recognize the importance of water availability for direct use, 68% regularly monitor water withdrawals at all their business sites, and no companies do not monitor water withdrawals at all (Figure 1). On the other hand, 8% of respondents have never specifically monitored "water withdrawals volumes from water stressed areas" on a regular basis, with only 53% monitoring them at all sites. This suggests that quite a few companies have not yet systematically identified water-stressed business sites or, if they have, do not conduct proper monitoring of water withdrawals from water-stressed areas.

As to the proportion of withdrawals sourced from water-stressed areas, the largest number of companies report "less than 10%" (53%) followed by "no business sites in water-stressed areas" (17%) and "10% or more but less than 20%" (13%) (Figure 2).

Only 41% of respondents monitor the volume of total water use that is recycled or reused at all sites

Only 41% of respondents monitor the volume of total water use that is recycled or reused at all sites. This may suggest that the definition of water recycling/reuse is not always clear to companies, or that keeping track of the total volume of water recycled/reused is challenging in practice.

Similarly, no more than 34% have monitored the effluent temperature at all sites. This could be because not many facilities are legally required to monitor the temperature of effluent, or because it does not always make sense for companies that are not involved in operations producing thermal discharge, such as thermal power generation, to monitor the temperature of effluent.

Table 1. Response to CDP's 2019 Water Security questionnaire (by sector)

Sector	Invited (n)	Responses (n)	Response rate (%)
Biotech, Health Care & Pharma	30	19	63%
Food, beverage & agriculture	30	18	60%
Fossil fuels	5	4	80%
Hospitality	6	1	17%
Infrastructure	20	4	20%
Manufacturing	120	90	75%
Materials	58	41	71%
Power generation	10	2	20%
Retail	33	11	33%
Servies	8	4	50%

Figures include companies whose parent company responded and do not include companies that voluntarily responded.

Figure 1. Water aspects monitored (N=182)

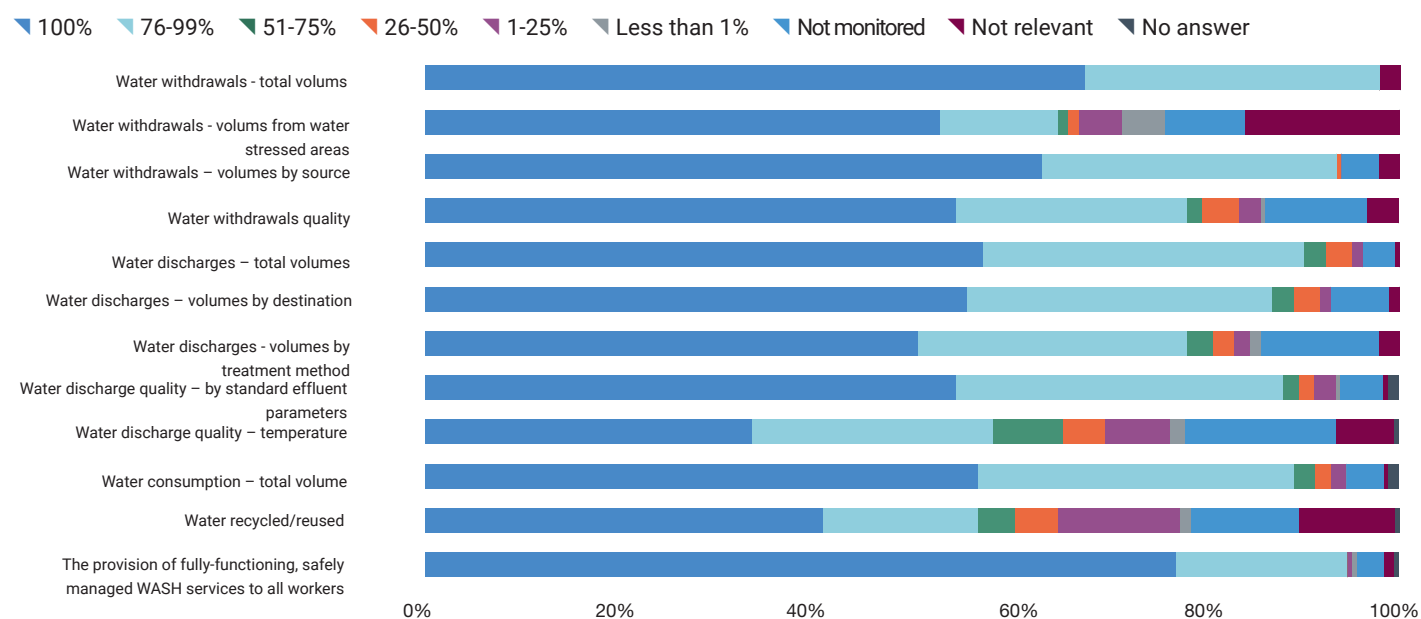
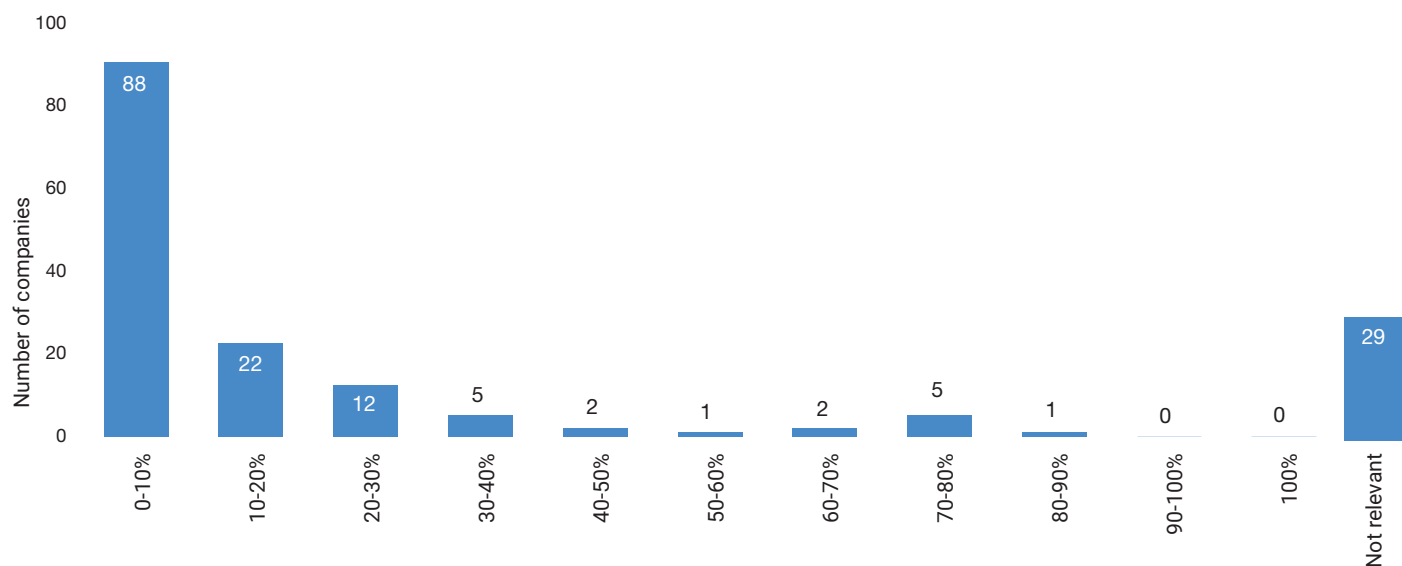


Figure 2. Proportion of total withdrawals sourced from water-stressed areas (N=167)



Water Risk Assessment

91% of respondents assess water risks

91% of respondents assess water risks. Of those companies, all assess water risks in direct operations, whereas only 71% do so in their supply chains (Figure 3). Even fewer companies (34%) include value-chain partners other than suppliers in their water risk assessment. Regarding the frequency of the assessment, respondents most commonly assess water risks annually.

Many companies rely on water risk assessment tools

Many companies rely on one or more water risk assessment tools, especially when assessing water risks in direct operations (Table 2). Of those, 120 companies use WRI Aqueduct and 37 use WWF-DEG Water Risk Filter. As part of the updates made to these two tools in the last two years, Aqueduct's Baseline Water Stress is now available in Water Risk Filter (see Box 1 for details). With the harmonization between the two tools and improved reliability and usability, more and more companies are expected to start using

these tools.

Fewer than 70% always take into account stakeholder conflicts in their water risk assessment

Nearly 90% of respondents report that they always consider water availability and water-related regulatory frameworks in assessing water risks (Figure 4). In contrast, fewer than 70% always take into account the status of ecosystems and habitats or stakeholder conflicts concerning water resources in their water risk assessment.

More than 80% of respondents report regulators, local communities, employees, and customers as stakeholders that are always considered when assessing water risks (Figure 5).

Box 1 Aqueduct and Water Risk Filter

WRI Aqueduct and WWF-DEG Water Risk Filter, which are two of the most frequently used water risk assessment tools, have been updated in the last two years.

