

Thirsty business: Why water is vital to climate action

2016 Annual Report of Corporate Water Disclosure

Written on behalf of 643 investors with US\$67 trillion in assets





About this report

Now in its seventh year, CDP's water program acts on behalf of 643 institutional investors, representing US\$67 trillion in assets. These investors use CDP water data to engage with portfolio companies, inform investment decisions and catalyze change.

On behalf of our investor signatories, this year we asked 1,252 of the largest global companies, an increase on the 1,073 companies approached last year, to provide data about their efforts to manage and govern freshwater resources. We selected these companies from the MSCI All Country World Index, based on economic and environmental criteria. In total 607 companies, or 48% of those targeted, responded to our investor-backed request for data – up from 405 (38%), last year.

This report summarizes and analyzes the disclosures made through the 2016 information request. It is aimed at companies facing water risks and opportunities, and investors seeking to better understand how water issues might impact their portfolios.

In particular, this year's report and the underlying data analysis aim to shine a light on the linkages between water, energy and private sector efforts to reduce carbon emissions. Many of the most serious impacts of climate change will be felt through water scarcity or flooding from extreme weather events or sea-level rise. Further, a stable supply of water is vital for many of the technologies that will help to dramatically reduce emissions. Water stewardship is an imperative not only for its own sake, but also to enable an effective response to climate change.

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To read 2016 company responses in full, please go to <https://www.cdp.net/en/responses>

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CEO foreword

Water's role in securing the low-carbon transition



Our analysis of the emissions reduction activities disclosed by companies shows that nearly a quarter are water-dependent.

The entry into force of the Paris Agreement marked a shift in gears in the global effort to address climate change. For all countries, the focus moves from planning to delivery – to the implementation of policies and measures that will deliver the ambitious goal to hold the increase in global temperatures to well below two degrees.

Water was not explicitly mentioned in the text of the Paris Agreement, but having a stable and sustainable supply of water – commonly referred to as water security – will be central to efforts both to adapt to the effects of climate change, and to mitigate rising greenhouse gas (GHG) emissions. In addition, the need to ensure availability and sustainable management of water and sanitation for all is clearly stated as the sixth Sustainable Development Goal.

Our analysis of the emissions reduction activities disclosed by companies shows that nearly a quarter (24%) of these activities depend on having a reliable supply of water for their success. These activities are estimated to cut 125 million metric tons of carbon dioxide emissions annually, the equivalent of shutting down 36 coal-fired power plants for a year.

Conversely, better water management can help reduce energy use and the associated emissions: more than half of disclosing companies report that more efficient use of water has led to lower GHG emissions. Global efforts to decarbonize the economy could therefore sink or swim based on how companies manage water.

Indeed, almost all forms of energy production rely on a stable supply of good quality water. Some 70% of current US electricity comes from power plants that require water for cooling¹. Less carbon-intensive power sources such as biofuels, nuclear power and, of course, hydropower all require significant amounts of water. Even solar photovoltaics, one of the least water-intensive sources of power, require water for cleaning.

In California, the six years of recent and still ongoing drought cost consumers US\$2.4 billion in higher power costs, and led to an 8% increase in carbon dioxide emissions from the state's power plants as they turned to natural gas to make up shortfalls in hydropower². In practice, some low-carbon energy systems could potentially be more water intensive than those they replace, especially if they expect to rely on carbon capture and storage in the future.

Unfortunately, reliable supplies of water can no longer be guaranteed in many parts of the world. Melting glaciers, empty reservoirs, and dusty riverbeds are all vivid reminders that climate change is making the world less water secure. Rising demand due to a combination of population growth and economic expansion, as well as increasingly polluted water sources are expected to make the situation worse.

With trillions of dollars' worth of assets set to be at risk from drying and drowning, investors are more focused than ever on leaders and laggards in the sustainability transition. Information is fundamental to their decisions. Through CDP, more than 600 institutional investors with assets of over US\$67 trillion are asking companies to disclose how they are managing the risks posed by worsening water security.

The responses to this year's investor-backed request for water data suggests that corporations have yet to fully grasp the implications of a less water secure world. As the World Bank warns, "current energy planning and production is often made without taking into account existing and future water constraints."³ This is reflected in our analysis: more than a third (37%) of energy companies disclose that they do not evaluate how water risk could impact their business in the future. Within the utility sector, that figure is one in five. This clearly needs to change.

Measurement and transparency are where meaningful action on water security starts, and as governments work to implement the Paris Agreement and the Sustainable Development Goals, CDP will be shining a spotlight on progress and driving the race to a water-secure world for all. High quality information will signpost the way to this future for companies, investors and governments – never has there been a greater need for it.

Paul Simpson
CEO, CDP

¹ EIA: <http://www.eia.gov/todayinenergy/detail.php?id=14971>

² Impacts of California's Ongoing Drought: Hydroelectricity Generation, Pacific Institute, 2015

³ Will Water Constrain Our Energy Future, World Bank, 2014



Reimagining Disclosure – sector strategy and TCFD recommendations

Our 2017-2020 strategy is to build on the momentum of the Paris Agreement to fulfil our mission to incorporate environmental stewardship into the economic system. We have been the catalyst for global disclosure over the past 15 years. We want to continue to drive the future of meaningful disclosure to help companies and investors better understand environmental risk and accelerate the transition to a more sustainable economy.

To deliver this, we have launched our Reimagining Disclosure initiative to work in consultation with you and our other key stakeholders. Our aim is to produce a step change in benefits for disclosers and users of disclosure information.

We are pleased to announce that the first deliveries from this initiative will be implemented by Q4 2017. We are evolving our climate, water and forests questionnaires to be more sector specific, and to implement the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. Our sector work will focus initially on the high impact sectors in Energy, Transport, Materials and Agriculture.

We look forward to partnering with you on our Reimagining Disclosure initiative to increase the efficiency and relevance of our disclosure process. This way, we will continue to ensure we are the go-to disclosure platform for data and analysis to manage environmental risk, and to drive financial decision-making.

Executive summary

This year has seen the largest response yet to CDP's annual request for investment-relevant information on listed companies in sectors exposed to water risk. Of the 1,252 companies approached in 2016, 607 (48%) responded; up from 405 out of the 1,073 companies approached last year.

Our analysis reveals a number of insights into how companies are managing water risks and seizing opportunities. Key findings include:

- ▼ **Water risks are rapidly materializing for business:** Disclosing companies reported US\$14 billion in water-related impacts this year, a five-fold increase from last year. Over a quarter of companies have experienced detrimental impacts from water this year, and companies expect over half (54%) of the 4,416 water risks they identified to materialize within the next six years.
- ▼ **Corporates are not moving fast enough:** Year-on-year disclosures through CDP show that companies are not moving fast enough to address the sustainable management of water. Disclosure around key metrics, such as tracking water use, assessing risk, and ensuring strategic management shows that performance has not improved markedly since last year.
- ▼ **A new international regime to cut carbon creates more demand and pressure to improve water management:** The Paris deal is now international law, meaning the nearly 200 countries that submitted climate plans are now mandated to deliver emissions reductions. CDP's data shows that this will necessitate better management of water: 24% of GHG emissions reduction activities reported by business depend on a stable supply of good quality water. Encouragingly, however, over half of companies (53%) report that better water management is delivering GHG reductions, showing that water can potentially make – or break – the low-carbon transition.
- ▼ **A pivot towards water stewardship is underway:** There is a bright spot emerging in the increasing numbers of companies recognizing the value of managing water in a more holistic sense. More companies are citing water stewardship as the basis for their water targets, and this year's Water A List includes 17 more companies than last year.

Call to action

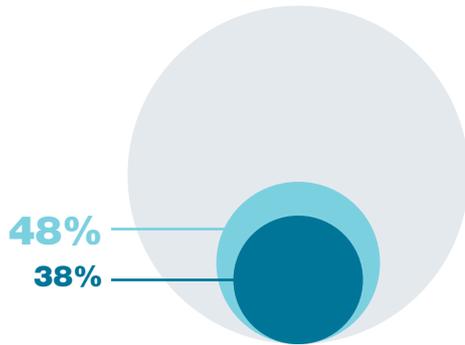
- ▼ The role of business in delivering water security is critical, and the business case for disclosure on the issue is unequivocal. Non-disclosing companies should take immediate steps towards reporting to CDP's water program.
- ▼ Investors managing more than US\$67 trillion in assets support the water program to understand and better manage risks and opportunities around water security. The greater the number of signatories, the clearer the message to companies. Investors should become a signatory to CDP's water program.
- ▼ CDP is planning to introduce a stronger disclosure framework in 2018, tailored to industry sectors, and a new reporting platform. Reporting companies should engage with the development of the disclosure framework to ensure they can provide investors with the information they need.

Year-on-year improvements

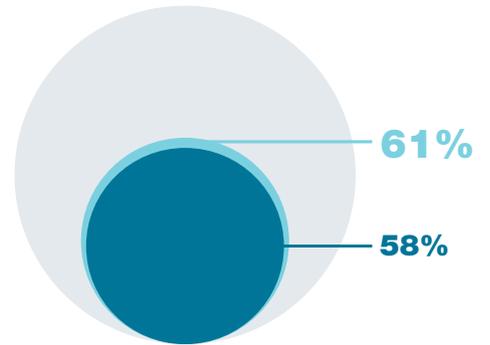
2016 2015



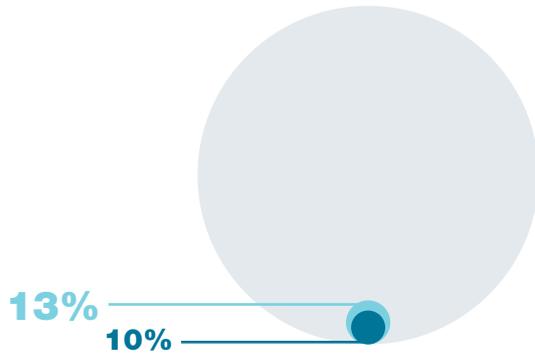
Transparency



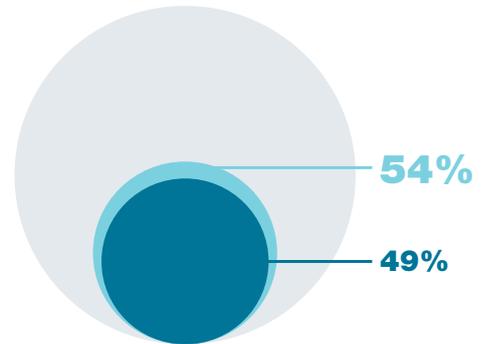
Measuring and monitoring



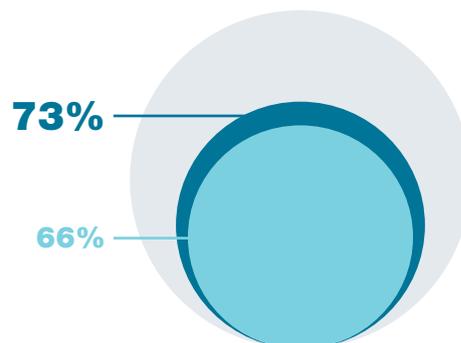
Risk assessment and management



Targets and goals



Engagement and response



State of play

CDP is an excellent framework for allowing a high caliber conversation between investors and companies.

Aviva
(\$US364 billion)

The information CDP collects is adding to a unique repository of corporate environmental data, helping build a picture of the current state of corporate water stewardship. We ask companies to systematically report data relating to their water use, water-related risks and opportunities and governance of water. By contextualizing and sharing this information with companies and investors, CDP catalyzes action to secure freshwater resources for all.

In many parts of the world, climate change threatens the availability of sufficient freshwater resources, and will lead to an increase in extreme weather events. Adapting to the effects of climate change on water systems is a crucial element of corporate water security.

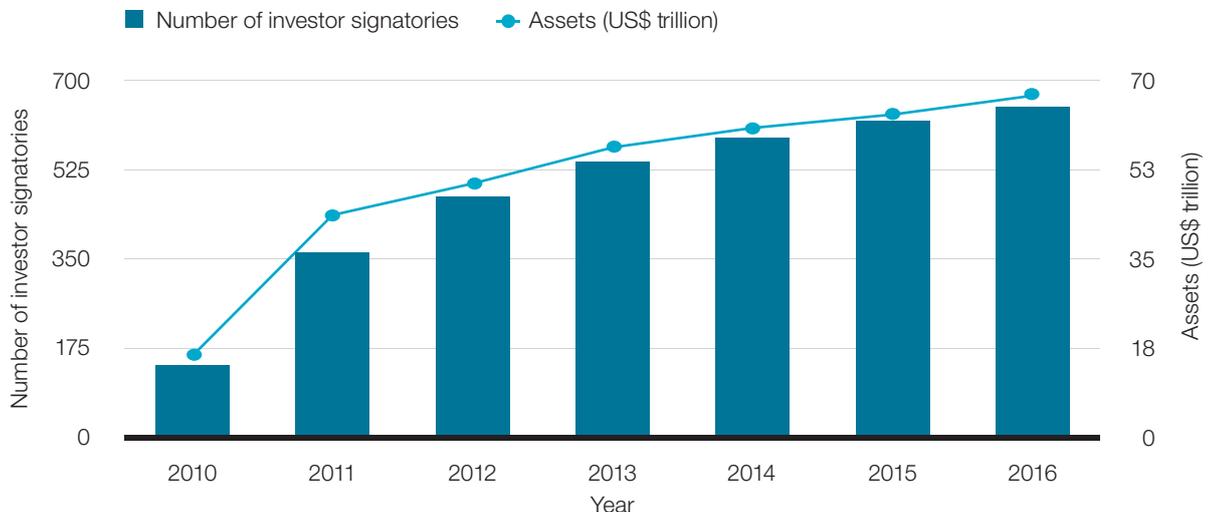
Obvious examples include switching to hydropower, or increasing the use of biomass or biofuels. But even low-carbon activities that are not water-intensive, such as the use of solar photovoltaics, require some water availability (in this case to keep panels clean and working at peak efficiency).

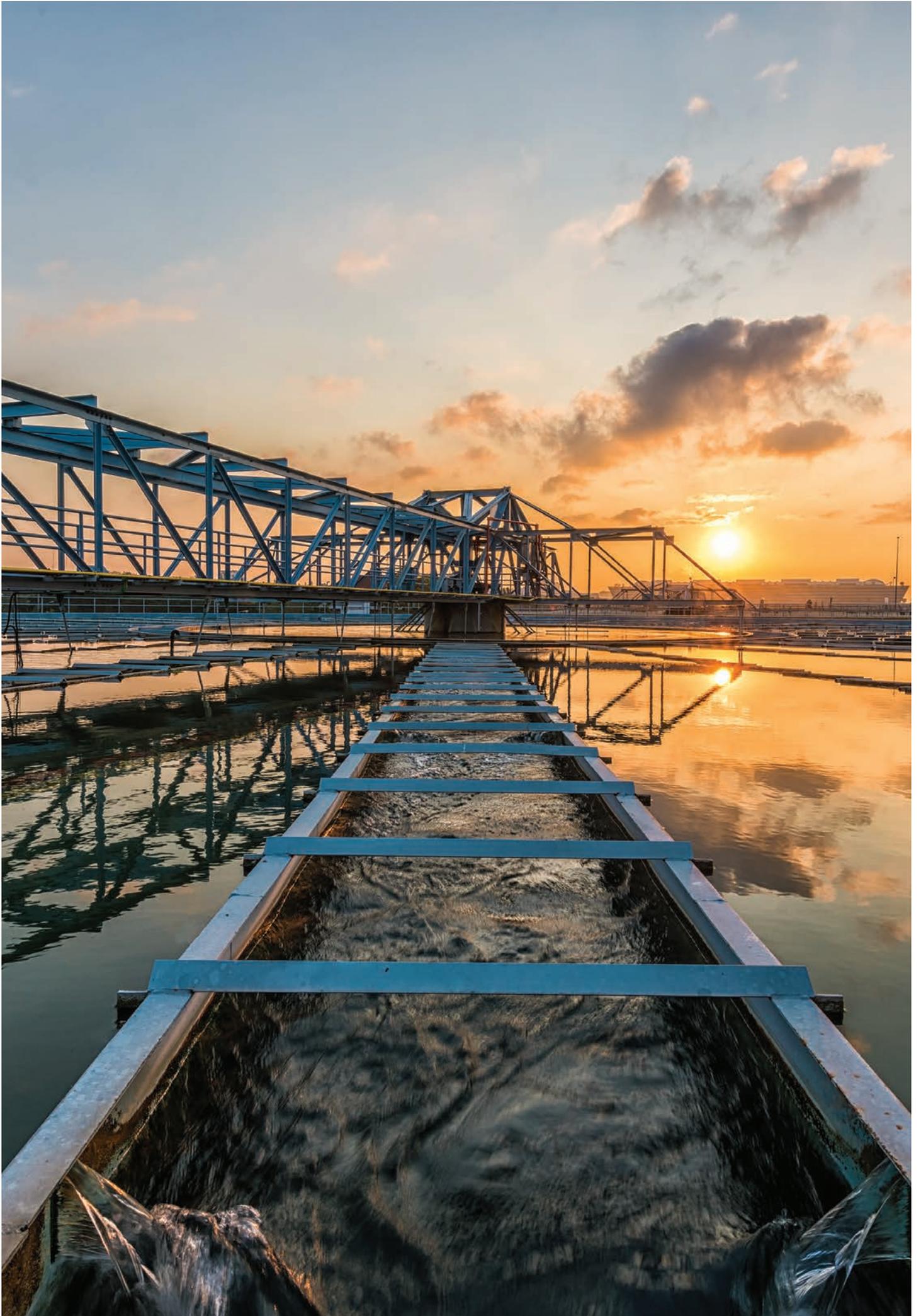
But water availability is also important for climate mitigation: data from CDP's climate change program shows that 24% of GHG reduction activities depend on the availability of good quality water.

This illustrates the inter-connectedness of corporate efforts to address climate and water issues, and the value of disclosures that address both societal concerns.

The objective of the water program, on behalf of the investor signatories that back CDP, is to encourage corporate progress towards a water-secure future for all. To that end, we track corporate action across five key areas (among others), namely: transparency; measuring and monitoring; risk assessment and management; targets and goals; and engagement and response.

Figure 1: CDP investor signatories & Assets: 2010 - 2016





Transparency

48% of companies are providing information to investors

We hope that CDP can draw in many more companies to this kind of disclosure, because it is the market that matters to us, not just any individual company. Market-wide disclosure is what we value in these efforts.

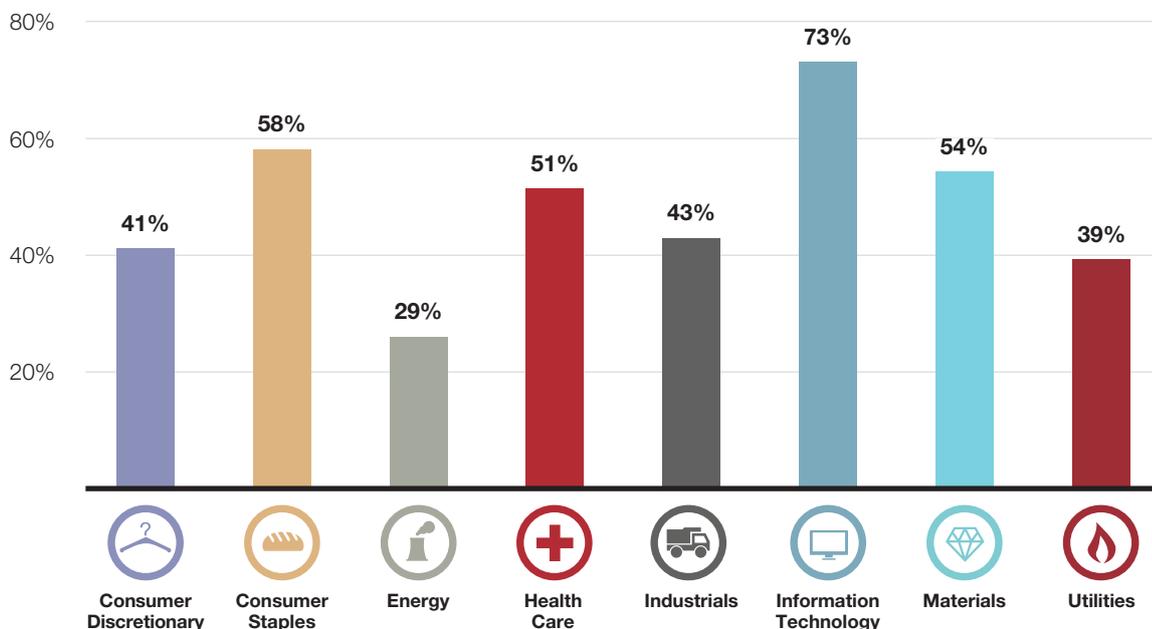
PGGM
(US\$200 billion)

Transparency is fundamental to modern economies and efficient investment, and it is the starting point of the work CDP does on behalf of its signatories. Without transparency on the crucial environmental metrics we track, it is impossible for investors – and difficult for the companies themselves – to understand the risks and opportunities they face and the steps they are taking to ensure water security.

This year, CDP wrote to 1,252 of the largest listed companies around the world in sectors exposed to water risk, namely Consumer Discretionary, Consumer Staples, Energy, Health Care, Industrials, Information Technology, Materials and Utilities. We asked them to complete the 2016 water information request. In total 607 companies did so, representing 48% of those approached, up from 405 out of 1,073 companies approached last year.

While these figures are moving in the right direction, they are not moving fast enough. Of particular concern to our investor signatories are a number of at-risk companies that have failed to disclose water-related information over the last five years, despite repeated requests from their shareholders. Given the importance that their investors and many of their customers place on understanding these issues, we list the largest three persistent non-disclosing companies from the Energy sector (see box, page 11).

Figure 2: Response rate by sector



Persistent non-disclosing companies

The below companies have failed to disclose critical water-related information to their investor shareholders via CDP for the last five years consecutively. They are:

Company Name	Sector	Market Capitalization ⁴
Exxon Mobil Corporation	Energy	US\$355 billion
Chevron Corporation	Energy	US\$204 billion
Royal Dutch Shell	Energy	US\$192 billion

Regulators are looking to ensure that companies are being sufficiently transparent on the environmental risks and opportunities they face. The EU's directive on non-financial reporting comes into force next year, while France's energy transition law requires that, from June 2017 at the latest, investors disclose how they incorporate environmental, social and governance issues into their investment policies.

Meanwhile, the international Financial Stability Board, which comprises central banks and finance ministries, has convened a Task Force on Climate-

related Disclosure that is drawing up its own corporate climate-related disclosure guidelines, which are likely to address water risk.

Disclosing through CDP helps companies understand the environmental challenges they face, as well as helping them to successfully respond to investor and regulatory requirements as they emerge. Indeed, voluntary engagement with disclosure helps companies contribute to and help frame the debate around transparency.



When Alcoa first responded to CDP Water, some of the questions prompted us to incorporate new concepts into our water strategy, in turn increasing its relevance to our business strategy. CDP's water questionnaire provides a robust framework for actions companies can take to improve their corporate water stewardship, increasing our capability to identify, manage and mitigate risk and capitalize on opportunities.

Alcoa Inc.



⁴ Market capitalization as of 9th November 2016.

Measuring & monitoring

More than a third of companies are still not measuring and monitoring water use

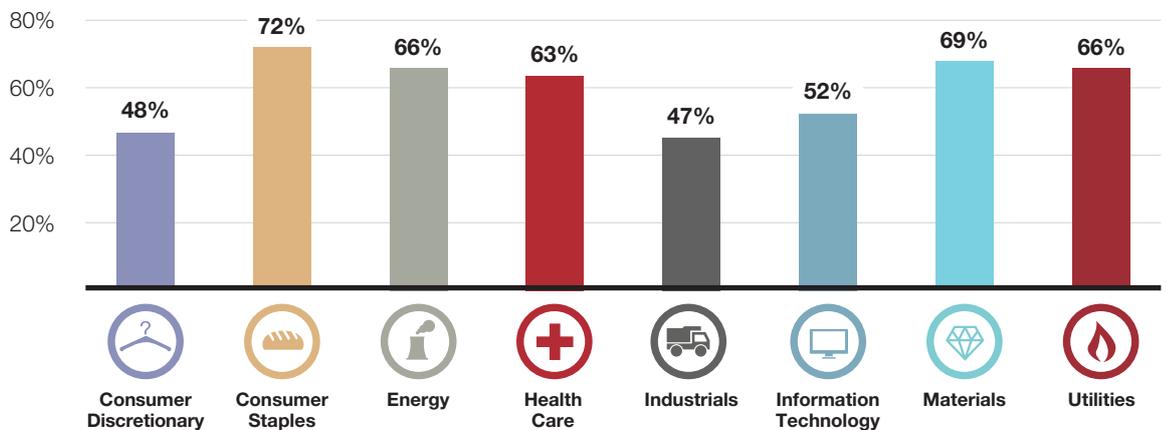
The foundation of transparency is rigorous measuring and monitoring of water use, discharge and consumption. Doing so is a vital step in allowing companies to understand the risks they face, and the opportunities available to improve water security and stewardship throughout their operations and supply chains.

Here, our analysis shows some progress, but it is by no means enough. While almost two-thirds (61%) of companies reporting via CDP now measure and monitor all aspects of water use and discharge, this is just three percentage points higher than last year.

regularly measure and monitor more than 50% of all water aspects (that is, withdrawals, discharges and consumption), while for Consumer Discretionary, the rate is 48%. These figures are too low, and should raise alarm bells for investors. For more detail on individual sectors, see pages 32 to 49.

Two sectors are of particular concern: within Industrials, just 47% of respondents state that they

Figure 3: Companies that regularly measure and monitor more than 50% of all water aspects



Case study: Measuring & monitoring

Duratex SA, a Brazil-based materials company, uses water measuring tools from SAP to monitor total volumes of water withdrawals, discharges, and consumption. Its monitoring showed a 6.6% reduction in water withdrawals in 2015, to 5,117 megaliters, partly due to investments in water reuse systems at its Botucatu fiber-board plant.

Its volume of water discharged in 2015 was essentially unchanged, at 2,616 megaliters. The company is making a series of investments in production efficiency at its manufacturing plants and in systems to reuse water. For example, in Taquari, a project was launched to treat and reuse effluents, leading to the complete elimination of effluent disposal from 2017.

The company's Sustainability Platform includes targets to reduce water withdrawals, and in 2016 it began a program to review its sustainability goals, within a long-term vision for the development of the business. Monitoring of water impacts will be an integral part of that review.



The growing imperative to assess and manage risk

US\$14 billion of water-related financial impacts reported

47%

The Energy sector is particularly exposed to these impacts, with almost half reporting paying penalties or fines last year.

Companies are becoming more aware that water can seriously impact the bottom line. This year, companies reporting to CDP disclosed water-related financial impacts of more than US\$14 billion – a vast increase from the US\$2.6 billion reported last year.

All sectors except Consumer Discretionary saw increased financial impacts this year, although much of the increase was driven by two sectors: Utilities and Materials. In the former, Japanese power giant **Tokyo Electric Power Co.** made a US\$9.7 billion provision to address groundwater pollution from the Daiichi nuclear power plant following the 2011 tsunami.

In Materials, South African miner **Gold Fields Limited** reported a US\$92 million impact from the capital and operating costs of a diesel-fired power generation plant. That investment, comprising 14.5% of the company's total capital expenditure in 2015, was required to make up for declining availability of power from Ghana's fleet of hydropower plants.

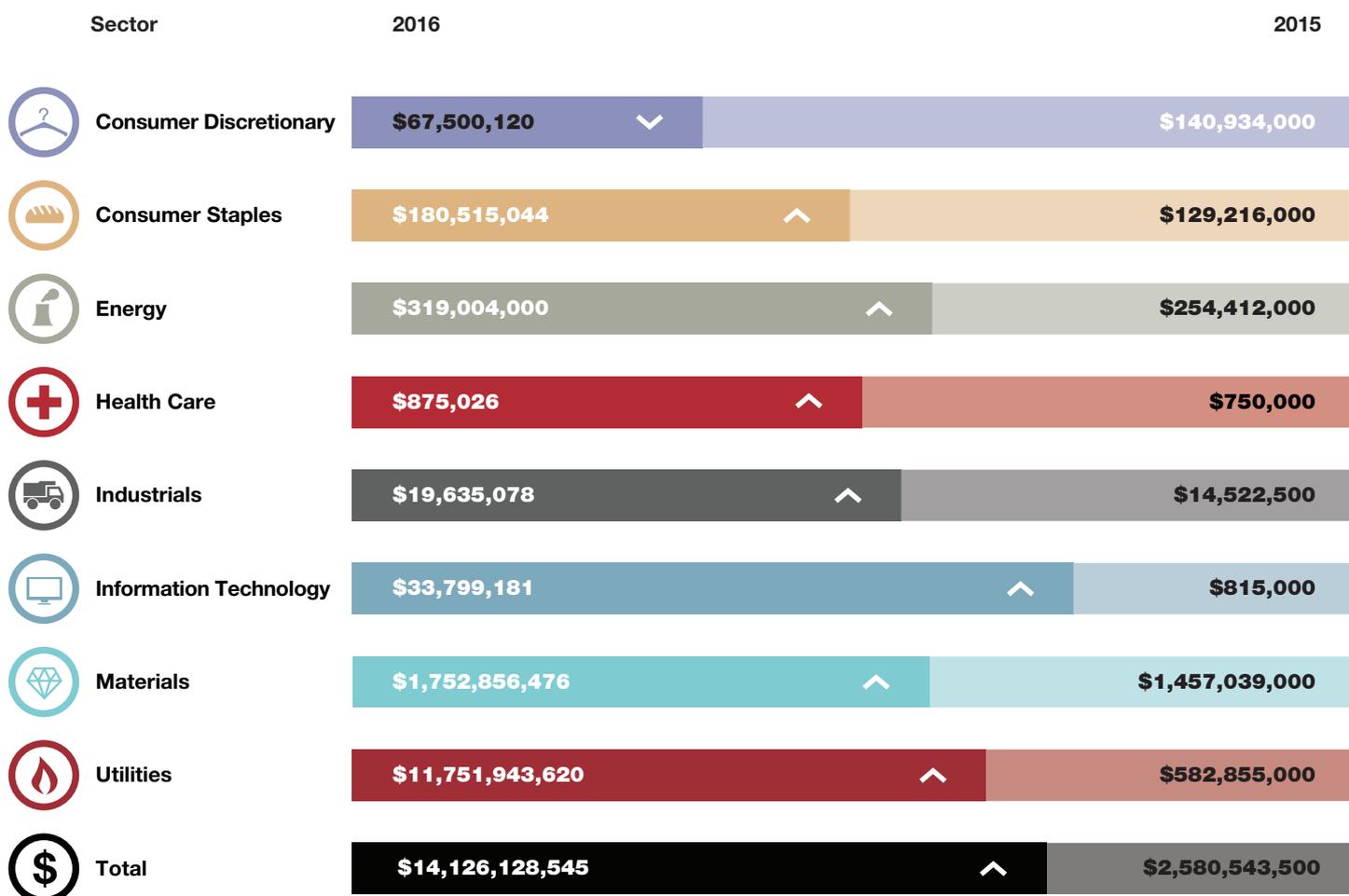
These figures bring the financial risk that companies face from water issues sharply into focus. In fact, over a quarter (27%) of companies disclosed detrimental impacts over the reporting period, a comparable percentage to last year. The most frequently cited impacts were:

- Higher operating costs:** such as those related to the emerging water quality regulations faced by **Suncor Energy Inc.**, which require substantial improvements in the quality of effluents discharged from its refineries. The Canadian energy company says that the best available technologies are not adequate to meet the new standards, meaning that R&D investment could push its total related costs above US\$165 million over the next few years.
- Plant or production disruption:** such as that faced at **Anglo American Platinum Ltd's** Mogalakwene mine, also in South Africa. The company has implemented a long-term bulk water strategy and infrastructure plan to protect, manage and maintain water supply to its operations, including an US\$5.8 million upgrade of a nearby sewage works to mitigate risks to the existing water supply.

Figure 4: Percentage of companies reporting impacts due to water by country



Figure 5: Year-on-year difference in reported financial impacts



France
32%

USA
29%

Turkey
21%

Germany
20%

Japan
13%



CDP's water questionnaire provides a very strong layer of risk management coverage to the CalSTRS Global Equity and total fund portfolios. The companies that receive CDP's water questionnaire represent 18% of our total investment portfolio and 36% of our global equity portfolio.

CalSTRS
(US\$193 billion)



In some cases, the links between water and energy become explicit, as **General Motors Company** found in Brazil. Drought pushed up water costs by US\$2.1 million in 2015, at the same time as reduced availability of hydropower pushed up electricity costs by US\$5.9 million. The company responded with increased water conservation efforts and energy efficiency measures.

In addition to these types of impacts, companies face costs from fines and penalties, delays in permitting, and brand damage. The Energy sector is particularly exposed to these impacts, with almost half (47%) reporting paying penalties or fines last year.

The degree of risk for a company is a function of how the availability of water impacts on its business, and how its use of water impacts on people and ecosystems. A comprehensive risk assessment is essential for companies to develop a clear understanding of physical, regulatory and reputational exposures as well as opportunities available.

The overwhelming majority of respondents to the water program (87%) state that water risks are assessed. However, current best practice suggests water-exposed companies should conduct risk assessments that are company-wide and comprehensive, including their direct operations and their supply chains. Crucially, these assessments should take place at the river basin level. Only 13% of disclosing companies meet this higher standard – up from 10% in 2015.

Assessment at the basin level poses challenges for companies, given that it requires an understanding of the activities and needs of local communities and other local water users. Nonetheless, business is responding. For example, the **International Council on Mining and Metals** has recently published a guide for managing water risks at the catchment level.⁵ This is the appropriate level for risk assessment to take place, as a water-stressed basin will not be able to support successful water-dependent businesses.

Case study: Risk assessment

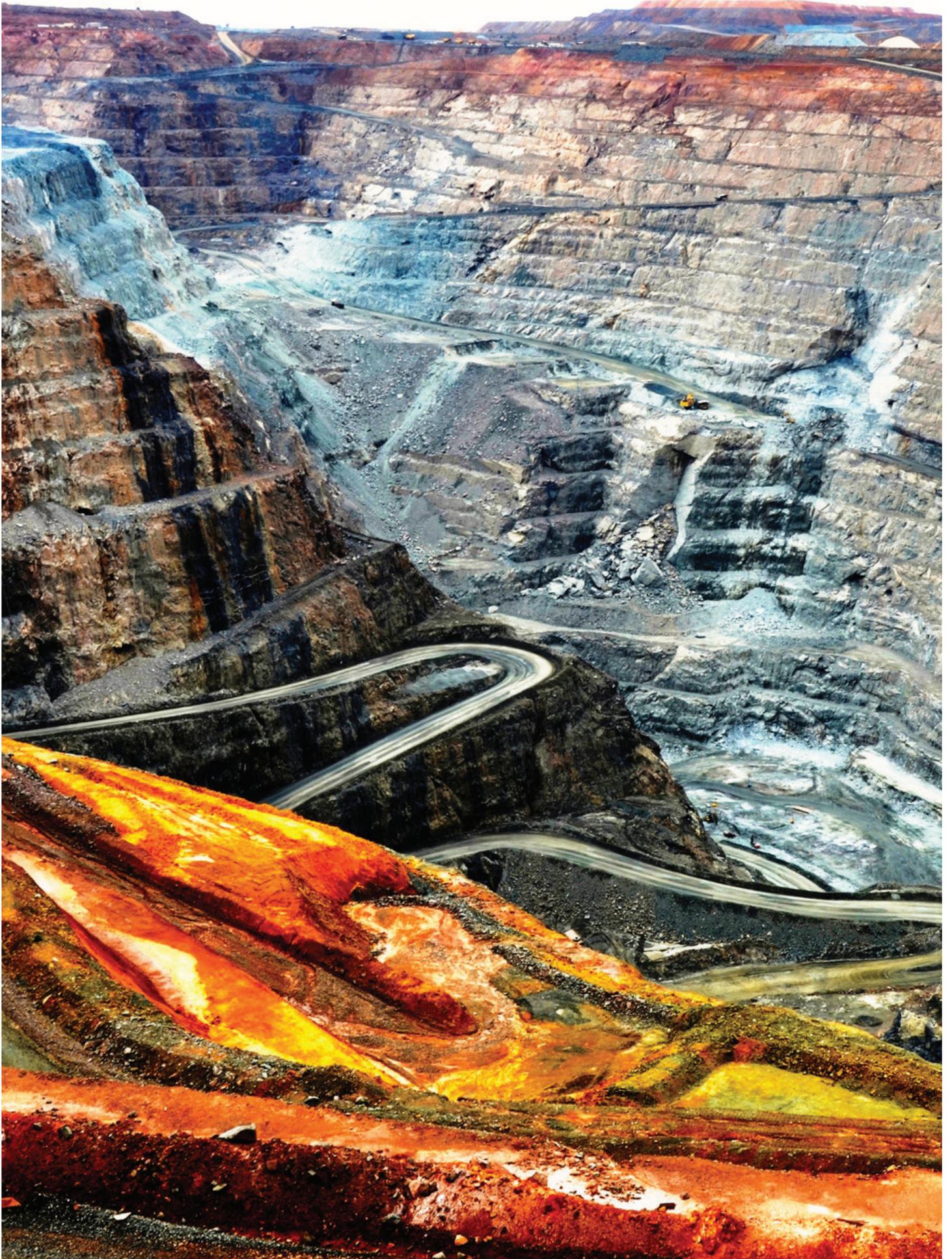
For consumer staples giant **Diageo plc**, regulation of its water use is considered to represent a major source of potential water-related risk – necessitating regulatory horizon scanning.

“Water use and consumption are significant cost drivers within our business,” the company says in its disclosure to CDP. “Any regulatory activity likely to increase water costs is an important element of water-related risk assessment.”

Specifically, it is concerned that local governance of water resources is lacking in some of the jurisdictions in which it operates, and is mindful that regulation is likely to increase in the future. It notes, for example, that water prices have increased significantly over the last year in Nairobi, Kenya, where the company operates a large brewery.

To manage these risks, the company relies upon internal company knowledge in the form of survey responses from site personnel, specific to water-related regulatory risks, as well as Diageo's custom-developed True Cost of Water calculator. This estimates the full cost of water to each plant, allowing plant managers to anticipate and plan for the financial impact of any price or tariff increases.

⁵ A practical guide to catchment-based water management for the mining and metals industry, ICMM (2016)



Targets & goals

54% of respondents have set both targets and goals to better manage water resources

Companies need to set targets and goals to bring their own water impacts to sustainable levels that reflect the ecological, economic and social needs of the river basins in which they operate. Commitments to address water security are evolving from simple water use metrics to more strategic, context-based objectives.

However, there is more work to be done to develop a methodology for setting meaningful and impactful targets and goals. While targets broadly remain operational, data suggest that there is an emerging corporate desire to address water issues in a way that reflects the local context and the role of others in achieving improvements in water security.

As companies are now moving to set emissions reduction targets based on climate science, CDP is working with partners to develop a new methodology for all companies to set better water targets.

This year, just over half of responding companies (54%) have set both targets and goals related to water. We define targets as quantifiable objectives to manage water resources, and goals as qualitative aims leading towards improved water stewardship.

Examples of quantitative target setting include these disclosed by the following companies:

- ▶ **Medtronic plc** has already met its 2020 target of reducing global water usage per dollar of revenue by 10%, against a base year of 2013.
- ▶ **Consol Energy Inc.**, in the US, committed to recycle or reuse at least 90% of its process water in its core operating areas. It met the target between 2013 and 2015.
- ▶ UK pharmaceutical company **GlaxoSmithKline** met a target to reduce operational water use by 20% against 2010 levels by 2015.



Using CDP's water questionnaire as a framework, we have benchmarked our strategies for addressing water-related impacts against sector peers, supporting us to further advance water stewardship in our direct operations and wider supply chain.

Mars



Meanwhile, the following companies have reported qualitative goals:

- ▼ **Dell Inc.** disclosed a goal to require all production sites and certain service suppliers to have a water risk mitigation plan in place by 2020. It also set a goal of using CDP data and its own hot-spot mapping to identify the 50 suppliers with the highest water usage and/or risk of natural disaster. By the end of the 2016 financial year, all 50 had published a five-year water risk mitigation plan.
- ▼ Spanish energy company **Iberdrola SA** has set a goal to monitor and control its supply chain water footprint. In 2015, three quarters of its contracted suppliers had environmental management systems in place. It also aims to replace less efficient electricity generation plants such as conventional thermal generation with renewables and combined cycle gas-fired generation, to reduce water consumption per unit of power produced. In 2015, its water consumption intensity was 70% below its peers, and Iberdrola aims to keep that intensity 50% lower than the sector average over the next five years.
- ▼ IT firm **Qualcomm, Inc.** disclosed a goal to raise employee engagement on sustainability issues, and launched an engagement campaign, "Take the Water Pledge," which encourages employees to commit to action to reduce their water footprints for thirty days. More than 2,000 employees at the US-based company participated globally.

Context-based water targets

The commitments and targets companies set are fundamental to determining the status of water resources. However, unlike for carbon emissions, no universally accepted standard exists for the setting of meaningful and measurable corporate water targets.

Water security for all requires collective action and coordination on shared water challenges at a local level. Meaningful targets are therefore those that are closely linked to the context within which a company's direct operations and supply chains are located.

CDP is partnering with the **UN CEO Water Mandate**, **The Nature Conservancy**, **WRI** and **WWF** to develop a common methodology that will assist companies in setting context-based targets (CBTs) that:

- ▼ Are based in science;
- ▼ Align with public sector efforts, particularly the targets relating to the United Nations' 2030 Sustainable Development Goals; and
- ▼ Reflect the principles of water stewardship.

The project began with a discussion paper launched at World Water Week 2016 setting the case for CBTs. Once funding is secured, the next phase will be to develop a consensus-driven protocol, plus a tool to support implementation across sectors. We would look to pilot the CBT methodology with our corporate partners.

The project will leverage existing work on science-based targets, the GHG Protocol, and research and findings on effective corporate water stewardship and disclosure.

Meeting targets on cutting water use can also deliver energy and climate change benefits.

Disclosures to CDP's water program show that no fewer than 53% of responding companies say they are realizing GHG reductions as a direct result of improvements to water management.

In the Energy sector alone, **Noble Energy, Inc.**, **OMV AG** and **Sasol Limited** identified water reduction efficiencies that reduced their energy use and therefore their GHG emissions.

Other examples include:

- ▶ Consumer staples giant **Nestlé SA** saved more than 80,000 tons of CO₂e in 2015 at the same time as using 1.7 million m³ less water.
- ▶ **Royal BAM Group nv** invested in the development of a type of asphalt that uses less energy and natural resources than conventional asphalt, delivering CO₂ emissions reductions and reducing the amount of water used per kilometer of highway.
- ▶ Japan's **Suntory Beverage & Food** notes that a "significant amount of energy is used for pumping water and controlling water temperature", and has set a target of reducing water use by unit of production by 42% by 2020, compared with 2007. It cites reduced energy and GHG emissions as a direct co-benefit.