The updated Aqueduct 3.0 now includes in total 13 indicators, among which Baseline water stress, Baseline water depletion, Interannual variability, Seasonal variability and Groundwater table decline are based on the outputs of a global hydrological model⁸. GLDAS-2 was used as the hydrological model in Aqueduct 2.1, but Aqueduct 3.0 now uses PCR-GLOBWB 2, which can provide information for more recent years. Among the above five indicators, Baseline water stress (BWS), which measures the ratio of total water withdrawals to available renewable surface and groundwater supplies, is often used to evaluate water stress. It should be noted that, due to a change in the hydrological model adopted, Aqueduct 3.0 produces BWS results that are different from those produced by Aqueduct 2.1.

Water Risk Filter 4.0, which was superseded by the new Water Risk Filter 5.0, included "Annual average monthly net water depletion", which essentially measures the ratio of total water consumption to available water supplies and hence is similar to Aqueduct's BWS. A similar indicator "Water depletion risk" is still available in Water Risk Filter 5.0, but on top of this, Aqueduct's BWS is now available in Water Risk Filter 5.0.

It should be welcome news that the two most widely used water risk assessment tools have been harmonized and have become more reliable and easier to use. More and more companies are expected to start using these tools.

It is nevertheless important to keep in mind the limitations in what can be achieved with water risk assessment tools. As WRI stresses, water risk assessment tools should be used as prioritization tools, after which deeper dive assessments should be conducted to understand local conditions with greater accuracy.

⁸ Hofste, R., S. Kuzma, S. Walker, E.H. Sutanudjaja, et. al. (2019) "Aqueduct 3.0: Updated Decision-Relevant Global Water Risk Indicators." Technical Note

⁹ WWF (2019) "Water Risk Filter 5.0 Methodology"

Table 2. Tools/methods used to assess water-related risks (multiple answers allowed)

Tools/methods	Supply chain	Supply chain	Other stages of the value chain
Tools on the market	124	69	23
Enterprise Risk Management	46	34	20
International methodologies	47	39	17
Databases	58	34	13
Other	90	68	33

Figure 3. Water-related risk assessment coverage (N=182)

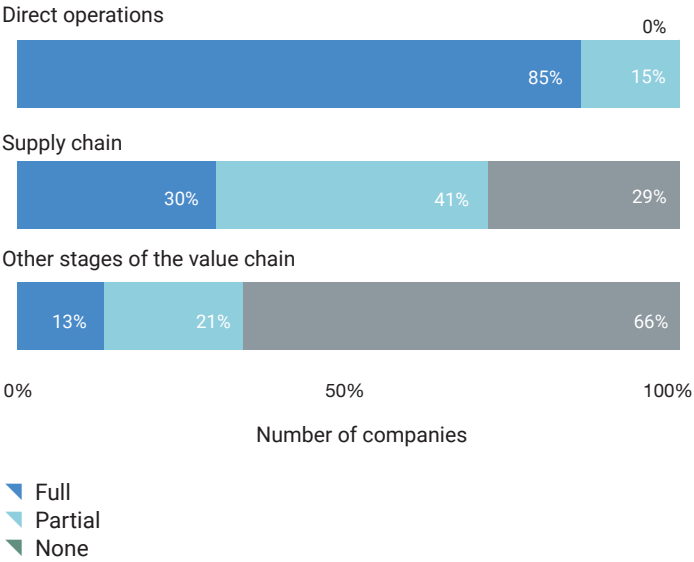


Figure 4. Contextual issues always considered in water-related risk assessments (N=181)

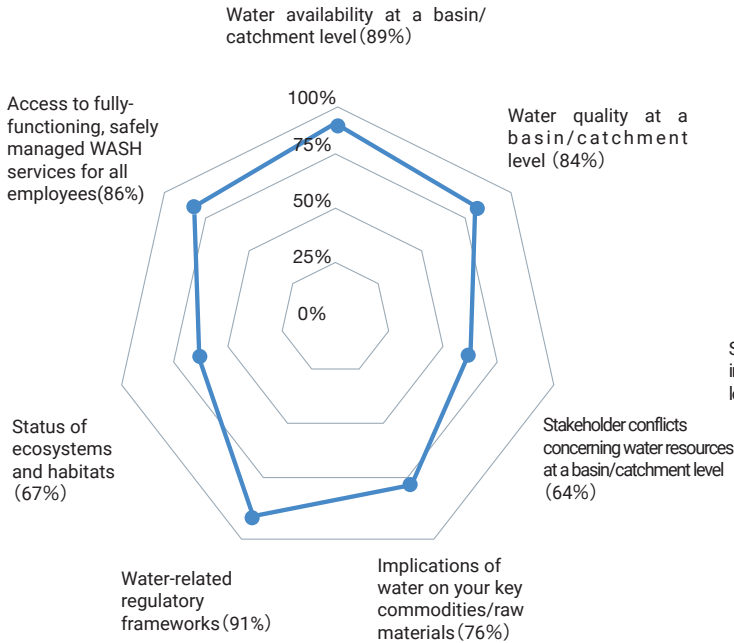
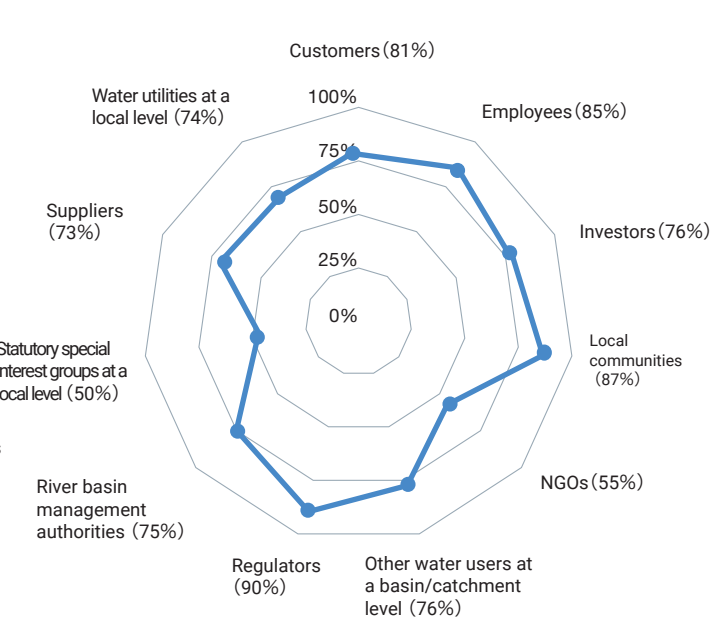


Figure 5. Stakeholders always considered in water-related risk assessments (N=181)



Risks and Opportunities

71% and 74% of respondents identify water risks and opportunities, respectively

As a result of water risk assessments, 71% of respondents identify “water-related risks with the potential to have a substantive impact on business” either in direct operations or value chains, or in both. This is a 5-point increase from the previous year. The companies that identify water-related opportunities also increased 1 point to 74%.

In recent years, it has increasingly become a common practice among Japanese companies to undertake water risk assessments. However, the maturity of assessment of water risks in direct operations and supply chains differs significantly among companies. Moreover, setting the definition of “water-related risks with the potential to have a substantive impact on business” ultimately rests on individual companies, and it is highly possible that Company A could consider a risk to have a potentially substantive impact on business while Company B does not. It is therefore difficult to disentangle factors behind the increase in companies identifying water risks with a potentially substantive impact on business.

Water risks in direct operations

Countries where exposure to substantive water risks are frequently reported for direct operations include Japan, China, India, Thailand, Indonesia, Mexico and the US (Figure 6).

Quite a few companies cite ‘Flooding,’ ‘Increased water stress,’ ‘Declining water quality’ and ‘Increased water scarcity’ as major water risk drivers in direct operations, and most commonly reported potential impacts on direct operations include ‘Reduction or disruption in production capacity,’ ‘Increased operating costs,’ ‘Closure of operations’ and ‘Reduced revenues from lower sales/output’ (Figure 7).

In order to respond to water risks, many companies ‘adopt water efficiency, water reuse, recycling, and conservation practice’ or ‘develop flood emergency plans.’ **Sumitomo Metal Mining**, for example, at a plant in the Philippines that produces nickel sulfide, recycles water from a tailings dam with a water recycling facility, so that a sufficient amount of water can be secured for production.

Water risks in value chains

Many respondents similarly cite ‘Flooding’ and ‘Increased water scarcity’ as major water risk drivers in value chains. ‘Supply chain disruption,’ ‘Disruption to sales due to value chain disruption’ and ‘Reduction or disruption in production capacity’ are commonly viewed as potential impacts (Figure 8). ‘Supplier diversification’ and the ‘amending of business continuity plans’ are cited by many companies as primary responses to water risks in value chains. Some companies engage with suppliers to address their water-related risks. The Nichirei Group, for example, with an aim to secure a stable supply of acerola produced in Brazil, provides its contract producers with instructions on irrigation and other agricultural techniques, achieving increased output with reduced water input.

Water-related opportunities

Regarding water-related opportunities, many respondents perceive ‘Increased sales of existing products/services,’ ‘Cost savings,’ ‘Sales of new products/impacts,’ ‘Improving water efficiency in operations’ and ‘Increased brand value’ as primary opportunities (Figure 9).