Companies need to ensure that targets and goals are both addressing the underlying water risk they face as well as contributing to the security of the water basins upon which they rely. In this regard, some are more effective than others. For example, companies may be meeting per unit water efficiency targets, but if the water saved is not returned to the environment or, indeed, is offset by increased production, then water security for all is not being improved.

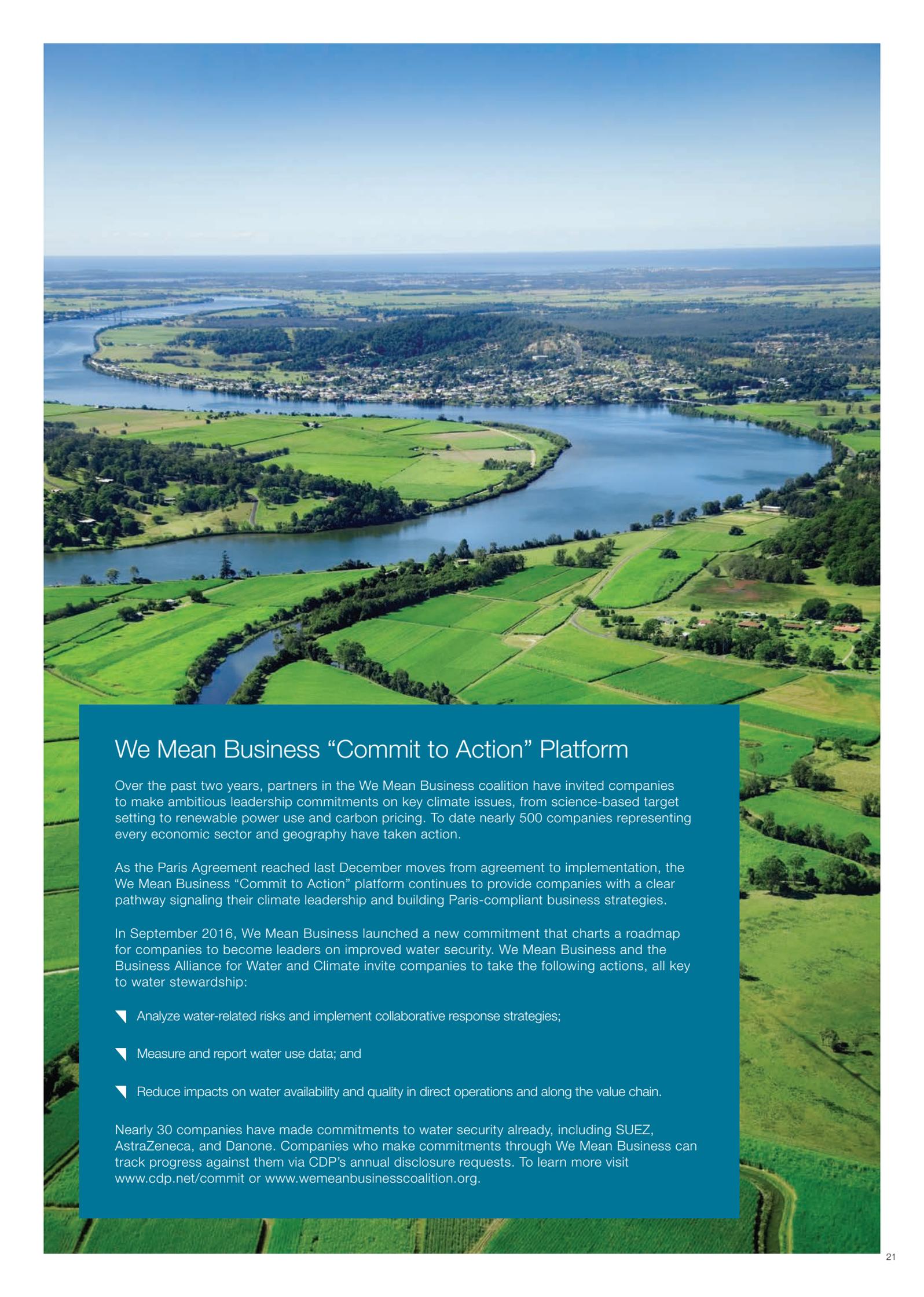
Case study: Targets & goals

Unilever has established targets and goals that involve not only its direct operations, but also its suppliers and local communities.

The Anglo-Dutch consumer goods company has set a target for 2020 to hold water abstraction by its factories around the world to below 2008 levels, despite significantly higher anticipated production volumes. In 2015, it reported abstraction at 19 million cubic meters below 2008 levels, representing a 77% reduction in absolute terms compared with 1995.

In addition, the company aims to provide 150 billion liters of safe drinking water by 2020 through sales of its Pureit home water purifier. From 2015, the company provided 78 billion liters of safe drinking water, including 13 billion in 2014.

Unilever has also set a goal to engage with suppliers to help them reduce their water impacts. "Water impacts in our supply chain could affect the viability of our business growth strategy by affecting commodity prices or supply availability," the company says. In response, it asked 179 key suppliers to complete CDP's supply chain water questionnaire: in 2015, almost 90% did so.



We Mean Business “Commit to Action” Platform

Over the past two years, partners in the We Mean Business coalition have invited companies to make ambitious leadership commitments on key climate issues, from science-based target setting to renewable power use and carbon pricing. To date nearly 500 companies representing every economic sector and geography have taken action.

As the Paris Agreement reached last December moves from agreement to implementation, the We Mean Business “Commit to Action” platform continues to provide companies with a clear pathway signaling their climate leadership and building Paris-compliant business strategies.

In September 2016, We Mean Business launched a new commitment that charts a roadmap for companies to become leaders on improved water security. We Mean Business and the Business Alliance for Water and Climate invite companies to take the following actions, all key to water stewardship:

- ▼ Analyze water-related risks and implement collaborative response strategies;
- ▼ Measure and report water use data; and
- ▼ Reduce impacts on water availability and quality in direct operations and along the value chain.

Nearly 30 companies have made commitments to water security already, including SUEZ, AstraZeneca, and Danone. Companies who make commitments through We Mean Business can track progress against them via CDP’s annual disclosure requests. To learn more visit www.cdp.net/commit or www.wemeanbusinesscoalition.org.

Engagement & response

83% of respondents have integrated water use into their business strategy



ICCR uses CDP's water data to understand companies' water-related risk exposure and water stewardship opportunities.

ICCR
(US\$19 billion)



For many companies, becoming water secure will require strategic change. Such change requires internal engagement at the very highest level. The percentage of disclosing companies with board oversight of water is high – at 69% – but that figure has barely moved from last year, when it was 68%. Similarly, while it is positive that 83% of responding companies integrate water into their business strategy, that figure is only one percentage point higher than last year.

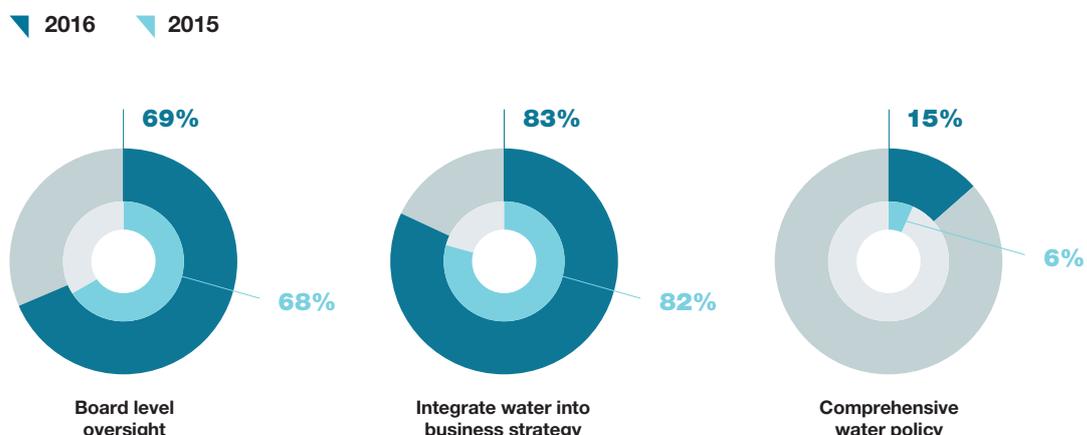
Meanwhile, there is considerable room for improvement in the percentage of companies with a publicly available, company-wide water policy that includes direct operations, supplier best practice and acknowledges the human right to water, sanitation and hygiene (WASH). Only 15% of respondents this year had such a policy in place; although this is up from 6% last year, possibly in response to the release of the new Sustainable Development Goals.

Companies working in isolation will struggle to eliminate unsustainable water use. Ensuring water security requires companies to look beyond their direct operations and understand the risks to other stakeholders, from the supply chain to local communities.

Some companies are taking such action within their supply chains. For example, US industrial tools company **Stanley Black & Decker, Inc.** is engaging with suppliers in three Chinese river basins to protect against the risk of supply chain disruption. It is now working with 36 of its top 50 suppliers in the region on supplier sustainability audits, which include assessing water stewardship practices.

Similarly, **Hewlett-Packard Co.** has collected sustainability data from 95% of its suppliers by spend, of whom 73% reported water metrics and 71% reported the use of a water goal in the last reporting period. The company is working to standardize tools and methodologies to facilitate consistent, reliable, and comparable reporting among suppliers and establish a robust process throughout its supply chain.

Figure 6: % improvements in the governance of water



Collective action is required to protect watersheds. In this regard, it remains a concern that only a quarter (26%) of responding companies undertake a water risk assessment at the river basin scale. However, some companies are successfully engaging with other water users.

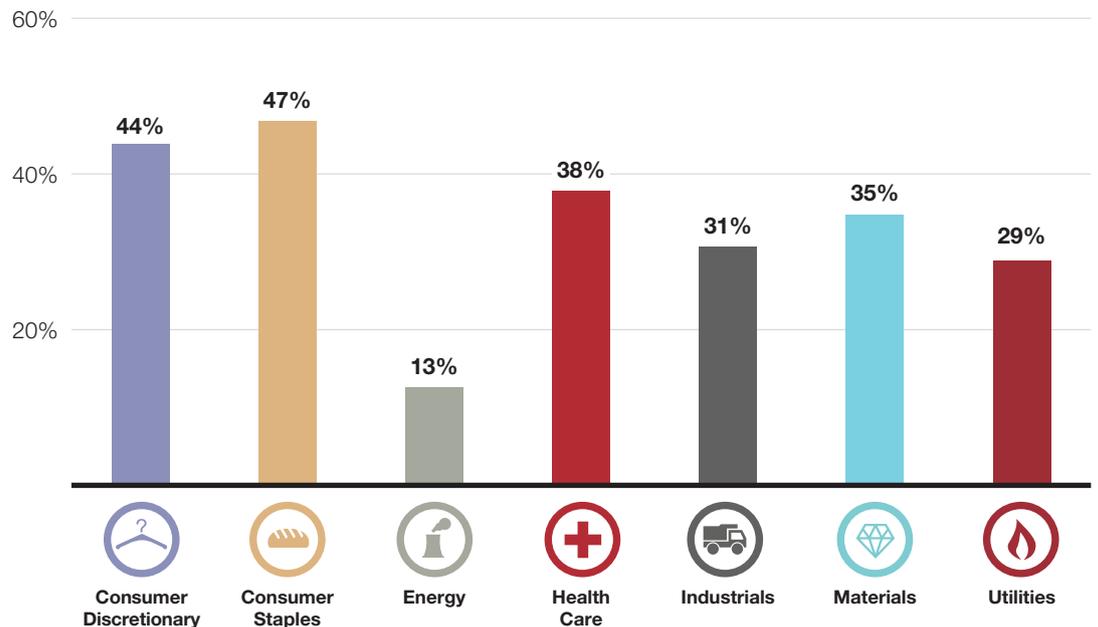
chain program has found that collaboration along the supply chain can generate opportunities to reduce emissions, often at a lower cost than a company acting alone could achieve. By extension, collaboration on water security is likely to reveal opportunities.

For example, French utility **Engie** has sought to head off the risk of delays in permitting for a new power plant in Cañete, Peru, through engagement with the local community and other stakeholders in the river basin. The outcome was the development of a desalination plant, reduced extraction from wells and the avoidance of using scarce groundwater.

How companies respond will shape the future. Business has a unique opportunity to act. As companies implement long-term plans and strategies to support the Paris Agreement and the Sustainable Development Goals, opportunities exist to make business models fundamentally more sustainable and resilient, by moving from a focus on direct operations to engaging in collective action.

Such engagement can also create links between water security and carbon emissions. CDP's supply

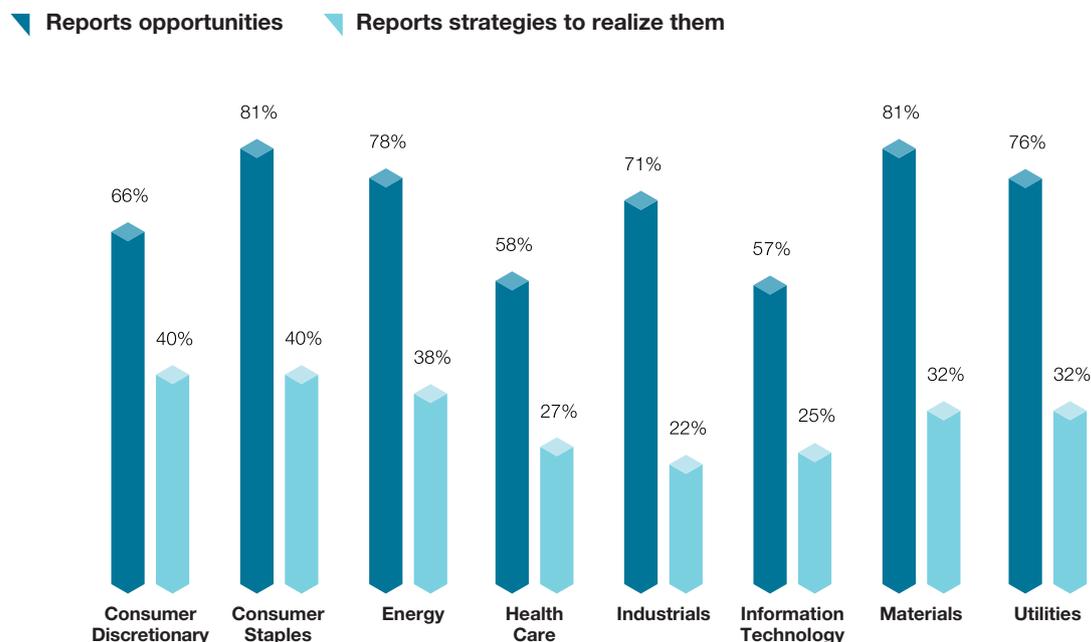
Figure 7: % of companies that request suppliers to report water use, risks and management



Calvert Investments recognizes that water is a high demand resource affecting a variety of industries and geographic regions. A company's water stewardship is pivotal to its operations, its community and society as a whole. The work produced by CDP in its water questionnaire provides vital information to investors on how companies are managing the use of this critical resource.

Calvert
(US\$16 billion)

Figure 8: % of companies reporting opportunities and strategies to realize them



Case study: Supply chain collaboration

Through multiple water footprint studies, **Coca-Cola European Partners**⁶ established that approximately 80% of the water footprint of their value chain came from agricultural ingredients, including beet and cane sugars, fruit juices, coffee, and pulp and paper products.

In response, CCEP has committed to sustainably source 100% of their key agricultural ingredients by 2020. To achieve this, they established a set of Sustainable Agriculture Guiding Principles (SAGPs), in conjunction with **The Coca-Cola Company**, which they expect key agricultural suppliers to adhere to. In 2014, 100% of CCEP's key sugar suppliers agreed to adhere to their SAGPs by 2020.

CCEP are working with suppliers and partners, such as the Sustainable Agriculture Initiative and the Rainforest Alliance, to develop ways of monitoring compliance. In 2015 they began working with suppliers and third-party frameworks to establish programs that will allow farmers to comply with their SAGPs.

Water replenishment programs are a key part of their value chain water strategy, helping to replenish the water used in their beverages. Over the past four years, CCEP has invested in water replenishment projects with **WWF-UK**, **WWF-France** and **Natuurpunt** in Belgium. Together with funding from **The Coca-Cola Foundation**, approximately US\$4.5 million has been invested and projects have replenished 1,509,400 m³ of water since 2012.

⁶ Data provided in response relates to **Coca-Cola Enterprises**, prior to merger to become **Coca-Cola European Partners**.



CDP's Water A List

In 2015, CDP published its first Water A list - highlighting eight companies that achieved an 'A' rating in accordance with our water scoring methodology. This year, we welcome 25 companies to our A list.

The methodology is based on four consecutive levels, representing the steps a company takes as it progresses. These are: disclosure; awareness; management; and leadership. A company needs to achieve a minimum score on each level in order to be assessed on the following one.

Every element in the questionnaire is scored for disclosure, with sections of most importance to data users carrying more weight. The awareness score measures how comprehensively the company has evaluated the ways in which water intersects with its business. Companies should consider the impacts of their activities on water, how these impacts affect people and ecosystems and, conversely, the impacts of water security on its business activities. These will influence the degree of risk that a particular company faces.

Management points are awarded for evidence of actions associated with good water management, such as the ability to account for water at the facility level, having company-specific targets and goals around water, or incorporating best practice elements in water policy. For leadership status, the company must demonstrate it is pursuing best practice, as understood by CDP and informed by other institutions we are working with to advance water stewardship, including the **Alliance for Water Stewardship**, **Ceres**, the **UN CEO Water Mandate**, **World Resources Institute** and **WWF**.

CDP's water score is an indicator of a company's commitment to transparency around their environmental risks, and the sufficiency of their response to them. These are both essential for the collaborative stewardship of water. CDP's water score is based solely on activities and positions disclosed in their CDP response. However, RepRisk, a business intelligence provider specializing in ESG risks, provides CDP with additional risk research and data into the proposed A List companies to assess whether any severe reputational issues could put their leadership status into question.

Companies eligible for an A are those that achieve 75% of the points available in the leadership band and have submitted a public response. However, 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 will receive an F, which signifies their failure to provide sufficient information to CDP to be evaluated for this purpose. An F does not indicate a failure in environmental stewardship.

Ultimately, the methodology aims to recognize companies that understand that the sustainable management of water is a business imperative and are acting to improve water security for all. For a summary of the leadership indicators, and breakdown of company responses by sector, please see Appendix III.



The continued development of CDP's water program and risk-related response data, together with the introduction and testing of scoring in 2014, is an important milestone in helping investors secure valuable information in their investment decision process.

Norges Bank Investment Management
(US\$852 billion)





Consumer Discretionary

Fiat Chrysler Automobiles NV (Italy)
Ford Motor Company (USA)
Sony Corporation (Japan)
Toyota Motor Corporation (Japan)



Consumer Staples

Coca-Cola European Partners (UK)
Colgate-Palmolive Company (USA)
Diageo plc (UK)
KAO Corporation (Japan)
Kirin Holdings Co Ltd (Japan)
L'Oréal (France)
Suntory Beverage & Food (Japan)
Unilever plc (UK)



Health Care

AstraZeneca (UK)
Bayer AG (Germany)
GlaxoSmithKline (UK)



Industrials

Mitsubishi Electric Corporation (Japan)



Information Technology

LG Display (South Korea)



Materials

Anglo American Platinum (South Africa)
BASF SE (Germany)
Harmony Gold Mining Co Ltd (South Africa)
Kumba Iron Ore (South Africa)
Metsä Board (Finland)
Royal Bafokeng Platinum Ltd (South Africa)



Utilities

Acciona S.A. (Spain)
Centrica (UK)



Investor interventions

Investor commentary



Norges Bank Investment Management is responsible for investing the assets of the Norwegian Government Pension Fund Global, currently amounting to US\$852 billion.⁷ We manage the fund on behalf of the Ministry of Finance, which owns the fund on behalf of the Norwegian people. Our mission is to safeguard and build financial wealth for future generations. Our primary objective is to secure the highest possible real return with an acceptable risk. Responsible investment is an important priority in the management of the fund.

The transition to a low-carbon global economy is underway, and focus will be on decreasing the carbon intensity of the global energy supply. More specifically, water plays a role in this energy transition. The energy sector is a significant water consumer, especially in power plant cooling, mineral extraction and processing and with the deployment of new technologies such as Carbon Capture and Storage. Cleaner sources of energy tend to be water intensive - and water withdrawals for energy production are expected to increase by twenty percent by 2035.⁸ The inter-linkages between water and energy need to be better understood to ensure the emissions reductions required are achieved.

Sustainable water management is part of the strategy to address resource constraints that can affect long-term economic growth. Eight out of the 17 United Nations Sustainable Development Goals relate directly or indirectly to water management. As a large global long-term investor, we have a clear interest in sustainable water management, efficient water regulation across different sectors and geographies and, more specifically, the internalization of externalities. Climate change already poses additional water challenges, through increased supply variability and extreme events. Insights from a broad range of disciplines are needed to manage and mitigate such risks. Solutions will have to involve academia, politics, science, and finance.

Water management has been a focus area for us since 2009, and we have published an expectations document that serves as a starting point for our dialogue with companies. This document, updated in 2015, is specifically directed at boards of companies, with clear expectations for strategy and investment planning, risk management, reporting and engagement with stakeholders. The goal is to highlight how we expect boards to integrate relevant water management challenges and opportunities in their business.

Our expectations are followed up through a variety ownership tools. Our investment teams have worked to understand sector-specific water issues, especially in high-risk industries such as agriculture, energy, mining, and utilities. We have assessed companies exposed to water risk on an annual basis since 2010. Assessments include reporting of management of risks in the supply chain. Data availability and high data quality is a requirement for this work.

To increase the transparency and availability of such company information, we have been the lead sponsor of CDP's water program since its inception. We provide guidance on how CDP can further develop data requirements to fit investor needs.⁹ We welcome the current plan to develop a sectoral approach for more relevant disclosure underpinned by materiality.

We will continue our work to understand these challenges, support increased disclosure of relevant metrics and initiatives that aim to increase coverage and data quality. In 2014 we initiated a project with Columbia University to research and develop environmental datasets and possible links to financial performance of companies. In 2016, we initiated a research project with Professor George Serafeim at Harvard Business School to study the relevance of corporate sustainability disclosure and potential bearing on financial performance. We are hopeful that research findings will inform industry practice and further development of reporting on water management. As an active manager, granularity in measurement and reporting at company- and site-levels can contribute to our understanding of business resilience of companies to local water challenges and the relevance of their risk mitigation strategies.

We want to acknowledge the role that CDP's water program has assumed in providing water-related datasets and welcome the release of the 2016 report.

Petter Johnsen
CIO, Norges Bank Investment Management

⁷ As of 06/30/2016 <http://www.nbim.no/en/responsibility/submissions>

⁸ Rodriguez et al. 2013

⁹ <http://www.nbim.no/en/responsibility/submissions>

Timeline of investor action on water

Since we launched our water program in 2010, investor interest in water as an issue of material concern has been on an upward trajectory. Below, we highlight some of the landmark investor interventions around water risk.

▼ **CDP** launches water program, backed by 137 investor signatories with US\$16 trillion in assets.

▼ **WWF** partners with Germany-based development finance institution **DEG** to develop the WWF-DEG Water Risk Filter.

▼ Shareholders ask that **Exxon Mobil** report on potential policies to reduce or eliminate hazards to air, water and soil quality from its hydraulic fracturing (fracking) operations.

▼ Nearly one third of investors back a resolution calling on consumer goods company **Fossil Group, Inc.**, to introduce supply chain standards, including on water.

▼ **Qualcomm Incorporated** agrees to address shareholder concerns about water risk in its supply chain, leading to the withdrawal of a resolution on the issue.

2010

2012

2011

2013

▼ **Norges Bank Investment Management (NBIM)** reiterates concerns over water scarcity, highlighting its expectations document first published in 2009.

▼ More than half of shareholders (52.7%) backed a resolution calling on electric power company **Ameren Corporation** to report on its efforts to address pollution impacts, including on ground and surface water, related to its handling of coal-combustion waste.

▼ Shareholders request that US utility **Ameren** adopt strategies and goals to reduce water use and increase use of less water-intensive energy sources.

▼ Shareholders petition **Cleco Corporation** to produce a sustainability report that includes a comprehensive discussion of the US utility's material water-related risk.

▼ Shareholders call for mining company **Molycorp** to issue a sustainability report describing the company's ESG performance, including a review of efforts to mitigate water risks in the company's operations.

- ▼ **Morgan Stanley** works with **CDP** on its Navigating Global Water Risk report on the power generation sector.
- ▼ Shareholders ask **EOG Resources Inc.** to develop indicators to minimize potential impacts on ground and surface water from the company's fracking operations.
- ▼ The **Principles for Responsible Investment** launches an investor-led collaborative engagement on water risk in agricultural supply chains.

2014

- ▼ **NBIM** initiates a research project with Professor George Serafeim at **Harvard Business School** to study the relevance of corporate sustainability disclosure and potential bearing on financial performance.
- ▼ Shareholders request that **Portland General Electric** prepare a climate change adaptation report quantifying the financial and operational risk to the company from climate change driven "mega-droughts".
- ▼ **Church Investors Group**, representing US\$19.5 billion of assets, engages with 37 companies failing to respond to CDP's water information request, leading almost half (16) to move towards disclosure.
- ▼ A coalition of **Swedish and Dutch pension funds** and investment managers pledge to use the Sustainable Development Goals, which include targets for access to water, as a framework to make investments.
- ▼ 643 investors, managing US\$67 trillion in assets, back **CDP's water program**. 25 companies are awarded an 'A' rating.

2015

- ▼ **Bloomberg** and the **Natural Capital Declaration** launch the Water Risk Valuation Tool, using financial modeling techniques to incorporate water risk into mining company valuations.
- ▼ **NBIM** funds the **Columbia Water Center** at Columbia University to develop a modeling platform to quantitatively assess the financial implications of water and other environmental risks for the mining sector.
- ▼ **Ceres** launches its **Investor Water Hub** to help promote greater consideration of water in investment decision-making.
- ▼ **CDP** launches corporate water scoring, applying its scoring methodology to all responding companies for the first time. Eight companies achieve an 'A' rating, joining CDP's Water A List.

2016

Sector summaries

These sector summaries allow investors to compare key metrics across sectors and assess their strengths and weaknesses. Investors can use this information to support their efforts on engagement, and facilitate improving company disclosure and action.

The responses from eight sectors are analyzed: Consumer Discretionary, Consumer Staples, Energy, Health Care, Industrials, Information Technology, Materials and Utilities. Each summary first gives a sector snapshot, followed by key findings and an overview of risks and opportunities. Companies are evaluated across five areas:



Transparency:

Do companies respond to CDP's request for information?



Measuring and monitoring:

Do companies measure and monitor all water aspects?¹⁰



Risk assessment and management:

Do companies conduct a comprehensive risk assessment at the river basin level across direct operations and supply chain?



Targets and goals:

Have companies set or achieved targets and goals which reflect a company-wide commitment or strategy?



Engagement and response:

Do companies report risk and an associated response in direct operations and supply chain? Do companies report opportunities relating to water?

¹⁰ Water aspects refers to water withdrawals, discharges, quality, consumption, and WASH (Water, Sanitation and Hygiene).

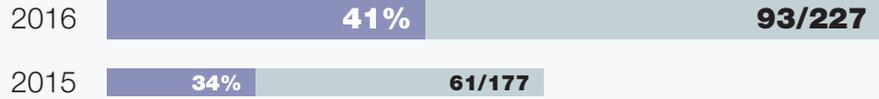
The heat map below provides an at-a-glance overview of each sector's performance in these five areas.

- Encouragingly, the overall response rate across sectors jumped by ten percentage points between 2015 and 2016. But growth is not fast enough—in four sectors more than half of companies are still not disclosing, and just 29% of companies in the highly exposed Energy sector are providing water data to investors via CDP.
- The Consumer Staples sector is the most advanced when it comes to the number of companies conducting comprehensive, river basin level risk assessment. However, across sectors, this proportion is still too low and year-on-year growth has been minimal (13% in 2016 vs 10% in 2015).
- The proportion of companies measuring and monitoring water aspects is increasing, but more must begin collecting this most basic of water information. Consumer Staples is still the best performing sector in terms of measuring and monitoring, but its rate has dropped six percentage points since 2015.
- Overall, a majority of companies are setting company-wide targets and goals for reducing their impact on water resources, but some sectors such as Energy, Industrials and Information Technology are falling behind.
- Across sectors, a high proportion of companies report risk in both their direct operations and supply chain. Responding to these risks requires collaborative action and current best practice is reflected in those companies that engage with local communities, policymakers, suppliers and other stakeholders in the river basin.

Sector stats at a glance	Consumer Discretionary	Consumer Staples	Energy	Health Care	Industrials	Information Technology	Materials	Utilities
Transparency	41%	58%	29%	51%	43%	73%	54%	39%
Risk assessment	15%	24%	13%	13%	10%	4%	8%	17%
Measuring and monitoring	48%	72%	66%	63%	47%	52%	69%	66%
Targets and goals	54%	67%	31%	54%	42%	45%	55%	56%
Engagement and response	66%	81%	78%	58%	71%	57%	81%	76%



Consumer Discretionary



Joint-lowest rate of water measuring and monitoring

- Water is essential for many of the production processes required by companies in the Consumer Discretionary sector, such as dyeing for textile production or painting in car manufacture.
- Worsening water security can have a direct impact on a company's low-carbon ambitions. **Ford Motor Company** reports the need to reuse water through wastewater treatment in areas of extreme water stress, requiring additional energy and resulting in increased GHG emissions. Some **Starwood Hotels & Resorts Worldwide, Inc.** properties that lie within water scarce regions have begun installing desalination plants on-site to produce enough fresh water for its guests, significantly increasing its energy use.
- Companies such as **Hanesbrands Inc.**, **Sumitomo Rubber Industries, Ltd.** and **Caesars Entertainment** are pursuing water use efficiencies in their operations that will help reduce energy use and resulting GHG emissions.

Sector stats at a glance

Current State	26%	experienced detrimental impacts in reporting year, costing the sector US\$68 million	Top impacts reported
	59%	evaluated how water risks could impact business' growth strategy	<ol style="list-style-type: none"> Higher operating costs Production disruption Water supply disruption
Risk Assessment	30%	conduct a company-wide assessment that covers both direct operations and supply chains	
		<ul style="list-style-type: none"> 57% include future regulatory changes at the local level; 66% include local communities; and Only 26% look at the river basin scale. 	
Exposure to Risk	53%	report exposure to risk	Top impacts reported
		<ul style="list-style-type: none"> 6% anticipate risks to materialize in <1 year 37% anticipate risks to materialize within 1-6 years 25% anticipate risks to materialize in >6 years 	<ol style="list-style-type: none"> Higher operating costs Production disruption - reduced output Supply chain disruption
Supply Chain	44%	request suppliers to report	
	23%	request more than 50% of suppliers to report	
Opportunities	66%	report opportunities	Top opportunities reported
	40%	report strategies to realize them	<ol style="list-style-type: none"> Improved water efficiency Cost saving Increased brand value

Key Findings

- Water stress and higher water prices are the top risk drivers for this sector. Yet only 48% of companies report measuring and monitoring water withdrawal, discharge, and consumption data—the lowest rate of all sectors. Without such monitoring, companies will struggle to understand their water risks, capitalize on opportunities and remain compliant with regulations.
- Supply chain disruption is one of the top reported risks, but less than half (44%) of respondents ask suppliers to disclose water-related information, leaving clear room for improvement. Collecting information from its suppliers allows **Toyota Motor Corporation** to better understand and manage water-related risks in its supply chain, while **Nissan Motor Company** holds regular environmental briefing sessions for suppliers to share targets, action plans and risk mitigation strategies.
- Key risks and opportunities may be going unnoticed, with only 30% of respondents undertaking a comprehensive risk assessment covering both direct operations and supply chain, and just 20% undertaking assessments at the river basin level such as **Johnson Controls** and **Starbucks Corporation**.

Risks and Opportunities

- The proportion of Consumer Discretionary companies that identify opportunities (66%) is low compared with other sectors, perhaps because so few companies have conducted a comprehensive risk assessment.
- However, 40% of companies that report opportunities have strategies in place to realize them. **Hilton Worldwide, Inc.** improved water efficiency by using polymer bead cleaning technology to reduce laundry water use by 80%. **Adidas AG** reports cost savings from requiring suppliers to use approved bluesign chemicals, which saves the need to test upstream suppliers and reduces operating costs. And groundwater replenishment activities could help **Suntory Beverage & Food** to increase brand value: they estimate if the recognition of their efforts resulted in a 1% increase in domestic sales, it would increase group sales by around US\$79 million.
- This sector seems well placed to respond to Sustainable Development Goal 6, as it has the second highest percentage of respondents with strong policies that acknowledge WASH (22%), including **Inditex**, **Caesars Entertainment** and **Woolworths Holdings Ltd.**

Case study: Ford Motor Company

Ford Motor Company has set an aggressive new target to reduce water use in its manufacturing operations by 30% per vehicle from 2015-2020. Water has been a priority for the company since 2000, when Ford announced its first reduction targets. Since then, the Company has reduced water use per vehicle by 61%. By 2020, it expects to reduce water use per vehicle by nearly 75%. These reductions have been achieved by implementing new technologies like 3-wet painting in assembly plants and minimum quantity lubrication in powertrain plants. In the future, Ford will be introducing real time water metering to aggressively manage water use.

Ford recognizes that it can't tackle water issues by itself, which is why it pursues partnerships to solve challenges and shares best practices with its suppliers through the Partnership for a Cleaner Environment (PACE) program.

Ford's employees are also very engaged in the Company's water efforts. In recognition of the 10th anniversary of the Ford Volunteer Corps, Ford's Executive Chairman Bill Ford created the Bill Ford Better World Challenge, a global grant program that will award up to US\$500,000 to community service projects identified by company employees.

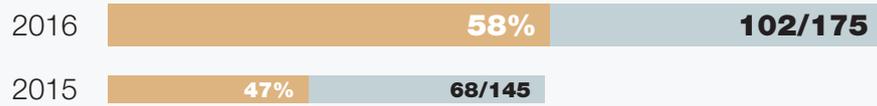
One winning project is the Thailand Clean Water Community Project. Hundreds of Ford volunteers are working with World Vision Foundation of Thailand, helping rebuild a water system in the town of Chanthaburi that serves a school and more than 3,300 local residents. Ford volunteers are repairing storage tanks and installing new water purifiers, sinks and other restroom fixtures. In addition, the water will be used to help irrigate crops and sustain community gardens, also providing a hands-on learning experience for students and families.

This work and Ford's goal of zero potable water use for manufacturing reinforces our commitment to the human right to water and is the foundation for our ultimate goal of zero water withdrawal for our manufacturing processes.





Consumer Staples



Highest exposure to risk and detrimental impacts

- ▶ A sufficient supply of high quality water is vital for both the production and manufacturing of the food and beverage industries. Although water is the core ingredient in **Heineken NV** and **Coca-Cola European Partners**¹¹ products, as much as 90% and 80% of their respective water footprint is derived from their agricultural supply chains.
- ▶ Water-consuming processes often use considerable amounts of energy, meaning that water efficiency projects can save on both water and energy consumption. In 2015, the savings delivered under **Nestlé's** Environmental Target Setting Program amounted to 1.1 million GJ of energy, 1.7 million m³ of water and 81,146 tons of CO₂e.

Sector stats at a glance

Current State	41%	experienced detrimental impacts in reporting year costing the sector US\$180 million	Top impacts reported
	71%	evaluated how water risks could impact business' growth strategy	<ol style="list-style-type: none"> 1. Higher operating costs 2. Water supply disruption 3. Supply chain disruption
Risk Assessment	51%	conduct a company-wide assessment that covers both direct operations and supply chains	
		<ul style="list-style-type: none"> ▶ 70% include future regulatory changes at the local level; ▶ 68% include local communities; and ▶ 35% are conducted the river basin scale. 	
Exposure to Risk	77%	report exposure to risk	Top risks reported
		<ul style="list-style-type: none"> ▶ 24% anticipate risks to materialize in <1 year ▶ 37% anticipate risks to materialize within 1-6 years ▶ 20% anticipate risks to materialize in >6 years 	<ol style="list-style-type: none"> 1. Higher operating costs 2. Supply chain disruption 3. Plant/production disruption leading to reduced output
Supply Chain	47%	request suppliers to report	
	9%	request more than 50% suppliers to report	
Opportunities	81%	report opportunities	Top opportunities reported
	40%	report strategies to realize them	<ol style="list-style-type: none"> 1. Improved water efficiency 2. Cost savings 3. Increased brand value

Key Findings

- ▶ The Consumer Staples sector reports the highest exposure to risk (77%) and detrimental impacts (41%). These impacts took a financial toll on companies, with both **Associated British Foods** and **Tongaat Hulett** reporting that the severe drought in South Africa cost them US\$35 million and US\$23 million, respectively, in the reporting year.
- ▶ Encouragingly, the sector reports the highest proportion of companies (51%) undertaking a comprehensive risk assessment in both direct operations and supply chain, including **KAO Corporation**, **Carrefour** and **WhiteWave Foods**. However, this still leaves just under half of companies in a highly exposed sector with an inadequate account of their water-related risks.
- ▶ This sector is a strong performer when it comes to governance, with the highest percentage of respondents integrating water into their business strategies (87%) and the second highest percentage of respondents with board level oversight of water policies and strategies (75%).

Risks and Opportunities

- ▶ For a sector in which supply chain disruption is reported as a top risk, the fact that less than half (47%) of companies require key suppliers to report water use, risks and management should be of concern to investors. An example of best practice is **Unilever** where a Responsible Sourcing Policy sets mandatory requirements for 76,000 supplier partners to include water efficiency and water risk management into their agricultural practices.
- ▶ 81% of companies identify opportunities, including increased water efficiency reported by **Philip Morris International**, **The Kraft Heinz Company** and **Carrefour**; cost savings reported by **Tiger Brands**, **Pinnacle Foods Group**, and **Danone**; and improved community relations, reported by **Diageo Plc**, **JBS S/A** and **Constellation Brands**.
- ▶ This sector also boasts the highest percentage of respondents (67%) that report setting targets and/or goals to reduce their impact on water resources. **PepsiCo Inc.** exceeded their target to reduce water usage per unit of production by 20% by 2015 compared to 2006, achieving a water usage reduction of 25.8% since 2006 and of 3.1 million m³ from 2014 to 2015.

¹¹ Data provided in response relates to **Coca-Cola Enterprises**, prior to merger to become **Coca-Cola European Partners**.

Case study: Colgate-Palmolive Company

One of life's most basic needs, clean water is vital to the communities we serve. Yet in many regions of the world, it is increasingly scarce. Water is also essential to our business; it is an ingredient in many Colgate products and required in almost every phase of the product life cycle. So we are committed to making every drop of water count through our global Water Stewardship Strategy.

The water required to use our products represents the largest part of our water footprint. That is why we are committed to reaching all of our consumers with water conservation messages to turn off the faucet while brushing teeth and washing hands. Today you will find a Save Water message on most all of our Oral Care packages around the world, supported by a website that provides water saving tips for toothbrushing, handwashing, dishwashing and showering.

Colgate's conservation campaign extends online and in stores. In the US, Colgate partnered with The Nature Conservancy to promote water conservation awareness in selected stores. In Brazil, the Sorriso toothpaste brand challenged consumers to take the #DesafioDoCopinho or One Cup Challenge, and use just one cup of water to brush their teeth.

In 2016, Colgate expanded the Save Water campaign globally with messaging on World Water Day. Our video and message to make every drop of water count was viewed by over a billion consumers in more than 60 countries. In the US, Colgate aired our award winning Save Water video message during football's Big Game. This campaign has reached over 2.7 billion people.

In the year ahead, Colgate's efforts will continue with more consumer, customer and employee engagement to Save Water.



This profile is collaborative content supported by Colgate-Palmolive Company



Energy



Lowest response rate for sixth year running

- Water is fundamental to the production of energy. It drives turbines for low-carbon hydropower; provides cooling for power generation; facilitates the extraction and processing of fuels; and, increasingly, irrigates biomass crops.
- The low carbon ambitions of companies in the energy sector are therefore closely connected with their water management practices. For example, **Cenovus Energy Inc.** explains how emerging regulations on the treatment of wastewater drove an increase in its energy use and, consequently, their GHG emissions.
- Conversely, **Noble Energy, Inc.**, **Husky Energy Inc.** and **Sasol Limited** identified water reduction efficiencies that reduced the energy required for operations and helped lower resulting GHG emissions.

Sector stats at a glance

Current State	25%	experienced detrimental impacts in reporting year costing the sector US\$319 million	Top impacts reported 1. Higher operating costs 2. Fines/penalties 3. Delays in water permit allocation
	63%	evaluated how water risks could impact business' growth strategy	
Risk Assessment	9%	incorporate a company-wide assessment which covers both direct operations and supply chains	
		<ul style="list-style-type: none"> 70% include future regulatory changes at the local level; 68% include local communities; and 34% are conducted at the river basin scale. 	
Exposure to Risk	72%	report exposure to risk	Top risks reported 1. Higher operating costs 2. Delays in water permit allocations 3. N/A
		<ul style="list-style-type: none"> 12% anticipate risks to materialize in <1 year 64% anticipate risks to materialize within 1-6 years 16% anticipate risks to materialize in >6 years 	
Supply Chain	13%	request suppliers to report	
	3%	request more than 50% suppliers to report	
Opportunities	78%	report opportunities	Top opportunities reported 1. Improved water efficiency 2. Cost savings 3. Increased brand value
	38%	report strategies to realize them	

Key Findings

- For the sixth year running, the Energy sector presents the lowest response rate, with less than a third of companies disclosing critical water-related data to their investors. The low response rate is particularly concerning given that almost three quarters of respondents (72%) report exposure to water risks.
- Of equal concern are the 91% of respondents that do not conduct a company-wide risk assessment covering both direct operations and supply chain. This leaves the sector unaware of opportunities and vulnerable to risks.
- This vulnerability is costing the sector, with 47% of energy companies subject to penalties in the reporting year, the highest of all eight sectors. The fines accrued to US\$78 million, over seven times the amount reported in 2015.

Risks and Opportunities

- 72% of companies report exposure to water risks, driven primarily by water scarcity, regulatory uncertainty and drought. Higher operating costs was the top risk identified, as seen in **Exxaro Resources Ltd's** anticipated increase in insurance costs due to the perceived higher risk of its operations and the impacts of climate change.
- A quarter of companies report detrimental impacts in the reporting year, including **Suncor Energy Inc.**, whose efforts to comply with emerging water quality regulations will have a financial impact of US\$165 million and **OMV AG** who invested US\$17 million in upgrading its water treatment plant to remain compliant.
- Conversely, a large majority (78%) of companies identified water-related opportunities for their business, including **Devon Energy Corporation**, which sees responsible water management as a way to build trust with local communities. **Anadarko Petroleum** was also able to reduce by 96% the number of trucks delivering water to its operations in Colorado, resulting in reduced GHG emissions and impact on local communities.
- However, the sector shows a lack of ambition and forward-planning to reduce their impact on water resources: only 31% of companies have targets and/or goals in place, the lowest rate of any sector.