Governance and Strategies

87% of respondents report that there is board-level oversight of water-related issues

Of the companies that responded to the questionnaire, 78% have a documented water policy that is publicly available and 87% report that there is board-level oversight of water-related issues within the company. The positions of individuals on the board that are typically reported to have responsibility for water-related issues include ‘Director on board’ (63 companies), ‘Chief Executive Officer (CEO)’ (46 companies) and ‘President’ (40 companies). 62% of respondents integrate water-related issues into their ‘Long-term business objectives,’ 61% into ‘Strategy for achieving long-term objectives,’ and 51% into ‘Financial planning.’

Only a fraction of companies report that they use internal pricing on water

There is only a fraction of companies that use internal pricing on water in order to quantify, in monetary terms, the ‘true’ value of water, which is not fully reflected in market prices, and incorporate it in their decision making. **Ajinomoto Co., Inc.**, for example, uses monetary evaluation of the carbon and water footprints of raw material crop production with multiple scenarios to examine its research and development options.

Figure 6. Countries with exposure to substantive water risks in direct operations (top 7)
(N=139, multiple answers allowed)

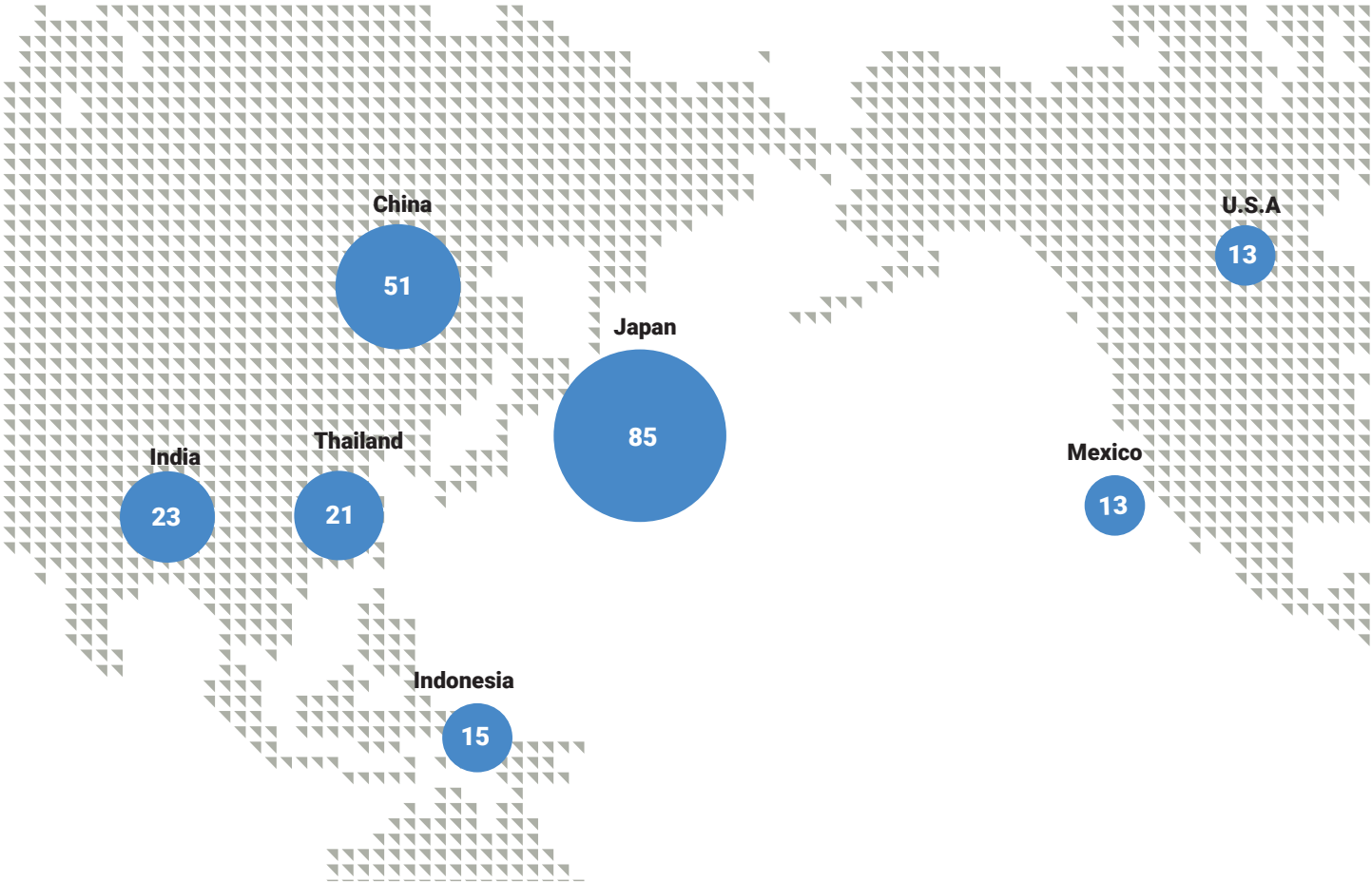


Figure 7. Potential impact on direct operations
(N=139, multiple answers allowed)

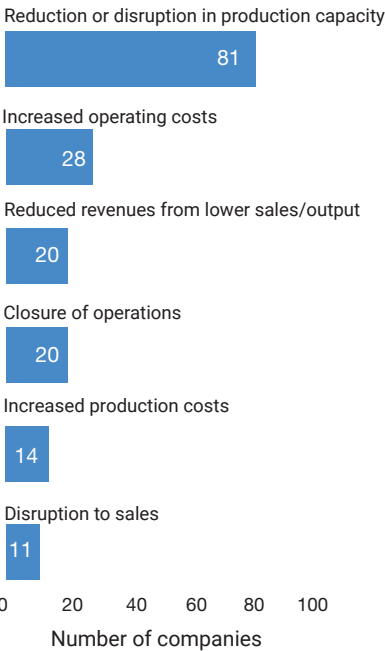


Figure 8. Potential impact on value chains
(N=86, multiple answers allowed)

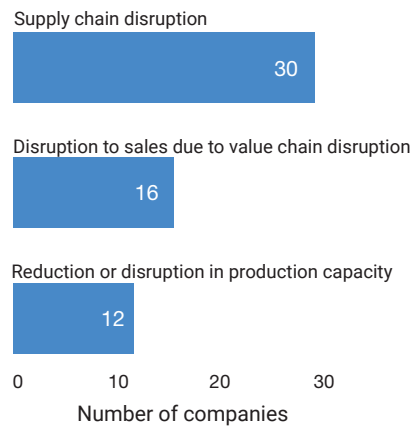
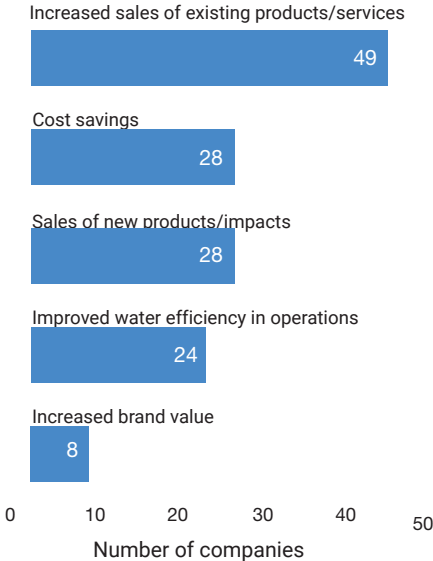


Figure 9. Water-related opportunities (N=138, multiple answers allowed)



Target setting

74% of respondents set company-wide targets and goals

148 companies (74%) set company-wide targets and goals while only 22 companies (11%) have neither.

Many companies set targets related to water use as their quantitative targets

Many companies set quantitative targets related to water use, such as 'Reduction in water withdrawals' (56 companies), 'Reduction in water consumption' (41 companies) and 'Improvement in water use efficiency' (27 companies), but 23 companies cited targets related to reduction of pollution load from wastewater.

Challenges in setting targets and goals

More companies are setting quantitative targets for water, but most are doing so without considering any context of the river basins where they operate. As water is a local resource and the impact of water usage largely depends on various conditions of the river basin, it is likely that the target setting that is informed by the context of the river basin where a facility is located, will be necessary.

A guide for setting site-specific water targets that are informed by catchment context, which was prepared by a project team consisting of UN Global Compact CEO Water Mandate, Pacific Institute, WRI and WWF, among others, was published in August 2019 (see Box 2 for details). Although no detailed methodologies to calculate specific target values are put forward, now that a recommended approach has been presented, it is expected that more and more companies will start setting water targets that are informed by catchment context.

Many companies set qualitative goals concerning ecosystem and habitat restoration

Most commonly reported qualitative goals include 'Watershed remediation and habitat restoration, ecosystem preservation' (26 companies), 'Improve wastewater quality beyond compliance requirements' (16 companies), and 'Providing access to safely managed Water, Sanitation and Hygiene (WASH) in local communities' (10 companies).

Scoring

In CDP's Water Security program, companies are assessed based on their responses to CDP's Water Security questionnaire across four levels: 'Leadership', 'Management', 'Awareness', and 'Disclosure.' If the minimum score threshold for one level is not achieved, the company will not be scored on the next level, and a letter grade is awarded based on the score obtained in the highest achieved level. In addition, weightings that vary for each sector are applied to the scoring categories in the 'Leadership' and 'Management' levels.

In CDP's 2019 Water Security questionnaire, 199 Japanese companies were assessed for scoring, and of those, 23 were included in CDP's Water Security A List. The number of A List companies has significantly increased from 8 included in the previous year, and the overall results also improved, with the majority of the companies receiving a 'B' score.

Conclusion

In recent years, water-related extreme events such as droughts and floods are on the rise, and for floods alone, the total annual cost of damages world-wide is projected to soar from US\$6 billion in 2005 to US\$25 billion by 2050.³ In the future, there will be more cases where the business performance of a company is greatly affected by the manifestation of water risks. Against this backdrop, institutional investors' interest in the impact of water on a company's bottom line is rising, as is clearly demonstrated by a marked increase in the total AUM of signatory institutional investors to CDP's Water Security program, from 57 in 2013 to 90 in 2019. In order for companies' water-related risks to be integrated into investors' actual investment decision making, they must be able to determine how those risks might crystallise. Investor Water Toolkit⁴ released by Ceres in 2017 is precisely the guide to help investors understand the issue. Companies will be expected to redouble their efforts in tackling water issues in order to respond to ever more accelerated investment activities of investors in relation to water. Such efforts would include in-depth water risk assessment in proportion to the level of potential water risks, target setting considering properties of the watershed in which a company site is located, engagement with stakeholders and value-chain partners, the use of internal pricing on water, and

contribution to solving water-related social challenges through products and services. In fact, quite a few Japanese companies are taking a forward-looking approach, as seen in the examples cited in this report. Using those examples as a reference, companies should make further efforts in the assessment of risks and opportunities, target setting, responses to risks and opportunities, and disclosure of information in proportion to their level of water-related risks and opportunities.

¹⁰ <https://www.nature.com/nclimate/journal/v3/n9/abs/nclimate1979.html>

¹¹ <https://www.ceres.org/resources/toolkits/investor-water-toolkit?toolkit=view>

Box 2 Site Water Targets Informed By Catchment Context

A guide for setting site-specific water targets that are informed by catchment context, which was prepared by a project team consisting of UN Global Compact CEO Water Mandate, Pacific Institute, WRI and WWF, among others, was published in August 2019.

For greenhouse gas emissions, the location of the emissions makes no difference in terms of the impact on the climate, since the emissions are eventually mixed in the atmosphere. It thus makes sense for companies to set a group-wide emissions reduction target and to try to reduce emissions, wherever economically feasible, taking into account, for example, regulatory environments and reduction opportunities at each factory. In contrast, whether a company withdraws water where it is plentiful or where it is scarce could make a significant difference in terms of the impact on the aquatic ecosystem, even if the company withdraws exactly the same amount of water. Therefore, it makes more sense for a company to prioritize reducing water withdrawals in highly water-stressed watersheds over reducing withdrawals in water-abundant watersheds, since the former leads to a greater reduction in the impact on the aquatic ecosystem. This is the idea behind setting site water targets that are informed by catchment context.

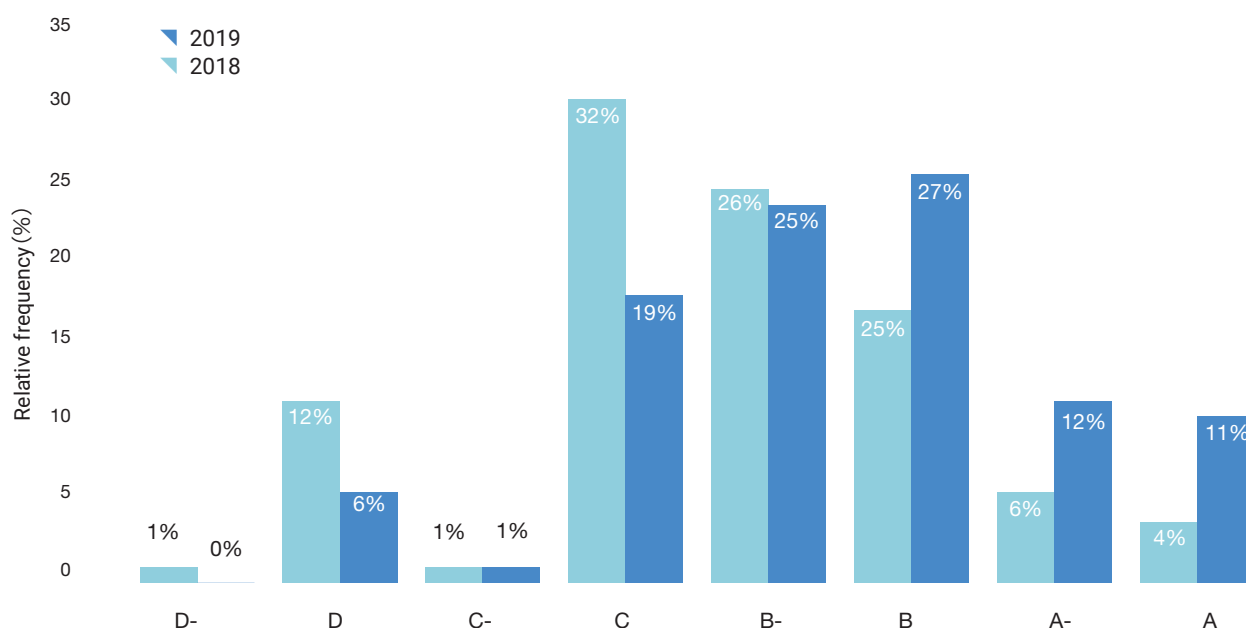
The guide lays out the following three key elements for setting effective site water targets, and recommends actions corresponding to each of the elements.

- 1) Water targets should respond to priority water challenges within the catchment;
- 2) The ambition of water targets should be informed by site's contribution to water challenges and desired conditions; and
- 3) Water targets should reduce water risk, capitalize on opportunities, and contribute to public sector priorities.

No detailed methodologies to calculate specific target values are put forward in the guide. Deriving target values based on scientifically robust data is ideal but such data are rarely available in practice. The guide rather proposes an approach to set directionally correct targets, based on appropriate estimates.

6 UN Global Compact CEO Water Mandate, Pacific Institute, CDP, The Nature Conservancy, World Resources Institute, WWF, UNEP/DHI Partnership Centre for Water and Environment (2019) "Setting Site Water Targets Informed by Catchment Context: A Guide for Companies."

Figure 10. Distribution of Japanese companies' final score



Appendix



CDP Water Security 2019 Japanese companies

Company ^a	Questionnaire Sector ^b	2019 Score ^c	2018 score ^d	% withdrawn from stressed areas	Company-wide of facilities exposed to water risk			Identification of water-related opportunities ^f	Board level oversight of water-related issues	Engagement with value chain ^g	Water-related outcomes from climate-related scenario analysis ^h	Water-related targets and/or goals
					Total number	%	Verification ^e					
Biotech, health care & pharma												
Astellas Pharma Inc.	General	B	B-	0%	No risks			Yes(r)	C-Suite	Supplier	Not water-related	Company-wide
Chugai Pharmaceutical Co., Ltd.	General	B-	C	Not relevant	No risks			Yes	President	Supplier	Not water-related	Activity, Company-wide, Site/facility
Cyberdyne Inc	General	F	F									
Daiichi Sankyo Co., Ltd.	General	F	F									
Eisai Co., Ltd.	General	F	F									
Hisamitsu Pharmaceutical Co., Inc.	General	A	N/S	27%	3	26-50%	Yes	Yes(r)	Board chair, CEO, CSO	Supplier	Water-related	Company-wide
Hoya Corporation	General	F	F									
Kaken Pharmaceutical Co., Ltd.	General	F	F									
Kissei Pharmaceutical Co., Ltd.	General	A-	B	0%	7	1-25%	Yes	Yes(r)	Board chair	Supplier	In 2 years	Business, Company-wide, Site/facility
KYORIN Holdings, Inc.	General	A-	B-	0%	No risks			No	CEO	Supplier	In 2 years	Company-wide, Site/facility
Kyowa Hakko Kirin Co., Ltd.	General	B-	C	Not monitored	14	1-25%	Yes	Yes(r)	Board chair	Supplier, Customer /Other	Water-related	Business, Company-wide
Mitsubishi Tanabe Pharma Corporation	General	F	F									
Mochida Pharmaceutical Co., Ltd.	General	C	C	Not relevant	3	1-25%	Yes	Yes(r)	CFO	In 2 years	In 2 years	Business, Other
Nihon Kohden Corporation	General	B	C	18%	4	1-25%	No	Yes(r)	Board chair	Supplier	Water-related	Business, Company-wide
Nippon Shinyaku Co., Ltd.	General	C	F	Non public								
Nipro Corporation	General	F										
Olympus Corporation	General	A-	Private	23%	3	1-25%	No	Yes(r)	Board chair	Supplier	In 2 years	Brand/ product, Company-wide, Site/facility
Ono Pharmaceutical Co., Ltd.	General	B-	SA	0%	2	1-25%	Yes	No	CEO	In 2 years	In 2 years	Company-wide, Site/facility
Otsuka Holdings Co., Ltd.	General	F	F									
Rohto Pharmaceutical Co., Ltd.	General	C	C	Not relevant	No risks			No	Board chair	No engagement	No analysis	No target/goal
Santen Pharmaceutical Co., Ltd.	General	C	C	Non public								
Sawai Pharmaceutical Co., Ltd.	General	B	C	1%	2	~1%	No	Yes(r)	CEO	Supplier, Customer /Other	In 2 years	Activity, Brand/ product, Business, Company-wide, Site/facility
Shimadzu Corporation	General	B-	C	0%	4	51-75%	Yes	Yes(r)	CSO	In 2 years	In 2 years	Company-wide
Shionogi & Co., Ltd.	General	B-	B-	2%	3	1-25%	Yes	Yes(r)	No	Supplier	In 2 years	Business, Company-wide, Country, Site/facility
Sumitomo Dainippon Pharma Co., Ltd.	General	B	C	39%	2	1-25%	No	Yes(r)	President	Customer / Other	In 2 years	Business, Company-wide, Site/facility
Sysmex Corporation	General	F	F									
Taisho Pharmaceutical Holdings Co., Ltd.	General	B	B	3%	No risks			Yes(r)	C-Suite	Supplier, Customer /Other	Water-related	Activity, Business, Company-wide, Site/facility
Takeda Pharmaceutical Company Limited	General	F	F									