Case study: OMV AG

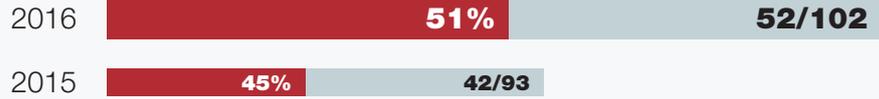
Used for a variety of processes in their upstream and downstream operations, water is critically important to OMV. They publicly demonstrated their commitment to responsible water management by publishing a Water Ambition Statement in their 2014 Sustainability Report, along with strategic pillars and goals.

Any significant water-related risks are considered and addressed across the company as part of its bi-annual Enterprise Wide Risk Management process. OMV applies the IPIECA Global Water Tool, WWF's Water Risk Filter and the WRI Aqueduct tool to screen and analyze physical, regulatory and reputational risks related to water. This practice has helped OMV highlight the aspects of their operations most vulnerable to water risks and assess where water might pose potential constraints to future operations.

OMV also recognizes that good water management can present opportunities. At their Petrobrazi refinery in Romania, OMV reduced their water withdrawals in 2015 by implementing projects such as condensate recovery in stripping reboilers, upgrading their steam tracer batteries and the optimization of their drinking water network. Additionally, the company recently constructed a new water treatment plant to improve the quality of water discharged to the receiving Barcau river in Romania, thus benefiting the local ecosystem and biodiversity of the river.



Health Care



Lowest proportion of companies reporting opportunities

- ▼ In the Health Care sector, water multitasks as a reagent, solvent and cleaning agent in the production of products, as well as facilitating Water, Sanitation and Hygiene (WASH) provision for employees and consumers.
- ▼ Many companies have recognized and acted on the link between reduced water use and energy requirements. By incinerating 250,000 tons of hazardous waste **Bayer AG** was able to produce 1 million tons of steam to use on-site, cutting CO₂ emissions by 200,000 tons.
- ▼ Meanwhile, at their Virginia site, **Merck & Co., Inc.** completed a water reduction project that will save 2.1 million m³ of water, generate 40 kWh of recovered energy and save US\$500,000 every year.

Sector stats at a glance

Current State	15% experienced detrimental impacts in the reporting year costing the sector US\$875,000	Top impacts reported
	62% evaluated how water risks could impact business' growth strategy	1. Higher operating costs 2. N/A 3. N/A
Risk Assessment	29% conduct a company-wide assessment that covers both direct operations and supply chains	
	<ul style="list-style-type: none"> ▼ 69% include future regulatory changes at the local level; ▼ 73% include local communities; and ▼ 35% are conducted at the river basin scale. 	
Exposure to Risk	50% report exposure to risk	Top risks reported
	<ul style="list-style-type: none"> ▼ 6% anticipate risks to materialize in <1 year ▼ 45% anticipate risks to materialize within 1-6 years ▼ 40% anticipate risks to materialize in >6 years 	1. Higher operating costs 2. Production disruption – reduced output 3. Supply chain disruption
Supply Chain	38% request suppliers to report	
	6% request more than 50% suppliers to report	
Opportunities	58% report opportunities	Top opportunities reported
	27% report strategies to realize them	1. Improved water efficiency 2. Cost savings 3. Increased brand value

Key Findings

- ▼ 50% of companies report that water poses a substantive risk to their business, one of the lowest of all sectors. However, risk may be underestimated with less than a third of respondents (29%) undertaking a comprehensive risk assessment covering both direct operations and supply chain.
- ▼ However, the sector has the joint-highest number of respondents undertaking a risk assessment at the river basin level (35%) including **Sanofi**, **Bayer AG** and **AstraZeneca**.
- ▼ Just 58% of companies have identified water-related opportunities, the lowest proportion of all sectors, and only 27% report strategies to capitalize on opportunities. More opportunities could potentially be identified with more comprehensive risk assessments.

Risks and Opportunities

- ▼ The main risk drivers in this sector are physical, including increased water scarcity, declining water quality and increasing water stress. In their efforts to address these physical risks, almost half of respondents (48%) report an increase in water-related CAPEX and OPEX, including **Netcare Limited**, which reports a 9.8% annual increase in OPEX as a result of increased water tariffs.
- ▼ As with most other sectors, higher operating costs was the top risk identified. **Mediclinic International** reports high costs due to interruptions in the water supplied by the local authority, estimating that they have gone a total of 3,585 hours without a reliable water supply. Production disruption and supply chain disruption are the second and third most reported risks respectively as reported by both **Bayer AG** and **Essilor International**.
- ▼ In a sector in which many companies depend on their supply chain to deliver raw materials and products, it is concerning that only 38% of respondents require their suppliers to report on water.
- ▼ Top opportunities include improved water efficiency as reported by **Biogen Inc.**, whose next-generation drug manufacturing process is expected to use 89% less water per kilogram of output; cost savings reported by **AstraZeneca** who implemented water use efficiencies and minimized its impact on the communities in which it operates; and increased brand value reported by **GlaxoSmithKline** which encouraged its customers to reduce their water use through its “turn off the tap” campaign.

Case study: Bayer AG

Bayer AG have publicly demonstrated their commitment to water stewardship, publishing relevant water performance indicators and goals in their Annual Report, as well as being an endorsing member of the UN CEO Water Mandate and achieving an A in CDP's 2016 Water A List.

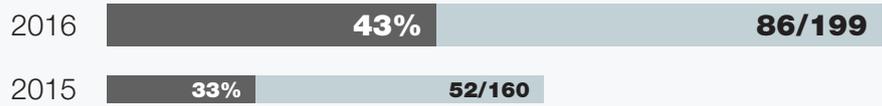
Bayer AG factors water use into product development. In 2014 they launched a waterborne polyurethane technology that reduces the water and energy consumption of the coating process by 95% and 50% respectively.

Environmental risks in Bayer's direct operations are identified and reviewed annually, with water use and withdrawals measured at site level and monitored at least once per year. Additionally, Bayer AG ensures ecological assessments are carried out for any investment over US\$11 million.

To assess water risks within their supply chain, Bayer annually conducts HSEQ supplier assessments and receive results from the 'Together for Sustainability' and the 'Pharmaceutical Supply Chain' initiatives. They aim to evaluate all strategically important suppliers by 2017.



Industrials



Second lowest sector reporting targets and goals

- ▼ The Industrials sector is comprised of a disparate group of companies, ranging from machinery to building products to trading companies and distributors. Water is often embedded in the supply chain, as well as being necessary for manufacturing processes, such as cooling and cleaning.
- ▼ The sector can help meet the need for low-carbon, water-efficient products by providing manufacturing solutions. For example, **SunPower Corporation's** subsidiary company Temasol produced and installed dozens of small solar grids to pump water in Morocco, effectively replacing diesel-operated electricity generators while saving money and reducing emissions.
- ▼ Decisions relating to products and manufacturing processes can have significant effects on both greenhouse gas emissions and water impacts. For example, by replacing brass with stainless steel in their products, **Assa Abloy** removed the need for energy- and water-intensive plating processes and **Deere & Company** ceased operation of their last remaining coal-fired boilers in 2015, reducing greenhouse gas emissions and eliminating the need for large quantities of non-contact cooling water.

Sector stats at a glance

Current State	24% experienced detrimental impacts in reporting year costing the sector US\$19.6 million	Top impacts reported
	58% evaluated how water risks could impact business' growth strategy	<ol style="list-style-type: none"> 1. Water supply disruption 2. Higher operating costs 3. Production disruption - reduced output
Risk Assessment	29% conduct a company-wide assessment that covers both direct operations and supply chains	
	<ul style="list-style-type: none"> ▼ 56% incorporate future regulatory changes at the local level; ▼ 62% include local communities; and ▼ Only 21% implement the assessment at river basin scale. 	
		Top risks reported
Exposure to Risk	47% report exposure to risk, and the majority are expected to occur in the next 6 years:	<ol style="list-style-type: none"> 1. Plant production disruption - reduced output 2. Higher operating costs 3. Brand damage
	<ul style="list-style-type: none"> ▼ 29% anticipate risks to materialize in <1 year ▼ 42% anticipate risks to materialize within 1-6 years ▼ 17% anticipate risks to materialize in >6 years 	
Supply Chain	31% request suppliers to report	
	8% request more than 50% suppliers to report	
Opportunities	71% report opportunities	Top opportunities reported
	22% report strategies to realize them	<ol style="list-style-type: none"> 1. Sales of new products/services 2. Improved water efficiency 3. Increased brand value

Key Findings

- ▼ Only 47% of companies report measuring and monitoring water withdrawal, discharge, and consumption data. This is the lowest of any sector and a cause for significant investor concern as the top risk reported relates to the disruption of water supply.
- ▼ The sector is falling behind when it comes to one of the most critical aspects of corporate water stewardship: engagement with stakeholders and other water users. Less than two-thirds (62%) consider local communities in water risk assessments and the sector is one of only two not using engagement as a top risk response strategy.
- ▼ While less than half (42%) report having set targets and goals, there are examples of action and achievement: aerospace and defense company **United Technologies Corporation** met their goal of a 40% annual reduction in absolute water use from a 2006 baseline.

Risks and Opportunities

- ▼ Some companies are capitalizing on water efficiency opportunities: while constructing tunnels for the Slovak highway in Poland, **Obrascon Huarte Lain (OHL)** used hydro shield tunnel boring machines which allow for the recycling of drilling water, resulting in an 84% reduction in water consumption.
- ▼ While just 31% of companies ask their suppliers to report on water risk, some are actively engaging their suppliers. In 2015, **Stanley Black & Decker, Inc.** conducted 198 sustainability and social accountability audits on their suppliers, ranking them as green, yellow, orange or red based on their performance against various criteria including water stewardship practice. These suppliers report their water withdrawal data to the company on a monthly basis, helping to drive continual improvement.
- ▼ Top risks reported include plant and production disruption, brand damage, and higher operating costs. For example, **Taisei Corporation** reports that an increase in the price of water would significantly impact the costs of concrete and result in decreased revenue. In response, Taisei is investing in the development of a new concrete material.

Case study: Lockheed Martin Corporation



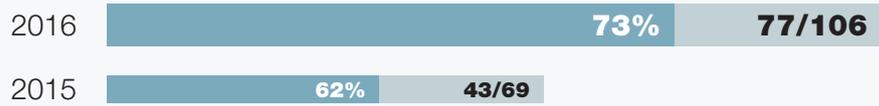
Lockheed Martin Corporation recognizes the synergies between water efficiency, energy efficiency, and reducing carbon emissions. Over the past five years, they have conducted Structured Improvement Activities at their top energy consuming sites to identify opportunities and develop plans for achieving water and carbon emissions reductions. Their efforts focused on assessing the energy required to supply water in aging infrastructure and identifying opportunities for improvements.

Lockheed Martin achieved the target set out in their 'Go Green' program to reduce absolute water usage by 25% between 2010 and 2015 through increased efficiency, on-site water reuse, and best management practices at all facilities. The efforts resulted in savings in energy and water costs of US\$28 million compared to 2010. More ambitious targets have already been set to reduce water usage further by 30% in 2020.

Lockheed Martin is also committed to improving clean energy technologies. In 2015, they announced that they will help advance the next generation of tidal energy by optimizing the design of new tidal turbines for the world's largest tidal stream energy project, known as the MeyGen project. By the early 2020s, the MeyGen project aims to produce 398MW of offshore tidal energy to supply clean and renewable electricity to the UK National Grid.



Information Technology



Lowest proportion reporting negative impacts related to water

- Gaining access to the required quantity and quality of water is of unique importance to the Information Technology sector. Some companies require extremely high quality water for manufacturing processes, particularly for semiconductor businesses such as **Intel Corporation**, **SK Hynix**, and **STMicroelectronics NV**. Others, such as the many data centers that power the world's cloud computing are cooled by significant quantities of water.
- Access to a reliable water supply can affect business strategies – in particular, location planning for new data centers. For companies such as **TDK Corporation** that use hydroelectricity to power their operations, this is of critical importance.

Sector stats at a glance

Current State	<p>8% experienced detrimental impacts in reporting year costing the sector US\$33 million</p> <p>57% evaluated how water risks could impact business' growth strategy</p>	<p>Top impacts reported</p> <ol style="list-style-type: none"> Higher operating costs N/A N/A
Risk Assessment	<p>34% conduct a company-wide assessment that covers both direct operations and supply chains</p> <ul style="list-style-type: none"> 53% include future regulatory changes at the local level; 56% include local communities; and 12% look at the river basin scale. 	
Exposure to Risk	<p>49% report exposure to risk</p> <ul style="list-style-type: none"> 10% anticipate risks to materialize in <1 year 21% anticipate risks to materialize within 1-6 years 53% anticipate risks to materialize in >6 years 	<p>Top risks reported</p> <ol style="list-style-type: none"> Higher operating costs Production disruption - reduced output Supply chain disruption
Supply Chain	<p>47% request suppliers to report</p> <p>19% request more than 50% suppliers to report</p>	
Opportunities	<p>57% report opportunities</p> <p>25% report strategies to realize them</p>	<p>Top opportunities reported</p> <ol style="list-style-type: none"> Sales of new products/services Cost savings Increased brand value

Key Findings

- This sector is the most transparent with almost three quarters (73%) of requested companies disclosing critical water information to investors via CDP, indicative of the vital importance of water to the sector.
- Only 8% of respondents report negative impacts, the lowest of all sectors. However, those that occurred were costly. For example, **Hewlett-Packard** reports a US\$5 million increase in electricity costs due to the drought in Brazil and their reliance on hydropower.
- Despite the sector's scope for improving water efficiency, the proportion of IT companies that have identified opportunities is low (57%) compared with other sectors. Those that have identified opportunities are reaping the rewards: **Cisco Systems'** water efficiency initiatives reduced water, energy and maintenance costs by approximately US\$100,000 per year, while **Texas Instruments Inc.** recognizes that its technology solutions may enable improved water efficiency and conservation among customers.

Risks and Opportunities

- Almost half (49%) of respondents report risk exposure, driven primarily by flooding and water scarcity. **Canon Inc.** report that the risk of flood could cause deterioration in production efficiency or shortage in parts supply, driving up manufacturing and product costs. They cite floods in Thailand in 2011, which adversely affected production, sales activities, and sales revenues.
- Many risks may be going unnoticed, with only half of companies incorporating (53%) future potential regulatory changes and (56%) local communities into their water risk assessments, the lowest of any sector.
- Supply chain risk is paramount, with supply chain disruption reported as a top potential impact. Encouragingly, 47% of companies ask suppliers to report on their water risks, the joint-highest of any sector alongside Consumer Staples. **LG Innotek** provides free consulting and training to help suppliers understand and report on their water-related risks.

Case study: Hewlett-Packard

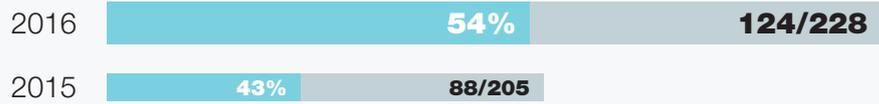
Water is a vital resource for Hewlett-Packard in both direct operations and supply chain for product manufacture and customer use.

Through proactive engagement with suppliers, Hewlett-Packard improved their water management practices by enhancing transparency, accounting and goal setting. They are working to standardize tools and methodologies to facilitate consistent, reliable, and comparable reporting among suppliers. By conducting scenario analysis on water-intensive supplier activities, they can identify opportunities for further reductions in their commodity manufacturing processes.

Hewlett-Packard publicly demonstrated their commitment to water stewardship by reporting on their water footprint in their 2015 Sustainability Report and 2015 Living Progress Report. Electricity consumption, primarily by customers using Hewlett-Packard products, made up 74% of their water use in 2015. As a result, Hewlett-Packard aims to address the link between water and energy consumption through ongoing efforts to improve the energy efficiency of their products. Producing smaller, more energy efficient desktops, notebooks and tablets resulted in a 12% decrease in their water footprint in 2015.



Materials



High levels of board oversight for water and almost all companies have fully integrated water into business strategy

- ▶ The Materials sector comprises metals and mining and provides the world with construction materials, chemicals, and paper products. Water is a both a key input and an essential element for processes from steam generation to cooling and cleaning.
- ▶ The energy requirement in this sector is significant. As companies go low-carbon by transitioning to more renewable energy sources, they cannot afford to ignore the impact of water security. **Gold Fields Limited** was forced to diversify its energy supply to more carbon intensive diesel generation when the availability of hydropower decreased due to drought, costing the company US\$92 million. Water scarcity has also led companies such as **Fortescue Metals Group**, **Anglo American** and **BHP Billiton** to use energy-intensive desalination as a means to ensure enough water for continued operations.
- ▶ However, improved water management practices can yield impressive savings in both costs and emissions. By improving water use intensity and maximizing water reuse, **Teck Resources Limited** have reduced their energy consumption and resulting GHG emissions. Meanwhile, **Metsä Board** implemented water and energy efficiency measures with estimated cost savings of US\$4.1 million in the reporting year.

Key Findings

- ▶ Almost all (92%) responding companies have fully integrated water into their business strategies, the highest of any sector, and 77% of companies have board level oversight of a water policy, strategy or plan.
- ▶ However, a third of companies (33%) still experienced detrimental water-related impacts, and the cost was significant; the sector reports the second largest financial impacts over the reporting year at US\$1.7 billion related to water. For example, production disruption due to water supply challenges cost **African Rainbow Minerals** US\$26 million, 34.5% of total reported revenue in 2015.
- ▶ Given that water can massively impact company financials, it is surprising that only 34% of Materials companies conduct a comprehensive risk assessment, covering both direct operations and supply chain.

Sector stats at a glance

Current State	<p>33% experienced detrimental impacts in the reporting year, costing the sector US\$1.7 billion</p> <p>77% evaluated how water risks could impact business' growth strategy</p>	<p>Top impacts reported</p> <ol style="list-style-type: none"> 1. Higher operating costs 2. Water supply disruption 3. Production disruption - reduced output
Risk Assessment	<p>34% conduct a company-wide assessment that covers both direct operations and supply chains</p> <ul style="list-style-type: none"> ▶ 82% include future regulatory changes at the local level; ▶ 88% include local communities; and ▶ Only 24% look at the river basin scale. 	
Exposure to Risk	<p>69% report exposure to risk</p> <ul style="list-style-type: none"> ▶ 17% anticipate risks to materialize in <1 year ▶ 30% anticipate risks to materialize within 1-6 years ▶ 25% anticipate risks to materialize in >6 years 	<p>Top risks reported</p> <ol style="list-style-type: none"> 1. Higher operating costs 2. Plant production disruption - reduced output 3. Supply chain disruption
Supply Chain	<p>35% request suppliers to report</p> <p>6% request more than 50% suppliers to report</p>	
Opportunities	<p>81% report opportunities</p> <p>32% report strategies to realize them</p>	<p>Top opportunities reported</p> <ol style="list-style-type: none"> 1. Improved water efficiency 2. Cost savings 3. Sales of new products/services

Risks and Opportunities

- ▶ 69% of Materials respondents report exposure to water risk, and higher operating costs is the most likely impact. **UPM-Kymmene Corporation** predicts that production volume could be affected by a lack of good quality freshwater. In response, the company plans to spend US\$8.9 million on new technology and infrastructure. Meanwhile, as **Duratex S/A** diversifies its energy mix to mitigate shortages of hydroelectric power, they expect to incur costs of US\$2.4 million and their low carbon strategy will also be affected.
- ▶ Companies are accounting for future regulatory changes, with 82% factoring them into their risk assessments including **Alcoa Inc.**, **CRH Plc** and **Solvay S.A.** This approach may help reduce the high proportion of companies (25%) affected by penalties: reported fines totaled US\$21.9 million in the reporting year.
- ▶ Alongside the Consumer Staples sector, Materials identified the highest proportion (81%) of opportunities, including improved water efficiency, cost savings and sales of new products, yet just less than a third (32%) report strategies to realize these.

Case study: Metsä Board

Metsä Board is Europe's leading supplier of paperboard for high quality packaging. The main raw material used in its paperboard is wood that comes from Northern European forests which do not need watering, but water is essential in making pulp and paperboard. In 2015, all water used in the company's processes was fresh surface water from rivers and lakes.

Metsä Board's production units have very strict environmental permits set by local authorities and these are controlled regularly by a third party. Metsä Board's mills continuously seek new ways to reduce their use of fresh water. Furthermore, process waters are always carefully treated before release back into the watercourse, thus ensuring the environment surrounding the mills is not affected by the water used.

In 2013, Metsä Board started a major project to decrease water use and improve material efficiency by reducing water intake and fiber loss. Targets have been set for all production units, and in 2015 Metsä Board was able to achieve a 16% reduction in water use compared to a 2010 base year. During the project all mill sites were evaluated on their specific water use using the WBCSD Global Water Tool. 16 energy efficiency actions were also completed in 2015 resulting in a 7% decrease of process water use compared to a base year of 2014. Metsä Board has continued to implement new energy and water efficiency actions during 2016.

The fact that Metsä Board's production units are located in Northern Europe, in the midst of numerous forests and sources of water, is a great benefit in terms of overall efficiency. As the mills are located in Finland and Sweden, they have access to abundant water sources which do not compete with agriculture, forestry or household water uses.





Utilities



Second lowest response rate with more than 60% failing to respond

- Used for steam generation, cooling applications and carbon capture, water plays an integral role in this sector.
- Utilities reported the highest proportion (78%) of linkages and trade-offs between water use and other environmental issues. For example, **Endesa** recognizes the high water demand of carbon capture and storage, and is working to develop more energy and water efficient technologies to address this.
- Water security also has a big impact: **ENGIE** reports substantial fluctuations in its supply-demand balance for electricity and gas, as hydropower generation capacity is weakened by drought conditions in certain regions.
- Given the long-term, high-cost nature of utilities investments, the importance of factoring water issues into business strategy is critical. Highlighting the issue, **Exelon Corporation** report the closure of their Oyster Creek nuclear plant due to estimated upgrade costs of US\$800 million to meet new water regulations.