Company ^a	Questionnaire Sector ^b	2019 Score ^c	2018 score ^d	% withdrawn from stressed areas	Company-wide of facilities exposed to water risk		Verification ^e	Identification of water-related opportunities ^f	Board level oversight of water-related issues	Engagement with value chain ^g	Water-related outcomes from climate-related scenario analysis ^h	Water-related targets and/or goals
					Total number	%						
Terumo Corporation	General	F	F									
Tsumura & Co.	General	SA	SA									
Food, beverage & agriculture												
Ajinomoto Co.Inc.	FBT	A-	A-	1%	3	1-25%	No	Yes(r)	Board chair	Supplier	Water-related	Basin, Company-wide, Site/facility
Ariake Japan	FBT	F	F									
Asahi Group Holdings, Ltd.	FBT	A	A	0%	0	~1%	N/A	Yes(r)	Board chair	Supplier, Customer / Other	Water-related	Business, Company-wide, Site/facility
Calbee, Inc.	FBT	F	F									
Coca-Cola Bottlers Japan Holdings Inc.	FBT	F	F									
Ezaki Glico Co., Ltd.	FBT	F	F									
FUJI OIL HOLDINGS INC.	FBT	A-		7%	2	1-25%	No	Yes(r)	Board chair	Supplier, Customer / Other	In 2 years	Basin, Business, Company-wide, Country, Site/facility
HOUSE FOODS GROUP INC.	FBT	F	F									
Ito En, Ltd.	FBT	C	F	Not monitored		No risks		No	President	Customer / Other	In 2 years	No target/goal
Itoham Yonekyu Holdings	FBT	F	F									
Japan Tobacco Inc.	FBT	A	B	9%		No risks		No	Board chair	Supplier	Water-related	Business, Company-wide, Site/facility
Kagome Co., Ltd.	FBT	A-	Private	4%	1	1-25%	No	Yes(r)	President, Board chair	Supplier	Water-related	Activity, Company-wide, Site/facility
Kewpie Corporation	FBT	C	Private	1%		No risks		No	Board chair	No engagement	In 2 years	Site/facility
Kikkoman Corporation	FBT	A	A-	1%	1	1-25%	No	Yes(r)	CEO	Supplier, Customer / Other	Water-related	Business, Company-wide, Site/facility
Kirin Holdings Co Ltd	FBT	A	A	21%	2	1-25%	No	Yes(r)	CEO	Supplier, Customer / Other	Water-related	Business, Company-wide, Site/facility
MEGMILK SNOW BRAND Co.,Ltd.	FBT	D	D	Not monitored		No risks		No	No	No engagement	No analysis	No target/goal
Meiji Holdings Co Ltd	FBT	B-	Private	Not monitored	5	1-25%	N/A	Yes(r)	President	Customer / Other	Water-related	Company-wide
Morinaga & Company Ltd	FBT	F										
Morinaga Milk Industry Co., Ltd.	FBT	B-		Not relevant		No risks		Yes(r)	No	No engagement	In 2 years	Site/facility
NH Foods Ltd.	FBT	B-	C						Non public			
Nichirei Corporation	FBT	B	B-	3%	2	~1%	No	Yes(r)	Board chair	Supplier, Customer / Other	In 2 years	Business, Site/facility
Nisshin Seifun Group Inc.	FBT	B	F	19%	1	1-25%	No	Yes(r)	CEO	Customer / Other	Water-related	Business
Nissin Foods Holdings Co., Ltd.	FBT	F	F									
Sapporo Holdings Limited	FBT	B	Private	0%		No risks		Yes(r)	President	Supplier, Customer / Other	Water-related	Company-wide
Sumitomo Forestry Co., Ltd.	P&F	C	C		0	~1%	N/A	Yes	CEO	N/A	Water-related	Business, Company-wide
Suntory Beverage & Food	FBT	A-	A	62%	1	1-25%	Yes	Yes(r)	Board chair	Supplier, Customer / Other	Water-related	Activity, Company-wide, Country, Site/facility
Takara Holdings Inc.	FBT	F	F									
Toyo Suisan Kaisha, Ltd.	FBT	F	F									
Yakult Honsha Co Ltd.	FBT	F	F									
Yamazaki Baking Co., Ltd.	FBT	F	F									
Fossil Fuels												

Company ^a	Questionnaire Sector ^b	2019 Score ^c	2018 score ^d	% withdrawn from stressed areas	Company-wide of facilities exposed to water risk			Identification of water-related opportunities ^f	Board level oversight of water-related issues	Engagement with value chain ^g	Water-related outcomes from climate-related scenario analysis ^h	Water-related targets and/or goals
					Total number	%	Verification ^e					
Cosmo Energy Holdings Co., Ltd.	O&G	C	C		No risks			No	Board chair	N/A	In 2 years	Site/facility
Idemitsu Kosan Co., Ltd.	O&G	B-	Private		Non public							
Inpex Corporation	O&G	F	F									
JXTG Holdings, Inc.	O&G	C	C-	1%	2	51-75%	N/A	No	Board chair	N/A	In 2 years	Site/facility
Showa Shell Sekiyu K. K.	O&G	SA	C									
Hospitality												
Heiwa Corporation	General	F	F									
Oriental Land Co Ltd.	General	D	F		Non public							
Resorttrust Inc	General	F	F									
Seibu Holdings Inc.	General	F	F									
Skylark Co., Ltd.	General	F	F									
Zensho Holdings Co., Ltd.	General	F	F									
Infrastructure												
Aeon Mall Co., Ltd.	General	F	N/S									
Daikyo Incorporated	General	F										
Daiwa House Industry Co., Ltd.	General	B	A-	0%	3	~1%	Yes	Yes(r)	Board chair	Supplier, Customer /Other	Water-related	Brand/ product, Business, Company-wide, Site/facility
Hulic Co., Ltd.	General	F										
Ichigo Group Holdings Co Ltd	General	F										
Iida Group Holdings	General	F	F									
Kajima Corporation	General	C	C	0%	4	1	Yes	Yes(r)	President	Customer / Other	In 2 years	Business
Kanden Co., Ltd	General	F										
Keihan Electric Railway Co., Ltd.	General	F	F									
Kinden Corporation	General	F										
Maeda Corporation	General	F										
Obayashi Corporation	General	F										
Osaka Gas Co., Ltd.	General	F	F									
Penta-Ocean Construction Co Ltd	General	F										
Sekisui Chemical Co., Ltd.	General	A-	A-	14%	9	1-25%	Yes	Yes(r)	CEO	Customer / Other	Water-related	Basin, Company-wide, Site/facility
Sekisui House, Ltd.	General	B-	B-	0%	1	~1%	Yes	Yes(r)	CEO	Customer / Other	Water-related	Country
Shimizu Corporation	General	F										
Taisei Corporation	General	F	F									
Toda Corporation	General	F										
Toho Gas Co., Ltd.	General	F	F									
Tokyo Gas Co., Ltd.	General	A	Private	0%	7	1-25%	Yes	Yes(r)	Board chair	Supplier	Water-related	Activity, Brand/ product, Business, Company-wide, Site/facility
Manufacturing												
Advantest Corporation	General	B-	C		No risks			No	C-Suite	N/A	In 2 years	Company-wide
Aisin Seiki Co., Ltd.	General	B	C	16%	1	~1%	Yes	Yes(r)	Board chair	Supplier, Customer /Other	In 2 years	Business, Company-wide, Site/facility
ALPS ALPINE CO., LTD.	General	C	C	12%	6	26-50%	No	No	C-Suite	No engagement	In 2 years	Company-wide
Amada Holdings, Ltd.	General	C	F		Non public							
Asics Corporation	General	B-	N/S		No risks			Yes(r)	Board-level committees	Supplier	In 2 years	Business
Azbil Corporation	General	B-	B-	11%	1	1-25%	No	Yes	C-Suite	In 2 years	Water-related	Company-wide
Bridgestone Corporation	General	B	B	0%	No risks			Yes(r)	CEO	Supplier	Not water-related	Business, Company-wide, Site/facility

Company ^a	Questionnaire Sector ^b	2019 Score ^c	2018 score ^d	% withdrawn from stressed areas	Company-wide of facilities exposed to water risk			Identification of water-related opportunities ^f	Board level oversight of water-related issues	Engagement with value chain ^g	Water-related outcomes from climate-related scenario analysis ^h	Water-related targets and/or goals
					Total number	%	Verification ^e					
Brother Industries, Ltd.	General	B	B-	9%	No risks			Yes(r)	COO	Supplier	Water-related	Activity, Company-wide, Site/facility
Calsonic Kansei Corporation	General	A-	B	Non public								
Canon Inc.	General	B	B-	0%	1	1-25%	Yes	Yes(r)	CFO	Supplier	In 2 years	Company-wide, Site/facility
Casio Computer Co., Ltd.	General	B-	C	Not relevant	No risks			No	No	N/A	No analysis	Activity, Company-wide
Citizen Watch Co.,Ltd.	General	B	B-	Not relevant	No risks			Yes	President	In 2 years	In 2 years	Business, Company-wide, Site/facility
Daifuku Co., Ltd.	General	B-	F	No risks			No	No	N/A	Not water-related	Company-wide, Country, Site/facility	
Daihatsu Motor Co., Ltd.	OEMs	B	B-	Non public								
Daikin Industries, Ltd.	General	A-	B-	1%	2	1-25%	Yes	Yes(r)	CSO	Supplier, Customer /Other	Not water-related	Business, Company-wide, Site/facility
Denso Corporation	General	B	B-	Non public								
DISCO Corporation	General	C	D	Not relevant	13	1	No	Yes(r)	Other	In 2 years	Water-related	Brand/ product, Business
DMG Mori Seiki Co., Ltd.	General	F	F	Non public								
Ebara Corporation	General	D	D	Non public								
EXEDY Corporation	General	B-	B-	Non public								
Fanuc Corporation	General	C	D	Not relevant	No risks			No	CEO	Customer / Other	No analysis	Business, Company-wide
Foster Electric Company, Limited	General	C		0%	9	76-99%	Yes	No	CEO, CSO, Other	In 2 years	In 2 years	
Fuji Electric Co., Ltd.	General	B-	C	2%	1	1-25%	Yes	Yes(r)	Board chair	No engagement	In 2 years	Company-wide
FUJIFILM Holdings Corporation	General	A-	B-	6%	5	1-25%	Yes	Yes(r)	President	Supplier, Customer /Other	Water-related	Basin, Company-wide, Site/facility
Fujikura Ltd.	General	B-	B-	Not relevant	2	1-25%	Yes	No	President	N/A	Water-related	Company-wide
Fujitsu General Limited	General	F	F	Non public								
Furukawa Electric Co., Ltd.	General	B	B-	Non public								
Glory Ltd.	General	B-	C	25%	No risks			No	No	N/A	No analysis	Site/facility
GS Yuasa Corporation	General	C	C	Not relevant	0	Unknown	N/A	Yes(r)	President	Supplier	In 2 years	Business
Hamamatsu Photonics K.K.	General	C	C	0%	1	~1%	Yes	Yes(r)	Board chair	Supplier	Not water-related	Company-wide
Hino Motors, Ltd.	OEMs	B	B-	40%	4	26-50%	No	Yes(r)	Board chair	Supplier	In 2 years	Company-wide
Hirose Electric Co., Ltd.	General	C	F	Non public								
Hitachi Construction Machinery Co., Ltd.	General	B	B-	21%	5	1-25%	Yes	Yes(r)	CEO	Supplier, Customer /Other	Water-related	Company-wide
Hitachi High-Technologies Corporation	General	B	F	5%	No risks			Yes(r)	No	Supplier	In 2 years	Company-wide, Site/facility
Hitachi, Ltd.	General	A	B	3%	1	1-25%	No	Yes(r)	President	Supplier, Customer /Other	Water-related	Business, Company-wide, Site/facility
Honda Motor Co., Ltd.	OEMs	F	B-	Non public								
HORIBA, Ltd.	General	C	C	Not monitored	26	26-50%	No	Yes	CEO, Other	No engagement	In 2 years	Company-wide
Hoshizaki Electric Co., Ltd.	General	F	F	Non public								
Ibiden Co., Ltd.	General	C	C	7%	2	1-25%	No	Yes(r)	No	Supplier, Customer /Other	No analysis	Company-wide
IHI Corporation	EPM	F	F	Non public								
Isuzu Motors Limited	OEMs	B	B-	Not relevant	2	1	Yes	Yes(r)	Board chair	Supplier	Water-related	Activity, Company-wide, Site/facility

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					Total number	%						
Japan Display Inc.	General	B-	C	3%	9	1	No	Yes	CEO	In 2 years	In 2 years	Company-wide
JTEKT Corporation	General	B	B-	4%	5	1-25%	Yes	Yes(r)	President	Supplier, Customer /Other	In 2 years	Company-wide, Country, Site/facility
Kawasaki Heavy Industries, Ltd.	General	F	F									
Keyence Corporation	General	F	F									
Kioxia Holdings Corporation	General	B		Not relevant		No risks		Yes(r)	CEO	Supplier	Water-related	Company-wide
Koito Manufacturing Co., Ltd.	General	B-	C						Non public			
Komatsu Ltd.	General	A-	A-	11%	3	1-25%	Yes	Yes(r)	CEO	Supplier	Water-related	Company-wide, Country, Site/facility
Konica Minolta, Inc.	General	B	C	4%	1	1-25%	Yes	Yes(r)	CEO	Supplier, Customer /Other	Water-related	Company-wide
Kubota Corporation	General	A	A-	35%	25	26-50%	Yes	Yes(r)	Board chair, President	Supplier	Water-related	Business, Company-wide, Site/facility
Kurita Water Industries Ltd.	General	B-	C	0%		No risks		Yes(r)	Board chair	Customer / Other	In 2 years	Company-wide
Kyocera Corporation	General	A-	B						Non public			
Mabuchi Motor Co., Ltd.	General	F	F									
Makita Corporation	General	C-	F						Non public			
Mazda Motor Corporation	OEMs	B-	B-	10%	9	76-99%	Yes	Yes(r)	CEO	Supplier, Customer /Other	Water-related	Company-wide
Meidensha Corporation	General	C	C	0%	0	~1%	N/A	Yes(r)	President, CSO	Supplier, Customer /Other	In 2 years	Company-wide
MinebeaMitsumi Inc.	General	A-	B	4%	8	76-99%	Yes	No	CEO	Supplier	In 2 years	Activity, Business, Company-wide, Site/facility
Mitsubishi Electric Corporation	General	A	A	1%	3	1-25%	Yes	Yes(r)	President	Supplier, Customer /Other	Water-related	Business, Company-wide, Site/facility
Mitsubishi Heavy Industries, Ltd.	General	F	F									
Mitsubishi Motors Corporation	OEMs	B	Private	25%	1	1-25%	No	Yes(r)	No	Supplier, Customer /Other	Water-related	Company-wide
Mitsui Mining & Smelting Co., Ltd.	General	C		Not monitored	8	1-25%	N/A	Yes(r)	Board chair	In 2 years	In 2 years	Company-wide
Miura Co., Ltd.	General	F	F									
Murata Mfg. Co.	General	A-	B	3%	1	1-25%	Yes	Yes(r)	Board chair	Supplier, Customer /Other	In 2 years	Activity, Company-wide, Site/facility
Nabtesco Corporation	General	A-	A	7%	1	1-25%	Yes	Yes(r)	CEO	N/A	Not water-related	Company-wide, Country, Site/facility
NGK Insulators, Ltd.	General	B-	B-						Non public			
NGK Spark Plug Co., Ltd.	General	B-	D	Not relevant		No risks		No	CEO	N/A	Not water-related	Activity, Basin, Business, Company-wide, Country, Site/facility
NHK Spring Co., Ltd.	General	D	F									
Nidec Corporation	General	D	D		70	1-25%	No	No	No	N/A	In 2 years	Company-wide
Nifco Inc.	General	F	F									
Nikon Corporation	General	B	B	Not relevant	3	1-25%	Yes	Yes(r)	CEO	Supplier	Water-related	Company-wide, Site/facility
Nippon Electric Glass Co., Ltd.	General	F	F									
Nissan Motor Co., Ltd.	OEMs	A	B	5%	3	1-25%	Yes	Yes(r)	Board chair	Supplier, Customer /Other	Water-related	Business, Company-wide, Country