Sector stats at a glance

Current State	34% experienced detrimental impacts in reporting year, costing the sector US\$1.8 billion	Top impacts reported
	80% evaluated how water risks could impact business' growth strategy	<ol style="list-style-type: none"> Higher operating costs Brand damage N/A
Risk Assessment	37% conduct a company-wide assessment that covers both direct operations and supply chains;	
	<ul style="list-style-type: none"> 80% include future regulatory changes at the local level; 80% include local communities; and 32% are conducted the river basin scale. 	
Exposure to Risk	66% report exposure to risk	Top risks reported
	<ul style="list-style-type: none"> 32% anticipate risks to materialize in <1 year 32% anticipate risks to materialize within 1-6 years 34% anticipate risks to materialize in >6 years 	<ol style="list-style-type: none"> Higher operating costs Production reduction – reduced output Closure of operations
Supply Chain	29% request suppliers to report	
	7% request more than 50% suppliers to report	
Opportunities	76% report opportunities	Top opportunities reported
	32% report strategies to realize them	<ol style="list-style-type: none"> Cost savings Improved water efficiency Increased brand value

Key Findings

- With 61% of companies still withholding vital water data from their stakeholders, there is substantial room for improved transparency and disclosure in this sector.
- Of those that do disclose, two thirds (66%) report exposure to water risk with regulatory factors being the top driver. For example, revised Effluent Limitation Guidelines for steam electric plants will impose a significant financial burden on **DTE Energy Company**, and will likely force the closure of several plants.
- There is a high level of awareness amongst respondents that water issues could substantively affect their business, with 80% of companies evaluating water risks into the future, the highest of all sectors. At **The Tokyo Electric Power Company Holdings, Inc. (TEPCO)**, water risks are assessed every six months, and considered as far into the future as possible.

Risks and Opportunities

- Risks are already materializing, with 34% reporting detrimental impacts, second only to the Consumer Staples sector. Revenues at **Celsia SA ESP** suffered due to reduced availability of water for their hydroelectric power generation plants in Colombia. The impact lasted some 10 months, and the company has had to make up the shortfall in supply with thermal power generation.
- 80% of respondents factor future regulatory changes into their risk assessments, suggesting that companies recognize they must be prepared for change. For example, **EDP - Energias de Portugal S.A.** performed scenario analysis of regulatory and tariff changes, allowing the short- and long-term impact of potential water regulations and tariffs to be forecast. Water regulations are also affecting the bottom line. **American Electric Power Company, Inc.** report investing in technology upgrades costing up to US\$10 million at each of their affected sites to meet new water intake standards.
- Promisingly, 76% of respondents report opportunities related to water use. In its Durance hydro dams, **EDF** increased the availability of water and thus hydroelectric power by engaging with local farmers to increase the efficiency of their water use through a target based payment scheme. **Pinnacle West Capital Corporation** recognized the water saving and emission reduction opportunities associated with closing some of its coal units and replacing them with natural gas and solar units. Their decision to do so took advantage of the reduced water intensity of natural gas and allowed for a 20% reduction in water consumption.

Case study: Iberdrola SA

As a signatory of the Global Round Table on Climate Change and the UN CEO Water Mandate, Iberdrola champions transparency on water. Recognizing that effective water management depends on operational- and supply chain-level interactions, Iberdrola promotes environmental responsibility and strict compliance by suppliers, with a particular emphasis on the principles established by the UN Global Compact. Through such efforts, 75% of Iberdrola's contracted suppliers had Environmental Management Systems in place in 2015.

Over the last three years, Iberdrola modernized 45 of its 92 small hydropower projects, investing US\$11.2 million in order to ensure their hydropower facilities are equipped with the most advanced, energy efficient technology and maximize the generation of clean energy. They also invested in R&D for the development of a biodegradable oil for hydraulic systems in hydroelectric plants in order to prevent environmental damage in the event of oil spillage.

Replacing less efficient technologies such as conventional thermal generation with renewables has helped Iberdrola to meet rolling annual water efficiency targets. In 2015, they achieved a 45.4% reduction in their water consumption compared to 2013.

Furthermore, Iberdrola are actively pursuing Sustainable Development Goal 6 and are involved in a number of initiatives aiming to achieve this goal. One such initiative, part of the Water for All program in Brazil, involves the installation of systems for capturing and storing rainwater for human consumption, which will supply water to over 3,300 homes that currently have no connection to the general water system.



Appendix I

Summary of key indicators by sector

Key Indicators

Total respondents

Public respondents

Non-public respondents

Response rate

Companies requested

Current State

Respondents that have experienced detrimental water-related business impacts in the reporting year

Respondents that have evaluated how water risks could impact business growth over the next year or more

Respondents that regularly measure and monitor more than 50% of all water aspects

Respondents that require key suppliers to report water use, risks and management

Water risk assessment

Respondents that undertake a comprehensive company wide risk assessment that covers both direct operations and supply chain

Respondents that undertake water risk assessments at the river basin scale

Respondents that factor estimates of future potential regulatory changes at a local level into their water risk assessments

Respondents that factor local communities into their water risk assessments

Water risks & opportunities

Respondents exposed to risks in either direct operations or supply chain

Respondents exposed to risks in direct operations

Respondents exposed to risks in supply chain

Respondents exposed to risks in both direct operations and supply chain

Respondents that identify opportunities

Accounting

Respondents that report water withdrawals

Respondents that report water discharge

Respondents that verify (>50%) total volume of water withdrawal data by source for at risk facilities

Respondents that verify (>50%) water discharge quality data by destination for at risk facilities

Governance & Strategy

Respondents with board level oversight of water policy, strategy or plan

Respondents with a publicly available, company wide water policy that includes direct operations, supplier best practice and acknowledges WASH

Respondents that align public policy position with water stewardship

Respondents with water integrated into their business strategy

Respondents whose water CAPEX and OPEX increased year-on-year in the last reporting period

Compliance

Respondents subject to penalties and/or fines

Total reported fines by all respondents

Targets and initiatives

Respondents with targets and goals in place

Respondents reporting targets with quantitative actions to manage water resources

Respondents reporting qualitative goals leading towards improved water stewardship

Linkages and trade-offs

Respondents that have identified any linkages or trade-offs between water and other environmental impacts

Consumer Discretionary	Consumer Staples	Energy	Health Care	Industrials	Information Technology	Materials	Utilities	Total
93	102	32	52	86	77	124	41	607
62	76	27	46	66	54	90	33	454
29	23	4	3	19	19	33	4	134
41%	58%	29%	51%	43%	73%	54%	39%	48%
227	175	109	102	199	106	228	106	1252
26%	41%	25%	15%	24%	8%	33%	34%	27%
59%	71%	63%	62%	58%	57%	77%	80%	68%
48%	72%	66%	63%	47%	52%	69%	66%	61%
44%	47%	13%	38%	31%	47%	35%	29%	38%
30%	51%	9%	29%	29%	34%	34%	37%	34%
26%	35%	34%	35%	21%	12%	24%	32%	26%
57%	70%	75%	69%	56%	53%	82%	80%	68%
66%	68%	81%	73%	62%	56%	88%	80%	72%
18%	18%	47%	15%	21%	21%	27%	39%	18%
10%	11%	47%	15%	19%	18%	25%	39%	39%
9%	7%	0%	0%	2%	3%	2%	0%	9%
34%	60%	25%	35%	26%	29%	41%	27%	34%
66%	81%	78%	58%	71%	57%	81%	76%	66%
80%	91%	88%	90%	78%	82%	91%	88%	80%
73%	87%	81%	88%	72%	79%	88%	88%	73%
23%	38%	16%	27%	16%	25%	33%	34%	23%
14%	22%	13%	12%	5%	14%	20%	24%	14%
67%	75%	56%	60%	67%	51%	77%	61%	69%
22%	24%	3%	12%	13%	5%	12%	15%	15%
11%	16%	22%	8%	7%	5%	20%	20%	14%
77%	85%	81%	73%	74%	70%	92%	85%	83%
37%	39%	25%	48%	34%	38%	35%	34%	38%
14%	32%	47%	19%	16%	4%	25%	17%	21%
\$113,557	\$9,007,354	\$78,073,522	\$58,731	\$1,242,330	\$92,520	\$21,853,349	\$1,423,901	\$111,865,264
54%	67%	31%	54%	42%	45%	55%	56%	54%
18%	15%	9%	15%	21%	16%	15%	5%	15%
10%	8%	34%	12%	14%	18%	18%	12%	15%
57%	72%	53%	54%	45%	52%	68%	78%	62%

Appendix II

Summary of key indicators by geography

Key Indicators

Total respondents

Public respondents

Non-public respondents

Response rate

Companies requested

Current State

Respondents that have experienced detrimental water-related business impacts in the reporting year

Respondents that have evaluated how water risks could impact business growth over the next year or more

Respondents that regularly measure and monitor more than 50% of all water aspects

Respondents that require key suppliers to report water use, risks and management

Water risk assessment

Respondents that undertake a comprehensive company wide risk assessment that covers both direct operations and supply chain

Respondents that undertake water risk assessments at the river basin scale

Respondents that factor estimates of future potential regulatory changes at a local level into their water risk assessments

Respondents that factor local communities into their water risk assessments

Water risks & opportunities

Respondents exposed to risks in either direct operations or supply chain

Respondents exposed to risks in direct operations

Respondents exposed to risks in supply chain

Respondents exposed to risks in both direct operations and supply chain

Respondents that identify opportunities

Accounting

Respondents that report water withdrawals

Respondents that report water discharge

Respondents that verify (>50%) total volume of water withdrawal data by source for at risk facilities

Respondents that verify (>50%) water discharge quality data by destination for at risk facilities

Governance & Strategy

Respondents with board level oversight of water policy, strategy or plan

Respondents with a publicly available, company wide water policy that includes direct operations, supplier best practice and acknowledges WASH

Respondents that align public policy position with water stewardship (W6.2a)

Respondents with water integrated into their business strategy

Respondents whose water CAPEX and OPEX increased year on year in the last reporting period

Compliance

Respondents subject to penalties and/or fines

Total reported fines by all respondents

Targets and initiatives

Respondents with targets and goals in place

Respondents reporting targets with quantitative actions to manage water resources

Respondents reporting qualitative goals leading towards improved water stewardship

Linkages and trade-offs

Respondents that have identified any linkages or trade-offs between water and other environmental impacts

Australia	Canada	France	Germany	Japan	South Africa	South Korea	Turkey	United Kingdom	USA
17	19	19	20	116	34	19	19	42	175
14	17	14	12	75	30	14	15	38	148
3	2	5	8	41	4	5	4	4	27
27%	66%	46%	54%	63%	51%	38%	31%	50%	48%
63	29	41	37	183	67	50	61	84	361
35%	37%	32%	20%	13%	65%	47%	21%	36%	29%
65%	68%	68%	65%	58%	76%	84%	53%	71%	69%
59%	74%	42%	70%	67%	65%	79%	58%	57%	51%
35%	5%	42%	50%	41%	32%	58%	16%	38%	42%
29%	16%	47%	60%	36%	41%	53%	5%	43%	32%
29%	42%	47%	30%	24%	21%	21%	26%	40%	25%
88%	79%	74%	85%	59%	65%	84%	53%	74%	66%
94%	95%	74%	70%	72%	71%	79%	58%	69%	70%
18%	42%	26%	35%	24%	32%	42%	26%	26%	17%
18%	42%	21%	20%	22%	32%	42%	21%	21%	13%
0%	0%	5%	15%	3%	0%	0%	5%	5%	4%
35%	32%	37%	15%	42%	62%	42%	26%	38%	35%
59%	79%	79%	60%	66%	97%	84%	74%	69%	77%
82%	100%	84%	95%	87%	100%	89%	74%	90%	86%
71%	89%	74%	95%	84%	97%	89%	74%	88%	81%
6%	26%	53%	30%	23%	44%	63%	26%	33%	17%
6%	0%	26%	30%	10%	9%	47%	16%	12%	5%
71%	68%	74%	90%	85%	97%	42%	63%	88%	51%
18%	5%	37%	35%	22%	32%	21%	16%	31%	19%
29%	21%	16%	10%	4%	12%	11%	11%	14%	14%
88%	95%	84%	80%	77%	88%	89%	79%	88%	85%
71%	100%	79%	80%	79%	76%	58%	79%	76%	78%
29%	42%	26%	15%	6%	21%	0%	5%	29%	29%
\$2,220	\$85,905,464	\$1,082,762	\$433,029	\$273,832	\$3,864,779	nil	\$9,166	\$755,770	\$16,420,006
53%	37%	63%	50%	47%	62%	68%	47%	57%	55%
6%	16%	0%	15%	17%	12%	21%	16%	24%	15%
6%	32%	26%	15%	18%	18%	0%	21%	12%	12%
53%	63%	58%	65%	52%	74%	74%	42%	79%	64%

Appendix III

Summary of leadership indicators

CDP has developed a set of leadership indicators to track a company's progression towards best practice in water management. Here, the percentages indicate the proportion of companies in each sector achieving the indicator.

Leadership KPIs

Provide a comprehensive and complete disclosure to investors and customers via CDP.

Regularly measure, monitor and disclose more than 75% of all water withdrawals by source, discharges by destination and consumption.

Require suppliers to report water use, risks and management and include this within water risk assessments.

Account for river basin conditions in comprehensive, company wide water risk assessments.

Considers a broad range of river basin contextual issues and factors relevant issues into water risk assessments.

Considers a broad range of river basin stakeholders and factors relevant issues into water risk assessments.

Able to identify and capitalize on water-related opportunities.

Discloses all water withdrawals by source, discharges by destination and consumption data for at-risk facilities.

Strategic responsibility for water management resides with the highest decision-making level within the business.

Have implemented a company wide, publicly available water policy that:

- includes performance standards for both direct operations and supplier, procurement and contracting best practice; and
- includes a commitment to customer education and acknowledge the human right to water, sanitation and hygiene.

Have achieved or is making progress against strategic water management targets and goals.

Have identified, taken action and developed a policy for managing environmental trade-offs and/or linkages.

Responsibility for CDP water disclosure resides at the highest decision-making level within the business.



Consumer Discretionary



Consumer Staples



Energy



Health Care



Industrials



Information Technology



Materials



Utilities

Total

Consumer Discretionary	Consumer Staples	Energy	Health Care	Industrials	Information Technology	Materials	Utilities	Total
100%	100%	100%	100%	100%	100%	100%	100%	100%
15%	26%	13%	23%	15%	17%	28%	37%	22%
41%	47%	9%	38%	30%	43%	35%	29%	37%
14%	23%	9%	12%	9%	4%	8%	15%	12%
16%	22%	6%	13%	16%	13%	17%	24%	17%
13%	16%	9%	10%	10%	6%	13%	32%	13%
40%	40%	38%	27%	22%	25%	32%	32%	32%
15%	30%	19%	19%	13%	17%	19%	24%	19%
46%	56%	31%	46%	42%	34%	52%	49%	46%
22%	26%	6%	13%	10%	9%	10%	17%	15%
12%	23%	0%	10%	6%	6%	8%	15%	11%
32%	48%	25%	33%	30%	32%	42%	56%	38%
33%	33%	22%	21%	23%	18%	33%	34%	28%

Appendix IV

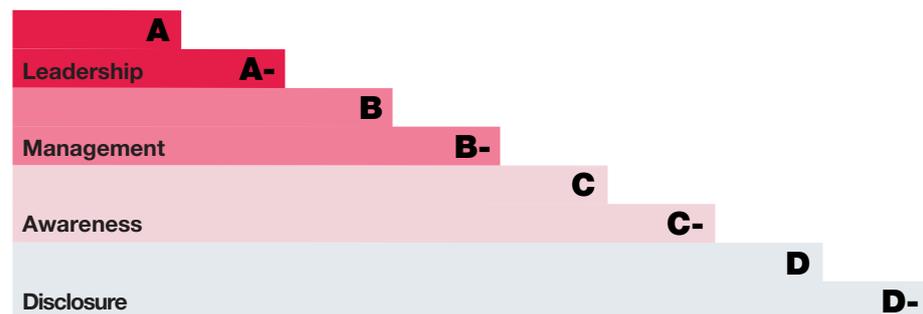
Response status and sector by company

Key to response status:

AQ	Answered questionnaire
AQ (NP)	Answered questionnaire but response not made public
AQ (SA)	Company is either a subsidiary or has merged during the reporting process; see Company in parenthesis for further information
AQ (L)	Answered questionnaire after submission deadline
DP	Declined to participate
NR	No response
RV	Responded voluntarily ¹²

Score levels:

The levels build consecutively from Disclosure to Leadership. A threshold of 75% in a lower level has to be passed before a company is scored for the next level. For more information, please see our [Introduction to Scoring](#).



F: Failure to provide sufficient information to CDP to be evaluated for this purpose¹³

Company	Response Status	Ticker	Country HQ	CDP Band and Score
Consumer Discretionary				
ABC-Mart, Inc.	NR	2670 JP	Japan	Failure to disclose (F)
AccorHotels	NR	AC FP	France	Failure to disclose (F)
adidas AG	AQ	ADS GR	Germany	Management (B)
Advance Auto Parts Inc	NR	AAP US	USA	Failure to disclose (F)
Aisin Seiki Co., Ltd.	DP	7259 JP	Japan	Failure to disclose (F)
AKSA AKRİLİK KİMYA SANAYİİ A.Ş.	DP	AKSA TI	Turkey	Failure to disclose (F)
ARÇELİK A.Ş.	NR	ARCLK TI	Turkey	Failure to disclose (F)
Aristocrat Leisure	NR	ALL AU	Australia	Failure to disclose (F)
Autoliv Inc	NR	ALIV SS	Sweden	Failure to disclose (F)
AutoNation, Inc.	NR	AN US	USA	Failure to disclose (F)
Autoneum AG	AQ (NP) RV	AUTN SW	Switzerland	Not scored
AutoZone, Inc.	NR	AZO US	USA	Failure to disclose (F)
BANDAI NAMCO Holdings Inc.	AQ	7832 JP	Japan	Disclosure (D)
Barratt Developments plc	NR	BDEV LN	United Kingdom	Failure to disclose (F)
Bed Bath & Beyond Inc.	NR	BBBY US	USA	Failure to disclose (F)

¹² Companies that respond voluntarily to CDP are not scored unless they request this service.

¹³ 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.