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					Total number	%	Verification ^e					
Nisshinbo Holdings Inc.	General	B-	D	5%	1	~1%	No	Yes(r)	President, Board chair	In 2 years	Not water-related	Business, Company-wide, Site/facility
NOK Corporation	General	B	C	37%	3	1	Yes	Yes(r)	President	Supplier	In 2 years	Company-wide
NSK Ltd.	General	B-	C	2%	3	1-25%	Yes	Yes(r)	CEO	Supplier, Customer / Other	In 2 years	Company-wide, Country, Site/facility
NTN Corporation	General	B-	B-		10	1-25%	No	No	CFO	N/A	In 2 years	Company-wide
Oji Holdings Corporation	P&F	B	B-	19%	No risks			Yes(r)	Board chair	Customer / Other	Water-related	Basin, Company-wide, Site/facility
Okuma Corporation	General	F	F									
OMRON Corporation	General	B	B	14%	5	1-25%	Yes	Yes(r)	Board chair	Supplier	Water-related	Company-wide, Site/facility
OSG Corporation	General	F	F									
Panasonic Corporation	General	B-	B-		Non public							
Renesas Electronics Corporation	General	D	F									
Rengo Co., Ltd.	P&F	C	C	Not relevant	No risks			Yes(r)	Board chair	No engagement	No analysis	Site/facility
Ricoh Co., Ltd.	General	B	B	20%	2	1-25%	Yes	Yes	CEO	Supplier	Not water-related	Brand/ product, Company-wide, Site/facility
Rinnai Corporation	General	F	F									
Rohm Co., Ltd.	General	A-	B-	71%	17	76-99%	No	No	Board chair	In 2 years	In 2 years	Activity, Business, Company-wide, Country, Site/facility
Sankyo Co., Ltd.	General	F	F									
Sanwa Holdings Corporation	General	F	F									
SCREEN Holdings CO., Ltd.	General	B-	B-	0%	5	51-75%	Yes	Yes(r)	Board chair	Supplier, Customer / Other	Water-related	Brand/ product
Seiko Epson Corporation	General	B	B	8%	2	1-25%	No	Yes(r)	President	Supplier	Not water-related	Business, Company-wide, Site/facility
Sharp Corporation	General	B	C	4%	2	1-25%	No	Yes(r)	CEO	Customer / Other	In 2 years	Basin, Company-wide, Site/facility
SMC Corporation	General	D	N/S		Non public							
Sony Corporation	General	A	B	1%	No risks			Yes(r)	CEO	Supplier	Not water-related	Business, Company-wide, Site/facility
Stanley Electric Co., Ltd.	General	D	F		Non public							
Subaru Corporation	OEMs	F	F									
Sumco Corporation	General	F	F									
Sumitomo Electric Industries, Ltd.	General	B-	C	2%	3	1-25%	Yes	Yes(r)	Board chair	Customer / Other	Not water-related	Company-wide
Sumitomo Heavy Industries, Ltd.	General	B-	B-		30	76-99%	Yes	Yes(r)	CEO	Supplier	In 2 years	Company-wide
Sumitomo Rubber Industries, Ltd.	General	B-	C	16%	5	1-25%	Yes	Yes(r)	C-Suite	Supplier, Customer / Other	In 2 years	Company-wide, Other
Suzuki Motor Corporation	OEMs	B-	C		Non public							
Tadano Ltd	General	N/S	F		Non public							
Taiyo Yuden Co., Ltd.	General	D	F									
TANAX, INC.	General	C	C	4%	3	1-25%	N/A	Yes(r)	CEO	Supplier	Water-related	Company-wide

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					Total number	%	Verification ^e					
TDK Corporation	General	A-	D	6%	4	1-25%	No	Yes(r)	C-Suite	Supplier	Water-related	Activity, Business, Company-wide, Country, Site/facility
The Japan Steel Works, Ltd.	General	F	F									
THK Co., Ltd.	General	C	C	Not monitored		No risks		No	President	Supplier	No analysis	No target/ goal
Tokai Rika Co., Ltd.	General	C	C	7%	4	1-25%	No	No	No	Supplier	No analysis	Basin, Site/ facility
Tokyo Electron Ltd.	General	B	B-	3%	6	76-99%	Yes	Yes(r)	Board chair	Supplier, Customer /Other	Water-related	Activity, Brand/ product, Business, Company-wide, Site/ facility
Topcon Corp	General	F	F									
Toshiba Corporation	General	B	C	Not relevant	0	~1%	No	Yes(r)	C-Suite	Supplier	Water-related	Business, Company-wide, Site/ facility
Toto Ltd.	General	B	B-	16%	4	1-25%	Yes	Yes(r)	Board chair	Supplier, Customer /Other	Water-related	Brand/ product, Company-wide, Country
Toyo Seikan Group Holdings, Ltd.	General	C	C	Not relevant		No risks		No	President	No engagement	In 2 years	Company-wide
Toyo Tire Corporation	General	B	B-	4%	4	1-25%	No	No	C-Suite	Supplier, Customer /Other	In 2 years	Company-wide, Site/ facility
Toyoda Gosei	General	A-	B	5%	6	1-25%	No	Yes(r)	President	Supplier, Customer /Other	In 2 years	Business, Company-wide, Site/ facility
Toyota Boshoku Corporation	General	A	B	28%	8	1-25%	No	Yes(r)	Board chair	Supplier, Customer /Other	In 2 years	Company-wide, Country, Site/facility
Toyota Industries Corporation	General	A-	A	17%	1	1-25%	Yes	Yes(r)	Board chair	Supplier	In 2 years	Business, Company-wide, Site/ facility
Toyota Motor Corporation	OEMs	A	A-	16%	1	1-25%	Yes	Yes(r)	Board chair	Supplier	Not water-related	Business, Company-wide, Site/ facility
TS Tech Co., Ltd.	General	C	C									
ULVAC, Inc.	General	F										
Uni-Charm Corporation	P&F	B-	C			No risks		Yes(r)	Other	Supplier, Customer /Other	Not water-related	Company-wide
Uni-Charm Corporation	General	A	B	22%	1	1-25%	Yes	Yes(r)	Board chair	Supplier	Not water-related	Activity, Business, Company-wide, Site/ facility
Ushio Inc.	General	F	F									
Yamaha Corporation	General	B	B-									
Yamaha Motor Co., Ltd.	OEMs	F	C									
Yaskawa Electric Corporation	General	F	F									
Yokohama Rubber Company, Limited	General	B	B	18%	11	26-50%	Yes	Yes(r)	Board chair	Supplier	Water-related	Company-wide
Materials												
AGC Inc.	General	A	B	0%	0	~1%	N/A	Yes(r)	CEO	Customer / Other	In 2 years	Basin, Business, Company-wide, Country, Site/facility
Aica Kogyo Co Ltd	Chemicals	C	C-	22%		No risks		No	No	In 2 years	In 2 years	Company-wide
Air Water Inc.	Chemicals	B-	F									

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					Total number	%						
Asahi Kasei Corporation	Chemicals	A-	B	0%	2	1-25%	No	Yes(r)	Board chair	Supplier	Not water-related	Brand/ product, Company-wide, Site/facility
Ciz Holdings Co Ltd	General	F										
Daicel Corporation	Chemicals	B-	C						Non public			
Daido Steel Co., Ltd.	Steel	F	F									
Denka Company Limited	Chemicals	B	F	0%	1	1-25%	No	Yes(r)	CEO	No engagement	In 2 years	Company-wide
DIC Corporation	Chemicals	B-	B-	0%	1	~1%	No	Yes(r)	C-Suite	N/A	In 2 years	Business, Site/facility
Dowa Holdings Co., Ltd.	M&M	D-	F						Non public			
FP Corporation	Chemicals	F	F									
Hitachi Chemical Company, Ltd.	Chemicals	C	C	17%	81	1	Yes	Yes(r)	President	In 2 years	Not water-related	Company-wide
Hitachi Metals, Ltd.	Steel	B-	B-						Non public			
JFE Holdings, Inc.	Steel	A-	Private						Non public			
JSR Corporation	Chemicals	B-	B	0%	5	26-50%	Yes	No	Board chair	Supplier	In 2 years	Company-wide, Site/facility
Kaneka Corporation	Chemicals	F	F									
Kansai Paint Co., Ltd.	Chemicals	F	F									
KAO Corporation	General	A	A	20%	8	1-25%	Yes	Yes(r)	CEO	Supplier, Customer /Other	Water-related	Business, Company-wide, Site/facility
Kobayashi Pharmaceutical Co., Ltd.	General	B	F	0%		No risks		No	No	No engagement	In 2 years	Company-wide
Kobe Steel., Ltd.	Steel	B-	C	74%	6	26-50%	Yes	Yes(r)	No	Customer / Other	In 2 years	Company-wide
KOSE Corporation	General	B	N/S	0%	4	1-25%	Yes	Yes(r)	CEO	In 2 years	In 2 years	Site/facility
Kuraray Co., Ltd.	Chemicals	F	F									
Lintec Corporation	Chemicals	C	C	82%		No risks		No	President	No engagement	No analysis	Other
Lion Corporation	General	B	F	1%	1	1-25%	Yes	Yes	CEO	Supplier, Customer /Other	In 2 years	Business, Company-wide, Country
LIXIL Group Corporation	General	A	A	3%	6	1-25%	Yes	Yes(r)	Board chair	Supplier, Customer /Other	Water-related	Company-wide, Country, Site/facility
Maruichi Steel Tube Ltd.	M&M	F	F									
Mitsubishi Chemical Holdings Corporation	Chemicals	B	A-	57%	5	~1%	Yes	Yes(r)	CEO	Supplier, Customer /Other	Water-related	Activity, Brand/ product, Business, Company-wide, Site/facility
Mitsubishi Gas Chemical Company, Inc.	Chemicals	C	C	Not relevant		No risks		No	Board chair, President	N/A	In 2 years	Company-wide
Mitsubishi Materials Corporation	M&M	B-	C		18	1-25%	Yes	No	C-Suite	N/A	No analysis	Other
Mitsui Chemicals, Inc.	Chemicals	B-	B-	0%	0	~1%	Yes	Yes(r)	C-Suite	Supplier	Water-related	Company-wide
Nippon Kayaku Co., Ltd.	Chemicals	B-	C	Not monitored	4	1-25%	No	Yes(r)	CSO	No engagement	Water-related	Business
Nippon Paint Holdings Co., Ltd.	Chemicals	F	F									
Nippon Paper Industries Co Ltd	P&F	C	C						Non public			
Nippon Sheet Glass Company, Ltd	General	B-	B-						Non public			
Nippon Shokubai Co., Ltd.	Chemicals	D	D						Non public			
NIPPON STEEL CORPORATION	Steel	B	B-						Non public			
Nissan Chemical Industries, Ltd.	Chemicals	A	B	0%	1	1-25%	Yes	Yes(r)	President	Supplier, Customer /Other	In 2 years	Activity, Basin, Company-wide, Site/facility
Nitto Denko Corporation	Chemicals	B-	B-	10%		No risks		Yes(r)	Board chair	In 2 years	In 2 years	Business, Company-wide, Site/facility

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					Total number	%	Verification ^e					
Noevir Holdings	General	F										
NOF CORPORATION	Chemicals	C								Non public		
Pigeon Corp	General	F	F									
Pola Orbis Holdings Inc.	General	F	F									
Shin-Etsu Chemical Co., Ltd.	Chemicals	D	D	79%	40	1-25%	Yes	Yes(r)	Board chair	Supplier	In 2 years	Company-wide
Shiseido Co., Ltd.	General	B	C	19%	6	1-25%	No	Yes(r)	Board chair	Supplier, Customer /Other	Water-related	Site/facility
Showa Denko K.K.	Chemicals	B-	Private	3%	1	~1%	Yes	Yes	CEO	Supplier, Customer /Other	Water-related	Activity
Sumitomo Chemical Co., Ltd.	Chemicals	A-	B	0%	2	1-25%	Yes	Yes(r)	President	Supplier	In 2 years	Company-wide, Country, Site/facility
Sumitomo Metal Mining Co., Ltd.	M&M	B	B	8%	2	1-25%	Yes	Yes(r)	President	Supplier	In 2 years	Activity, Business, Company-wide, Site/facility
Sumitomo Osaka Cement Co., Ltd.	Cement	D	N/S	Not monitored	5	1	N/A	No	No	No engagement	No analysis	No target/goal
Taiheiyo Cement Corporation	Cement	C	C							Non public		
Taiyo Nippon Sanso Corporation	Chemicals	SA	SA									
TBM, LTD	General	B	B-			No risks		Yes(r)	CEO	N/A	Not water-related	Activity, Brand/ product, Business, Company-wide, Site/facility
Teijin Ltd.	Chemicals	C	D	3%	2	1-25%	Yes	Yes	CEO	No engagement	In 2 years	Business
Tokai Carbon Co., Ltd.	Chemicals	F										
Tokuyama Corporation	Chemicals	B-								Non public		
Toray Industries, Inc.	Chemicals	A	B	14%	1	1-25%	No	Yes(r)	Board chair	Supplier, Customer /Other	Water-related	Activity, Brand/ product, Business, Company-wide, Site/facility
Tosoh Corporation	Chemicals	F	F									
Toyobo Co., Ltd.	Chemicals	F	Private									
Ube Industries, Ltd.	Chemicals	C	D	Not relevant		No risks		No	No	No engagement	In 2 years	No target/goal
Yamato Kogyo Co., Ltd.	Steel	F	F									
Zeon Corporation	Chemicals	C	C	Not monitored		No risks		Yes	President	N/A	No analysis	No target/goal
Power generation												
Chubu Electric Power Co., Inc.	EU	B	F	0%		No risks		No	Other	N/A	No analysis	Company-wide, Site/facility
Electric Power Development Co.,Ltd (J-POWER)	EU	F	F									
Hokkaido Electric Power Co., Inc.	EU	F	F									
Hokuriku Electric Power Company	EU	F	F									
Kyushu Electric Power Co Inc	EU	F	Private									
Shikoku Electric Power Co., Inc.	EU	F	F									
The Chugoku Electric Power Company	EU	F	F									
The Kansai Electric Power Co., Inc.	EU	F	F									
The Tokyo Electric Power Company Holdings, Inc (TEPCO)	EU	A-	B	0%	1	~1%	No	Yes(r)	President	Supplier	Not water-related	Basin, Brand/ product, Business, Company-wide, Site/facility
Tohoku Electric Power Co., Inc.	EU	F	F									
Retail												
ABC-Mart, Inc.	General	F	F									
Aeon Co., Ltd.	General	F	N/S									

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					Total number	%						
Ain Holdings Inc	General	F	F									
Autobacs Seven Co., Ltd.	General	F	F									
Bic Camera Inc	General	D	D	Not relevant		No risks		No	No	No engagement	No analysis	No target/goal
COSMOS Pharmaceutical Corporation	General	F	F									
Don Quijote Holdings Co., Ltd.	General	C-	F									
Fast Retailing Co., Ltd.	General	B	C		0	0	N/A	Yes(r)	Board chair, Board chair, CFO, Other	Supplier	In 2 years	Brand/ product, Company-wide, Site/facility
H2O Retailing Corporation	General	F	F									
Isetan Mitsukoshi Holdings Ltd.	General	F										
ITOCHU Corporation	General	B	B-									
Izumi Co., Ltd.	General	F	F									
J. Front Retailing Co., Ltd.	General	F	F									
Kusuri No Aoki Holdings	General	F	F									
Lawson, Inc.	General	F	F									
Marubeni Corporation	FBT	B-	B									
Marui Group Co., Ltd.	General	F										
Matsumotokiyoshi Holdings Co., Ltd.	General	F	F									
Mitsubishi Corporation	General	B	D									
Mitsubishi Shokuhin Co., Ltd.	FBT	SA	SA									
Nagase & Co., Ltd.	General	C	C									
Nitori Holdings Co., Ltd.	General	F	F									
Paltac	General	F										
Ryohin Keikaku Co., Ltd.	General	F	F									
Seven & I Holdings Co., Ltd.	General	F	F									
Shimamura Co., Ltd.	General	F	F									
Sojitz Corporation	General	N/S	N/S									
Sugi Holdings Co., Ltd.	General	F	F									
Sumitomo Corporation	General	A	B	0%		No risks		Yes(r)	Board chair	Customer / Other	In 2 years	Activity, Basin, Brand/ product, Business, Company-wide, Country, Site/facility
Sundrug Co., Ltd.	General	F	F									
Toyota Tsusho Corporation	General	B	B									
Tsuruha Holdings Inc.	General	F	N/S									
Welcia Holdings Co Ltd	General	F	F									
Services												
BANDAI NAMCO Holdings Inc.	General	D	D	Not monitored		No risks		No	No	N/A	No analysis	No target/goal
FamilyMart UNY Holdings Co., Ltd.	General	F	F									
Fujitsu Limited	General	A	B	9%		No risks		Yes(r)	CEO	Supplier, Customer /Other	Not water-related	Activity, Business, Company-wide, Site/facility
H.I.S.Co.,Ltd.	General	F	F									
Kyowa Exeo Corporation	General	F										
M3, Inc.	General	F										
Mitsui & Co., Ltd.	General	B-	B-									
NEC Corporation	General	A	B	Not relevant	0	~1%	N/A	Yes(r)	CEO	Supplier	Water-related	Company-wide, Site/facility, Other
Sega Sammy Holdings Inc.	General	D	D									
Transportation services												
Nankai Electric Railway Co., Ltd.	Transportation services	B	A-	69%	2	51-75%	No	Yes(r)	C-Suite	N/A	No analysis	Brand/ product, Business, Company-wide

- a Listed in alphabetical order by main business lines. Corporate names are omitted.
- b FBT: Food, Beverage & Tobacco
EPM: Transport Engine Part Manufacturers
- c N/S: Not Scored
SA: See Another
- d N/S: Not Scored
Private: Score is not public
SA: See Another
- e N/A: Not applicable
(If the company has not responded for facilities exposed to water risk)
- f Yes(r): Opportunities are identified and realized
Yes: Opportunities are identified but not yet realized
No: Opportunities are not identified
- g In 2 years: planned to engage within 2 years
N/A: Not applicable ("not at all/not very important" or "rated") I have not." about the indirect water use assessment)
- h Water-related: Climate-related scenario analysis is used and water-related outcome is identified
Not water-related: Climate-related scenario analysis is used but no water-related outcome is identified
In 2 years: Climate-related scenario analysis is not used but will be anticipated within the next two years
No analysis: Climate-related scenario analysis is not used and no plans for using in the next two years

Report writer and scoring partner



Scoring partners



Supporters: This report was published for the CDP Japan Water Security Launch event 2019 and for distribution to those involved. Our sincere thanks are extended to the following organizations for supporting the event.



外務省

Ministry of Foreign Affairs of Japan



国土交通省



環境省

Ministry of the Environment



内閣官房

水循環政策本部事務局



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