Company	Response Status	Ticker	Country HQ	CDP Band and Score
Berkeley Group	DP	BKG LN	United Kingdom	Failure to disclose (F)
Best Buy Co., Inc.	AQ	BBY US	USA	Awareness (C)
BMW AG	AQ (NP)	BMW GR	Germany	Leadership (A-)
BorgWarner	DP	BWA US	USA	Failure to disclose (F)
BorgWarner Morse Systems Japan K.K.	AQ RV	N/A	Japan	Not scored
Brembo SpA	AQ (NP) RV	BRE IM	Italy	Management (B)
Bridgestone Corporation	AQ (NP)	5108 JP	Japan	Leadership (A-)
BRİSA BRIDGESTONE SABANCI LASTİK SAN.VE TİC.A.Ş	AQ	BRISA TI	Turkey	Management (B)
Burberry Group	AQ	BRBY LN	United Kingdom	Leadership (A-)
BYD	AQ (NP) RV	1211 HK	China	Disclosure (D-)
Caesars Entertainment	AQ RV	CZR US	USA	Leadership (A-)
CarMax Inc.	NR	KMX US	USA	Failure to disclose (F)
Carnival Corporation	AQ	CCL US	USA	Management (B)
Casio Computer Co., Ltd.	AQ (NP)	6952 JP	Japan	Disclosure (D)
CCC	NR	CCC PW	Poland	Failure to disclose (F)
Chipotle Mexican Grill	NR	CMG US	USA	Failure to disclose (F)
Christian Dior	DP	CDI FP	France	Failure to disclose (F)
Coach, Inc.	AQ (L)	COH US	USA	Not scored
Compagnie Financière Richemont SA	DP	CFR VX	Switzerland	Failure to disclose (F)
Compass	AQ	CPG LN	United Kingdom	Management (B)
Continental AG	AQ	CON GR	Germany	Disclosure (D)
Coway Co Ltd	AQ	021240 KS	South Korea	Management (B)
Crown Resorts	NR	CWN AU	Australia	Failure to disclose (F)
D.R. Horton, Inc.	NR	DHI US	USA	Failure to disclose (F)
Daihatsu Motor Co., Ltd.	AQ	7262 JP	Japan	Management (B)
Daimler AG	NR	DAI GR	Germany	Failure to disclose (F)
Darden Restaurants, Inc.	AQ (NP) (L)	DRI US	USA	Not scored
Delphi Automotive Plc	AQ	DLPH US	United Kingdom	Management (B-)
Denso Corporation	AQ (NP)	6902 JP	Japan	Management (B)
Dixons Carphone	DP	DC/ LN	United Kingdom	Failure to disclose (F)
DOĞUŞ OTOMOTİV SERVİS VE TİCARET A.Ş.	NR	DOAS TI	Turkey	Failure to disclose (F)
Dollar General Corporation	NR	DG US	USA	Failure to disclose (F)
Dollar Tree Inc	NR	DLTR US	USA	Failure to disclose (F)
Domino's Pizza Enterprises	NR	DMP AU	Australia	Failure to disclose (F)
Don Quijote Holdings Co., Ltd.	NR	7532 JP	Japan	Failure to disclose (F)
Dufry	NR	DUFY US	Switzerland	Failure to disclose (F)
EGE ENDÜSTRİ VE TİCARET A.Ş.	NR	EGEEN TI	Turkey	Failure to disclose (F)
Electrolux	DP	ELUXB SS	Sweden	Failure to disclose (F)
Famous Brands Limited	DP	FBR SJ	South Africa	Failure to disclose (F)
Fast Retailing Co., Ltd.	AQ	9983 JP	Japan	Awareness (C)
Faurecia	AQ (NP) RV	EO FP	France	Awareness (C)
FF Group (Folli Follie)	NR	FFGRP GA	Greece	Failure to disclose (F)
Fiat Chrysler Automobiles NV	AQ	FCAU US	Italy	Leadership (A)
Flight Centre	NR	FLT AU	Australia	Failure to disclose (F)
Ford Motor Company	AQ	F US	USA	Leadership (A)
FORD OTOMOTİV SANAYİ A.Ş.	AQ	FROTO TI	Turkey	Management (B-)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
Foschini Group Ltd	DP	TFG SJ	South Africa	Failure to disclose (F)
Fossil, Inc.	NR	FOSL US	USA	Failure to disclose (F)
Fuji Heavy Industries Ltd.	AQ (NP) (L)	7270 JP	Japan	Not scored
GameStop Corp.	NR	GME US	USA	Failure to disclose (F)
Gap Inc.	AQ	GPS US	USA	Management (B)
Garmin Ltd	NR	GRMN US	Switzerland	Failure to disclose (F)
General Motors Company	AQ	GM US	USA	Management (B)
Genuine Parts Company	NR	GPC US	USA	Failure to disclose (F)
Gestamp	AQ RV	495294Z SM	Spain	Management (B-)
GKN	AQ	GKN LN	United Kingdom	Awareness (C)
GOODYEAR LASTIKLERİ T.A.Ş.	NR	GOODY TI	Turkey	Failure to disclose (F)
Goodyear Tire & Rubber Company	AQ	GT US	USA	Leadership (A-)
Groupe PSA	DP	UG FP	France	Failure to disclose (F)
Grupo Televisa S.A.	AQ RV	TLEVICPO MM	Mexico	Awareness (C)
H&M Hennes & Mauritz AB	AQ	HMB SS	Sweden	Management (B)
Hanesbrands Inc.	AQ	HBI US	USA	Leadership (A-)
Hankook Tire Co Ltd	AQ (NP)	161390 KS	South Korea	Awareness (C)
Harley-Davidson, Inc.	NR	HOG US	USA	Failure to disclose (F)
Harman International Industries Inc	DP	HAR US	USA	Failure to disclose (F)
Harvey Norman Holdings	NR	HVN AU	Australia	Failure to disclose (F)
Hasbro, Inc.	AQ (NP)	HAS US	USA	Disclosure (D)
Hermes International	NR	RMS FP	France	Failure to disclose (F)
Hilton Worldwide, Inc.	AQ	HLT US	USA	Management (B)
Honda Motor Company	AQ (NP)	7267 JP	Japan	Management (B)
HUGO BOSS AG	DP	BOSS GR	Germany	Failure to disclose (F)
Husqvarna AB	NR	HUSQB SS	Sweden	Failure to disclose (F)
Hyundai Motor Co	NR	005380 KS	South Korea	Failure to disclose (F)
İHLAS EV ALETLERİ İMALAT SANAYİ VE TİCARET A.Ş.	AQ (NP) RV	IHEVA TI	Turkey	Awareness (C-)
Iida Group Holdings	NR	3291 JP	Japan	Failure to disclose (F)
Imperial Holdings	NR	IPL SJ	South Africa	Failure to disclose (F)
Inditex	AQ	ITX SM	Spain	Management (B)
Intercontinental Hotels Group	AQ	IHG LN	United Kingdom	Management (B)
Isetan Mitsukoshi Holdings Ltd.	NR	3099 JP	Japan	Failure to disclose (F)
Isuzu Motors Limited	AQ (NP)	7202 JP	Japan	Disclosure (D-)
Italtile Ltd	NR	ITE SJ	South Africa	Failure to disclose (F)
Johnson Controls	AQ	JCI US	USA	Management (B)
Jumbo	NR	BELA GA	Greece	Failure to disclose (F)
Kering	AQ	KER FP	France	Management (B)
Kingfisher	DP	KGF LN	United Kingdom	Failure to disclose (F)
Kohl's Corporation	NR	KSS US	USA	Failure to disclose (F)
Koito Manufacturing Co., Ltd.	AQ (NP)	7276 JP	Japan	Management (B-)
KORDSA GLOBAL ENDÜSTRİYEL İPLİK VE KORD BEZİ SANAYİ VE TİCARET A.Ş.	AQ	KORDS TI	Turkey	Awareness (C)
L Brands, Inc.	NR	LB US	USA	Failure to disclose (F)
Las Vegas Sands Corporation	NR	LVS US	USA	Failure to disclose (F)
Leggett & Platt, Inc.	NR	LEG US	USA	Failure to disclose (F)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
Lennar Corporation	NR	LEN US	USA	Failure to disclose (F)
LG Electronics	AQ	066570 KS	South Korea	Leadership (A-)
Lowe's Companies, Inc.	NR	LOW US	USA	Failure to disclose (F)
LPP S.A.	NR	LPP PW	Poland	Failure to disclose (F)
Luxottica Group	NR	LUX IM	Italy	Failure to disclose (F)
LVMH	DP	MC FP	France	Failure to disclose (F)
Macy's, Inc.	NR	M US	USA	Failure to disclose (F)
Magna International Inc.	AQ RV	MG CN	Canada	Awareness (C-)
Mahindra & Mahindra	AQ RV	MM IN	India	Management (B-)
Marks and Spencer Group plc	AQ (NP)	MKS LN	United Kingdom	Not scored
Marriott International, Inc.	AQ	MAR US	USA	Management (B)
Marui Group Co., Ltd.	NR	8252 JP	Japan	Failure to disclose (F)
Maruti Suzuki India	NR	MSIL IN	India	Failure to disclose (F)
Mattel, Inc.	NR	MAT US	USA	Failure to disclose (F)
Mazda Motor Corporation	AQ	7261 JP	Japan	Leadership (A-)
McDonald's Corporation	AQ (NP)	MCD US	USA	Management (B-)
MCH Group AG	NR	MCHN SW	Switzerland	Failure to disclose (F)
Merlin Entertainments Group	NR	MERL LN	United Kingdom	Failure to disclose (F)
Michael Kors Holdings Ltd	NR	KORS US	Hong Kong	Failure to disclose (F)
Michelin	AQ (NP)	ML FP	France	Management (B)
Mitsubishi Motors Corporation	NR	7211 JP	Japan	Failure to disclose (F)
Mohawk Industries, Inc.	DP	MHK US	USA	Failure to disclose (F)
Mr Price Group Ltd	DP	MRP SJ	South Africa	Failure to disclose (F)
Newell Rubbermaid Inc.	NR	NWL US	USA	Failure to disclose (F)
Next	AQ (NP) (L)	NXT LN	United Kingdom	Not Scored
NGK Spark Plug Co., Ltd.	AQ	5334 JP	Japan	Awareness (C)
NIKE Inc.	AQ (NP)	NKE US	USA	Disclosure (D)
Nikon Corporation	AQ	7731 JP	Japan	Management (B)
Nissan Motor Co., Ltd.	AQ	7201 JP	Japan	Leadership (A-)
Nitori Holdings Co., Ltd.	NR	9843 JP	Japan	Failure to disclose (F)
NOK Corporation	AQ (NP)	7240 JP	Japan	Management (B-)
Nokian Tyres	AQ (NP)	NRE1V FH	Finland	Awareness (C)
Nordstrom, Inc.	NR	JWN US	USA	Failure to disclose (F)
OPAP SA	NR	OPAP GA	Greece	Failure to disclose (F)
O'Reilly Automotive	NR	ORLY US	USA	Failure to disclose (F)
Oriental Land Co Ltd.	NR	4661 JP	Japan	Failure to disclose (F)
Panasonic Corporation	AQ (NP)	6752 JP	Japan	Management (B)
Pandora A/S	NR	PNDORA DC	Denmark	Failure to disclose (F)
Pearson	AQ RV	PSON LN	United Kingdom	Awareness (C)
Persimmon	NR	PSN LN	United Kingdom	Failure to disclose (F)
Pirelli	AQ (NP) RV	PC IM	Italy	Not scored
Polo Ralph Lauren Corporation	NR	RL US	USA	Failure to disclose (F)
Porsche Automobil Holding SE	NR	PAH3 GR	Germany	Failure to disclose (F)
Premier Investments	NR	PMV AU	Australia	Failure to disclose (F)
Pulte Homes Inc	NR	PHM US	USA	Failure to disclose (F)
PVH Corp	AQ (NP) (L)	PVH US	USA	Not scored

Company	Response Status	Ticker	Country HQ	CDP Band and Score
RELX Group	AQ RV	REL LN	United Kingdom	Management (B)
Renault	DP	RNO FP	France	Failure to disclose (F)
Rinnai Corporation	NR	5947 JP	Japan	Failure to disclose (F)
Ross Stores Inc	NR	ROST US	USA	Failure to disclose (F)
Royal Caribbean Cruises Ltd	NR	RCL US	USA	Failure to disclose (F)
Ryohin Keikaku Co., Ltd.	NR	7453 JP	Japan	Failure to disclose (F)
Sands China LTD	NR (SA)	1928 HK	Hong Kong	Not scored
Sekisui Chemical Co., Ltd.	AQ	4204 JP	Japan	Management (B)
Sekisui House, Ltd.	AQ	1928 JP	Japan	Management (B)
Shimamura Co., Ltd.	NR	8227 JP	Japan	Failure to disclose (F)
Shimano, Inc.	NR	7309 JP	Japan	Failure to disclose (F)
Signet Jewelers Ltd.	NR	SIG US	Bermuda	Failure to disclose (F)
Sky City Entertainment Group	NR	SKC NZ	New Zealand	Failure to disclose (F)
Sodexo	AQ	SW FP	France	Management (B-)
Sony Corporation	AQ	6758 JP	Japan	Leadership (A)
Sports Direct International	NR	SPD LN	United Kingdom	Failure to disclose (F)
Stanley Electric Co., Ltd.	AQ (NP) RV	6923 JP	Japan	Not scored
Staples, Inc.	AQ	SPLS US	USA	Awareness (C)
Star Entertainment Group	NR	SGR AU	Australia	Failure to disclose (F)
Starbucks Corporation	AQ	SBUX US	USA	Management (B)
Starwood Hotels & Resorts Worldwide, Inc	AQ	HOT US	USA	Management (B)
Steinhoff International Holdings	NR	SHF SJ	Netherlands	Failure to disclose (F)
Sumitomo Electric Industries, Ltd.	AQ (NP)	5802 JP	Japan	Awareness (C)
Sumitomo Rubber Industries, Ltd.	AQ RV	5110 JP	Japan	Not scored
Sun International Ltd	AQ	SUI SJ	South Africa	Management (B-)
Super Group	NR	SPG SJ	South Africa	Failure to disclose (F)
Super Retail Group	NR	SUL AU	Australia	Failure to disclose (F)
Suzuki Motor Corporation	AQ (NP)	7269 JP	Japan	Awareness (C)
Swatch Group	NR	UHRN SW	Switzerland	Failure to disclose (F)
Tabcorp Holdings	NR	TAH AU	Australia	Failure to disclose (F)
Target Corporation	AQ	TGT US	USA	Disclosure (D)
Tatts Group	AQ (NP)	TTS AU	Australia	Awareness (C)
Taylor Wimpey Plc	AQ	TW/ LN	United Kingdom	Management (B-)
Tesla Motors, Inc.	NR	TSLA US	USA	Failure to disclose (F)
The Home Depot, Inc.	NR	HD US	USA	Failure to disclose (F)
Tiffany & Co.	NR	TIF US	USA	Failure to disclose (F)
TJX Companies, Inc.	NR	TJX US	USA	Failure to disclose (F)
TOFAŞ TÜRK OTOMOBİL FABRİKASI A.Ş.	AQ	TOASO TI	Turkey	Management (B)
Toho Co., Ltd.	NR	8142 JP	Japan	Failure to disclose (F)
Toyota Boshoku Corporation	AQ (NP) RV	3116 JP	Japan	Leadership (A-)
Toyota Industries Corporation	AQ	6201 JP	Japan	Awareness (C)
Toyota Motor Corporation	AQ	7203 JP	Japan	Leadership (A)
Tractor Supply Co.	NR	TSCO US	USA	Failure to disclose (F)
Truworths International	NR	TRU SJ	South Africa	Failure to disclose (F)
Tsogo Sun Holdings Ltd	AQ (SA)	TSH SJ	South Africa	Not scored
TUI Group	NR	TUI LN	United Kingdom	Failure to disclose (F)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
Under Armour Inc	NR	UA US	USA	Failure to disclose (F)
Urban Outfitters, Inc.	NR	URBN US	USA	Failure to disclose (F)
Valeo Sa	AQ (NP) (L)	FR FP	France	Not scored
VESTEL BEYAZ EŞYA SANAYİ VE TİCARET A.Ş.	AQ (NP)	VESBE TI	Turkey	Disclosure (D)
VESTEL ELEKTRONİK SANAYİ VE TİCARET A.Ş.	AQ	VESTL TI	Turkey	Management (B-)
VF Corporation	AQ	VFC US	USA	Management (B)
Volkswagen AG	AQ	VOW3 GR	Germany	Leadership (A-)
Whirlpool Corporation	NR	WHR US	USA	Failure to disclose (F)
Whitbread	NR	WTB LN	United Kingdom	Failure to disclose (F)
William Hill	NR	WMH LN	United Kingdom	Failure to disclose (F)
Woolworths Holdings Ltd	AQ	WHL SJ	South Africa	Leadership (A-)
Wyndham Worldwide Corporation	NR	WYN US	USA	Failure to disclose (F)
Wynn Resorts, Limited	NR	WYNN US	USA	Failure to disclose (F)
Yamaha Corporation	AQ	7951 JP	Japan	Management (B)
Yamaha Motor Co., Ltd.	NR	7272 JP	Japan	Failure to disclose (F)
Yokohama Rubber Company, Limited	AQ RV	5101 JP	Japan	Management (B)
Yum! Brands, Inc.	AQ	YUM US	USA	Management (B)
YÜNİSA YÜNLÜ SANAYİ VE TİCARET A.Ş.	AQ RV	YUNSA TI	Turkey	Management (B)

Consumer Staples				
Aeon Co., Ltd.	DP	8267 JP	Japan	Failure to disclose (F)
Ahold Delhaize	AQ (NP)	AD NA	Netherlands	Awareness (C)
Ajinomoto Co.Inc.	AQ	2802 JP	Japan	Leadership (A-)
Altria Group, Inc.	AQ	MO US	USA	Management (B)
Ambev - Cia de Bebidas das Américas	AQ (SA)	ABEV3 BZ	Brazil	Not scored
AmorePacific Corporation	AQ	090430 KS	South Korea	Leadership (A-)
ANADOLU EFES BİRACILIK VE MALT SANAYİİ A.Ş.	NR	AEFES TI	Turkey	Failure to disclose (F)
Anheuser Busch InBev	AQ	ABI BB	Belgium	Leadership (A-)
Arca Continental, SAB de CV	AQ (NP)	AC* MM	Mexico	Management (B)
Archer Daniels Midland	AQ	ADM US	USA	Management (B-)
Aryzta AG	NR	ARYN VX	Switzerland	Failure to disclose (F)
Asahi Group Holdings, Ltd.	AQ	2502 JP	Japan	Leadership (A-)
Associated British Foods	AQ	ABF LN	United Kingdom	Leadership (A-)
Avi Ltd	NR	AVI SJ	South Africa	Failure to disclose (F)
Barry Callebaut AG	AQ	BARN SW	Switzerland	Management (B-)
Beiersdorf AG	AQ	BEI GR	Germany	Management (B)
BİM BİRLEŞİK MAĞAZALAR A.Ş.	NR	BIMAS TI	Turkey	Failure to disclose (F)
Blackmores	NR	BKL AU	Australia	Failure to disclose (F)
BRF S.A	AQ (NP)	BRFS3 BZ	Brazil	Management (B)
British American Tobacco	AQ	BATS LN	United Kingdom	Management (B)
Brown-Forman Corporation	AQ	BF/B US	USA	Management (B)
Bunge	AQ (NP)	BG US	USA	Management (B-)
Calbee, Inc.	NR	2229 JP	Japan	Failure to disclose (F)
Campbell Soup Company	AQ	CPB US	USA	Management (B)
Carlsberg Breweries A/S	NR	CARLB DC	Denmark	Failure to disclose (F)
Carrefour	AQ	CA FP	France	Management (B)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
CARREFOURSA CARREFOUR SABANCI TİCARET MERKEZİ A.Ş.	NR	CRFSA TI	Turkey	Failure to disclose (F)
Casino Guichard-Perrachon	DP	CO FP	France	Failure to disclose (F)
China Mengniu Dairy Company Limited	NR	2319 HK	Hong Kong	Failure to disclose (F)
Chocoladefabriken Lindt & Sprüngli AG	AQ (NP)	LISN SW	Switzerland	Disclosure (D)
Church & Dwight Co., Inc	NR	CHD US	USA	Failure to disclose (F)
CJ Cheiljedang	AQ	097950 KS	South Korea	Leadership (A-)
Clicks Group Ltd	NR	CLS SJ	South Africa	Failure to disclose (F)
Clorox Company	AQ	CLX US	USA	Management (B)
Coca-Cola Amatil	NR	CCL AU	Australia	Failure to disclose (F)
Coca-Cola European Partners	AQ	CCE US	United Kingdom	Leadership (A)
Coca-Cola Femsa Sab-Ser I	AQ (NP)	KOFL MM	Mexico	Management (B)
Coca-Cola HBC AG	AQ	CCH LN	Switzerland	Leadership (A-)
COCA-COLA İÇECEK A.Ş.	AQ	CCOLA TI	Turkey	Management (B)
Colgate-Palmolive Company	AQ	CL US	USA	Leadership (A)
Colruyt	NR	COLR BB	Belgium	Failure to disclose (F)
ConAgra Foods, Inc.	AQ	CAG US	USA	Management (B)
Constellation Brands, Inc.	AQ	STZ US	USA	Management (B)
Costco Wholesale Corporation	DP	COST US	USA	Failure to disclose (F)
CROPP Coop./Organic Valley	AQ (NP) RV	0248281D US	USA	Management (B)
CVS Health	AQ	CVS US	USA	Management (B)
DAESANG CORPORATION	NR	001680 KS	South Korea	Failure to disclose (F)
Danone	AQ	BN FP	France	Leadership (A-)
Dean Foods Company	AQ (L)	DF US	USA	Not scored
Delhaize Group	AQ	DELB BB	Belgium	Disclosure (D)
Dia	NR	DIA SM	Spain	Failure to disclose (F)
Diageo Plc	AQ	DGE LN	United Kingdom	Leadership (A)
Distell Group Ltd	AQ	DST SJ	South Africa	Management (B)
DO & CO AG	NR	DOC AV	Austria	Failure to disclose (F)
Dr Pepper Snapple Group Inc	AQ	DPS US	USA	Management (B-)
Estee Lauder Companies Inc.	NR	EL US	USA	Failure to disclose (F)
Eurocash S.A.	NR	EUR PW	Poland	Failure to disclose (F)
FamilyMart Co., Ltd.	NR	8028 JP	Japan	Failure to disclose (F)
Femsa - Fomento Economico Mexicano	AQ (NP) RV	FEMSAUBD MM	Mexico	Management (B)
Flowers Foods Inc	AQ	FLO US	USA	Awareness (C)
Fresh Del Monte Produce Inc	AQ (NP)	FDP US	Cayman Islands	Awareness (C)
Fresherized Foods	AQ (NP) RV	N/A	USA	Management (B)
General Mills Inc.	AQ	GIS US	USA	Management (B)
Grupo Bimbo, S.A.B. de C.V.	AQ (NP)	BIMBOA MM	Mexico	Disclosure (D)
Heineken Holding NV	AQ (SA)	HEIO NA	Netherlands	Not scored
Heineken NV	AQ	HEIA NA	Netherlands	Leadership (A-)
Henan Shuanghui Investment & Development (A)	NR	000895 CH	China	Failure to disclose (F)
Henkel AG & Co. KGaA	AQ	HEN3 GR	Germany	Management (B)
Hindustan Unilever	AQ (SA)	HUVR IN	India	Not scored
Hitejinro	NR	000080 KS	South Korea	Failure to disclose (F)
Hormel Foods	AQ	HRL US	USA	Management (B)

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ICA Gruppen	NR	ICA SS	Sweden	Failure to disclose (F)
Illovo Sugar Ltd	AQ RV	ILV SJ	South Africa	Management (B)
Imperial Brands	AQ	IMB LN	United Kingdom	Management (B)
Ingredion Incorporated	AQ (L)	INGR US	USA	Not scored
ITC Limited	AQ (NP)	ITC IN	India	Management (B)
J Sainsbury Plc	NR	SBRY LN	United Kingdom	Failure to disclose (F)
Japan Tobacco Inc.	AQ (NP)	2914 JP	Japan	Management (B)
JBS S/A	AQ RV	JBSS3 BZ	Brazil	Management (B)
Jerónimo Martins SGPS SA	NR	JMT PL	Portugal	Failure to disclose (F)
KAO Corporation	AQ	4452 JP	Japan	Leadership (A)
Kellogg Company	AQ	K US	USA	Leadership (A-)
KENT GIDA MADDELERİ SANAYİ VE TİCARET A.Ş.	NR	KENT TI	Turkey	Failure to disclose (F)
Kerry Group PLC	DP	KYG ID	Ireland	Failure to disclose (F)
Keurig Green Mountain	NR	GMCR US	USA	Failure to disclose (F)
Kikkoman Corporation	NR	2801 JP	Japan	Failure to disclose (F)
Kimberly-Clark Corporation	AQ	KMB US	USA	Leadership (A-)
Kirin Holdings Co Ltd	AQ	2503 JP	Japan	Leadership (A)
KOSE Corporation	NR	4922 JP	Japan	Failure to disclose (F)
Kroger	NR	KR US	USA	Failure to disclose (F)
Kweichow Moutai	NR	600519 CH	China	Failure to disclose (F)
LAWSON, Inc.	NR	2651 JP	Japan	Failure to disclose (F)
LG Household & Health Care	AQ	051900 KS	South Korea	Leadership (A-)
L'Oréal	AQ (L)	OR FP	France	Leadership (A)
Lotte Chilsung	NR	005300 KS	South Korea	Failure to disclose (F)
Marfrig Global Foods S/A	AQ RV	MRFG3 BZ	Brazil	Management (B)
Mars	AQ RV	4614Z US	USA	Management (B)
Massmart Holdings Ltd	NR	MSM SJ	South Africa	Failure to disclose (F)
McCormick & Company, Incorporated	AQ	MKC US	USA	Management (B)
Mead Johnson Nutrition Company	AQ	MJN US	USA	Management (B-)
Meiji Holdings Co Ltd	NR	2269 JP	Japan	Failure to disclose (F)
METRO AG	AQ	MEO GR	Germany	Awareness (C)
MİGROS TİCARET A.Ş.	NR	MGROS TI	Turkey	Failure to disclose (F)
Molson Coors Brewing Company	NR	TAP US	USA	Failure to disclose (F)
Mondelez International Inc	AQ	MDLZ US	USA	Management (B)
Monster Beverage Corporation	NR	MNST US	USA	Failure to disclose (F)
Morrison Supermarkets	NR	MRW LN	United Kingdom	Failure to disclose (F)
Nestlé	AQ	NESN VX	Switzerland	Leadership (A-)
NH Foods Ltd.	AQ (NP)	2282 JP	Japan	Awareness (C)
Nisshin Seifun Group Inc.	NR	2002 JP	Japan	Failure to disclose (F)
Nissin Foods Holdings Co., Ltd.	NR	2897 JP	Japan	Failure to disclose (F)
Nordzucker	AQ (NP)	3112Z GR	Germany	Not scored
Nutreco Holding	NR	NUO NA	Netherlands	Failure to disclose (F)
Oceana	NR	OCE SJ	South Africa	Failure to disclose (F)
Olam International	AQ	OLAM SP	Singapore	Management (B-)
Oriental Brewery Company	NR	OBCLZ KS	South Korea	Failure to disclose (F)
Orion	AQ (NP) (L)	001800 KS	South Korea	Not scored

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Orkla ASA	AQ	ORK NO	Norway	Awareness (C)
PepsiCo, Inc.	AQ	PEP US	USA	Management (B)
Pernod Ricard	AQ	RI FP	France	Management (B)
Philip Morris International	AQ	PM US	USA	Management (B)
Pick 'n Pay Stores Ltd	AQ (NP)	PIK SJ	South Africa	Awareness (C)
Pilgrims Pride	NR	PPC US	USA	Failure to disclose (F)
PINAR SÜT MAMULLERİ SANAYİİ A.Ş.	AQ (NP) RV	PNSUT TI	Turkey	Leadership (A-)
Pinnacle Foods Group	AQ	PF US	USA	Leadership (A-)
Pioneer Foods	AQ (NP)	PFG SJ	South Africa	Awareness (C)
Procter & Gamble Company	DP	PG US	USA	Failure to disclose (F)
Pulmuone Co., Ltd.	AQ	017810 KS	South Korea	Management (B)
RCL Foods Ltd	NR	RCL SJ	South Africa	Failure to disclose (F)
Reckitt Benckiser	AQ (NP)	RB/ LN	United Kingdom	Leadership (A-)
Remy Cointreau	AQ (NP)	RCO FP	France	Awareness (C)
Reynolds American Inc.	AQ	RAI US	USA	Management (B)
SABMiller	AQ	SAB LN	United Kingdom	Leadership (A-)
Saputo Inc.	NR	SAP CN	Canada	Failure to disclose (F)
SCA	AQ	SCAB SS	Sweden	Leadership (A-)
Seven & I Holdings Co., Ltd.	NR	3382 JP	Japan	Failure to disclose (F)
Shiseido Co., Ltd.	AQ	4911 JP	Japan	Management (B-)
Shoprite Holdings Ltd	NR	SHP SJ	South Africa	Failure to disclose (F)
Suntory Beverage & Food	AQ	2587 JP	Japan	Leadership (A)
Swedish Match	DP	SWMA SS	Sweden	Failure to disclose (F)
Sysco Corporation	AQ (L)	SYU US	USA	Not scored
Tate & Lyle	AQ (L)	TATE LN	United Kingdom	Not scored
Tesco	NR	TSCO LN	United Kingdom	Failure to disclose (F)
TESCO KİPA	NR	KIPA TI	Turkey	Failure to disclose (F)
The Coca-Cola Company	AQ	KO US	USA	Management (B)
The Hain Celestial Group, Inc.	AQ (NP)	HAIN US	USA	Management (B)
The Hershey Company	AQ	HSY US	USA	Management (B)
The J.M. Smucker Company	AQ	SJM US	USA	Management (B-)
The Kraft Heinz Company	AQ	KHC US	USA	Disclosure (D)
The Spar Group Ltd	AQ	SPP SJ	South Africa	Management (B)
Tiger Brands	AQ	TBS SJ	South Africa	Management (B)
Tongaat Hulett Ltd	AQ	TON SJ	South Africa	Leadership (A-)
Treasury Wine Estates	DP	TWE AU	Australia	Failure to disclose (F)
Tsuruha Holdings Inc.	NR	3391 JP	Japan	Failure to disclose (F)
TÜRK TUBORG BİRA VE MALT SANAYİİ A.Ş.	DP	TBORG TI	Turkey	Failure to disclose (F)
Tyson Foods, Inc.	AQ (L)	TSN US	USA	Management (B)
ÜLKER BİSKÜVİ SANAYİ A.Ş.	NR	ULKER TI	Turkey	Failure to disclose (F)
Uni-Charm Corporation	AQ	8113 JP	Japan	Awareness (C)
Unilever Nv Cva	AQ (SA)	UNA NA	Netherlands	Not scored
Unilever plc	AQ	ULVR LN	United Kingdom	Leadership (A)
Uni-president Enterprises	NR	1216 TT	Taiwan	Failure to disclose (F)
Vina Concha y Toro S A	AQ RV	CONCHA CI	Chile	Not scored
Wal Mart de Mexico	AQ (NP)	WALMEX* MM	Mexico	Management (B)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
Walgreens Boots Alliance	DP	WBA US	USA	Failure to disclose (F)
Wal-Mart Stores, Inc.	AQ (NP) (L)	WMT US	USA	Not scored
Wesfarmers	NR	WES AU	Australia	Failure to disclose (F)
WhiteWave Foods	AQ RV	WWAV US	USA	Management (B)
Whole Foods Market, Inc.	AQ	WFM US	USA	Disclosure (D)
Woolworths Limited	NR	WOW AU	Australia	Failure to disclose (F)
Yakult Honsha Co Ltd.	NR	2267 JP	Japan	Failure to disclose (F)
YAMATO-ESULON CO., LTD.	AQ RV	9064 JP	Japan	Not scored
Yamazaki Baking Co., Ltd.	NR	2212 JP	Japan	Failure to disclose (F)

Energy				
Amec Foster Wheeler	NR	AMFW LN	United Kingdom	Failure to disclose (F)
Anadarko Petroleum Corporation	AQ	APC US	USA	Management (B)
Apache Corporation	DP	APA US	USA	Failure to disclose (F)
Baker Hughes Incorporated	DP	BHI US	USA	Failure to disclose (F)
BG Group	DP	BG/ LN	United Kingdom	Failure to disclose (F)
BP	DP	BP/ LN	United Kingdom	Failure to disclose (F)
Cabot Oil & Gas Corporation	NR	COG US	USA	Failure to disclose (F)
Caltex Australia	NR	CTX AU	Australia	Failure to disclose (F)
Cameco Corporation	NR	CCO CN	Canada	Failure to disclose (F)
Cameron International Corporation	NR	CAM US	USA	Failure to disclose (F)
Canadian Natural Resources Limited	DP	CNQ CN	Canada	Failure to disclose (F)
Genovus Energy Inc.	AQ RV	CVE CN	Canada	Management (B)
Chesapeake Energy Corporation	NR	CHK US	USA	Failure to disclose (F)
Chevron Corporation	NR	CVX US	USA	Failure to disclose (F)
China Shenhua Energy	NR	1088 HK	China	Failure to disclose (F)
Cimarex Energy Co.	DP	XEC US	USA	Failure to disclose (F)
CNOOC	NR	883 HK	China	Failure to disclose (F)
Coal India	NR	COAL IN	India	Failure to disclose (F)
Columbia Pipeline Group, Inc.	DP	CPGX US	USA	Failure to disclose (F)
ConocoPhillips	NR	COP US	USA	Failure to disclose (F)
CONSOL Energy Inc.	AQ	CNX US	USA	Management (B)
Core Laboratories N.V.	AQ (NP)	CLB US	Netherlands	Awareness (C)
Crescent Point Energy Corporation	AQ RV	CPG CN	Canada	Management (B)
Devon Energy Corporation	AQ	DVN US	USA	Management (B-)
Diamond Offshore Drilling	NR	DO US	USA	Failure to disclose (F)
Ecopetrol Sa	AQ RV	ECOPETL CB	Colombia	Management (B)
Enbridge Inc.	AQ (NP) (L)	ENB CN	Canada	Management (B)
Encana Corporation	AQ RV	ECA CN	Canada	Disclosure (D)
Enerplus Corporation	AQ RV	ERF CN	Canada	Management (B)
Eni SpA	NR	ENI IM	Italy	Failure to disclose (F)
Enso International Incorporated	NR	ESV US	United Kingdom	Failure to disclose (F)
EOG Resources, Inc.	AQ	EOG US	USA	Disclosure (D-)
EQT Corporation	DP	EQT US	USA	Failure to disclose (F)
Exxaro Resources Ltd	AQ	EXX SJ	South Africa	Management (B)
Exxon Mobil Corporation	DP	XOM US	USA	Failure to disclose (F)

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FMC Technologies	NR	FTI US	USA	Failure to disclose (F)
Formosa Petrochemical	NR	6505 TT	Taiwan	Failure to disclose (F)
Galp Energia SGPS SA	NR	GALP PL	Portugal	Failure to disclose (F)
Grupa Lotos S.A.	NR	LTS PW	Poland	Failure to disclose (F)
GS Caltex Corporation	NR	GSCALZ KS	South Korea	Failure to disclose (F)
Halliburton Company	AQ	HAL US	USA	Management (B-)
Helmerich & Payne	NR	HP US	USA	Failure to disclose (F)
Hess Corporation	DP	HES US	USA	Failure to disclose (F)
Husky Energy Inc.	AQ RV	HSE CN	Canada	Management (B)
Imperial Oil	DP	IMO CN	Canada	Failure to disclose (F)
Inpex Corporation	DP	1605 JP	Japan	Failure to disclose (F)
JX Holdings, Inc	AQ (L)	5020 JP	Japan	Not scored
Kinder Morgan Inc.	NR	KMI US	USA	Failure to disclose (F)
Lubelski Węgiel BOGDANKA S.A.	NR	LWB PW	Poland	Failure to disclose (F)
Lukoil OAO	NR	LKOH RM	Russia	Failure to disclose (F)
Lundin Petroleum	DP	LUPE SS	Sweden	Failure to disclose (F)
Marathon Oil Corporation	NR	MRO US	USA	Failure to disclose (F)
Marathon Petroleum	NR	MPC US	USA	Failure to disclose (F)
MOL Nyrt.	AQ	MOL HB	Hungary	Awareness (C)
Murphy Oil Corporation	NR	MUR US	USA	Failure to disclose (F)
MYTILINEOS Holdings S.A.	AQ RV	N/A	Greece	Management (B)
National Oilwell Varco, Inc.	NR	NOV US	USA	Failure to disclose (F)
Neste Corporation	NR	NESTE FH	Finland	Failure to disclose (F)
New Hope	NR	NHC AU	Australia	Failure to disclose (F)
Newfield Exploration Co	DP	NFX US	USA	Failure to disclose (F)
Noble Energy, Inc.	AQ	NBL US	USA	Management (B)
Novatek OAO	AQ	NVTK RM	Russia	Disclosure (D)
Occidental Petroleum Corporation	AQ	OXY US	USA	Management (B-)
Oil & Natural Gas	NR	ONGC IN	India	Failure to disclose (F)
Oil Search	AQ	OSH AU	Australia	Management (B-)
OMV AG	AQ	OMV AV	Austria	Leadership (A-)
Oneok Inc.	NR	OKE US	USA	Failure to disclose (F)
Origin Energy	AQ (L)	ORG AU	Australia	Not scored
Petrofac	NR	PFC LN	United Kingdom	Failure to disclose (F)
Petróleo Brasileiro SA - Petrobras	AQ (NP)	PETR3 BZ	Brazil	Management (B)
Phillips 66	NR	PSX US	USA	Failure to disclose (F)
Pioneer Natural Resources	NR	PXD US	USA	Failure to disclose (F)
PJSC Gazprom	AQ	GAZP RM	Russia	Management (B)
Polski Koncern Naftowy ORLEN	NR	PKN PW	Poland	Failure to disclose (F)
Polskie Górnictwo Naftowe i Gazownictwo SA	NR	PGN PW	Poland	Failure to disclose (F)
PTT	AQ RV	PTT TB	Thailand	Management (B-)
Range Resources Corp.	AQ	RRC US	USA	Management (B-)
Reliance Industries	NR	RIL IN	India	Failure to disclose (F)
Repsol	NR	REP SM	Spain	Failure to disclose (F)
Rosneft OAO	NR	ROSN RM	Russia	Failure to disclose (F)
Royal Dutch Shell	DP	RDSA NA	Netherlands	Failure to disclose (F)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
Saipem	NR	SPM IM	Italy	Failure to disclose (F)
Santos	NR	STO AU	Australia	Failure to disclose (F)
Sasol Limited	AQ	SOL SJ	South Africa	Management (B)
Schlumberger Limited	NR	SLB US	USA	Failure to disclose (F)
Showa Shell Sekiyu K. K.	AQ (NP) RV	5002 JP	Japan	Management (B)
SK Innovation Co Ltd	NR	096770 KS	South Korea	Failure to disclose (F)
S-Oil Corp	NR	010950 KS	South Korea	Failure to disclose (F)
Southwestern Energy	NR	SWN US	USA	Failure to disclose (F)
Spectra Energy Corp	DP	SE US	USA	Failure to disclose (F)
Statoil ASA	DP	STL NO	Norway	Failure to disclose (F)
Suncor Energy Inc.	AQ	SU CN	Canada	Management (B)
Surgutneftegas OAO	NR	SNGSP RM	Russia	Failure to disclose (F)
Technip Sa	NR	TEC FP	France	Failure to disclose (F)
Tenaris S.A.	NR	TEN IM	Luxembourg	Failure to disclose (F)
Tesoro Corporation	NR	TSO US	USA	Failure to disclose (F)
Total	DP	FP FP	France	Failure to disclose (F)
TransCanada Corporation	DP	TRP CN	Canada	Failure to disclose (F)
Transocean Ltd.	NR	RIG US	Switzerland	Failure to disclose (F)
TÜPRAŞ-TÜRKİYE PETROL RAFİNERİLERİ A.Ş.	NR	TUPRS TI	Turkey	Failure to disclose (F)
Valero Energy Corporation	NR	VLO US	USA	Failure to disclose (F)
Vopak	NR	VPK NA	Netherlands	Failure to disclose (F)
Weatherford International Ltd.	NR	WFT US	Switzerland	Failure to disclose (F)
Williams Companies, Inc.	NR	WMB US	USA	Failure to disclose (F)
Wood Group	AQ RV	WG/ LN	United Kingdom	Not scored
Woodside Petroleum	NR	WPL AU	Australia	Failure to disclose (F)
WorleyParsons	AQ RV	WOR AU	Australia	Management (B-)

Financials				
Attacq Ltd	NR	ATT SJ	South Africa	Failure to disclose (F)
Banco Santander	AQ RV	SAN SM	Spain	Management (B)
Bank of America	AQ RV	BAC US	USA	Leadership (A-)
Capital & Counties Properties	NR	CAPC LN	United Kingdom	Failure to disclose (F)
Cheung Kong Property Holdings Ltd	NR	1113 HK	Cayman Islands	Failure to disclose (F)
China Overseas Land & Investment	NR	688 HK	China	Failure to disclose (F)
CK Hutchison Holdings Ltd	NR	1 HK	Hong Kong	Failure to disclose (F)
Deutsche Wohnen AG	NR	DWNI GR	Germany	Failure to disclose (F)
E.Sun Financial Holding Co	AQ (NP) RV	2884 TT	Taiwan	Not scored
First Financial Holding Co	AQ (NP) RV	2892 TT	Taiwan	Not scored
Hannon Armstrong Sustainable Infrastructure Capital, Inc	AQ RV	HASI US	USA	Not scored
Mahindra Lifespace Developers Limited	AQ RV	MLIFE IN	India	Management (B)
New Europe Property Investments plc	NR	NEP SJ	South Africa	Failure to disclose (F)
Redefine Properties Ltd	AQ RV	RDF SJ	South Africa	Not scored
Sanlam	AQ RV	SLM SJ	South Africa	Management (B-)
ŞEKERBANK T.A.Ş.	AQ RV	SKBNK TI	Turkey	Leadership (A-)
Shenwan Hongyuan Group	NR	000166 CH	China	Failure to disclose (F)
Swiss Prime Site AG	NR	SPSN SW	Switzerland	Failure to disclose (F)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
T.GARANTİ BANKASI A.Ş.	AQ RV	GARAN TI	Turkey	Leadership (A-)
TÜRKİYE HALK BANKASI A.Ş.	AQ RV	HALKB TI	Turkey	Not scored
Unum Group	AQ RV	UNM US	USA	Management (B-)
Vonovia	NR	VNA GR	Germany	Failure to disclose (F)

Health Care				
Abbott Laboratories	AQ	ABT US	USA	Management (B)
AbbVie Inc	AQ	ABBV US	USA	Management (B)
Actelion Ltd	DP	ATLN VX	Switzerland	Failure to disclose (F)
Alexion Pharmaceuticals	NR	ALXN US	USA	Failure to disclose (F)
Alkermes Plc	NR	ALKS US	Ireland	Failure to disclose (F)
Allergan plc	AQ (NP)	AGN US	USA	Management (B-)
Amgen, Inc.	AQ	AMGN US	USA	Awareness (C)
Ansell	NR	ANN AU	Australia	Failure to disclose (F)
Anthem Inc	AQ RV	ANTM US	USA	Not scored
Aspen Pharmacare Holdings	AQ	APN SJ	South Africa	Management (B)
Astellas Pharma Inc.	AQ	4503 JP	Japan	Management (B)
AstraZeneca	AQ	AZN LN	United Kingdom	Leadership (A)
Baxalta Inc	NR	BXLT US	USA	Failure to disclose (F)
Baxter International Inc.	AQ	BAX US	USA	Management (B)
Bayer AG	AQ	BAYN GR	Germany	Leadership (A)
Becton, Dickinson and Co.	AQ	BDX US	USA	Management (B-)
Biogen Inc.	AQ	BIIB US	USA	Management (B)
Boston Scientific Corporation	DP	BSX US	USA	Failure to disclose (F)
Bristol-Myers Squibb	AQ	BMY US	USA	Management (B)
Celgene Corporation	AQ	CELG US	USA	Management (B-)
Chugai Pharmaceutical Co., Ltd.	AQ	4519 JP	Japan	Awareness (C)
CICOR TECHNOLOGIES	AQ RV	CICN SW	Indonesia	Not scored
Cochlear	NR	COH AU	Australia	Failure to disclose (F)
Coloplast A/S	NR	COLOB DC	Denmark	Failure to disclose (F)
Covidien Ltd.	AQ (SA) RV	COV US	Ireland	Not scored
CR Bard Inc	NR	BCR US	USA	Failure to disclose (F)
CSL	AQ	CSL AU	Australia	Management (B)
Daiichi Sankyo Co., Ltd.	AQ	4568 JP	Japan	Management (B)
Dentsply Sirona Inc.	NR	XRAY US	USA	Failure to disclose (F)
Dr. Reddy's Laboratories	AQ RV	DRRD IN	India	Not scored
Edwards Lifesciences Corp	AQ	EW US	USA	Awareness (C)
EİS ECZACIBAŞI İLAÇ, SINAI VE FİNANSAL YATIRIMLAR SANAYİ VE TİCARET A.Ş.	NR	ECILC TI	Turkey	Failure to disclose (F)
Eisai Co., Ltd.	NR	4523 JP	Japan	Failure to disclose (F)
Eli Lilly & Co.	AQ	LLY US	USA	Management (B)
Endo International plc	NR	ENDP US	Ireland	Failure to disclose (F)
Essilor International	AQ	EI FP	France	Leadership (A-)
Fisher & Paykel Healthcare Corporation	NR	FPH NZ	New Zealand	Failure to disclose (F)
Galenica SA	NR	GALN VX	Switzerland	Failure to disclose (F)
Getinge	NR	GETIB SS	Sweden	Failure to disclose (F)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
Gilead Sciences, Inc.	NR	GILD US	USA	Failure to disclose (F)
GlaxoSmithKline	AQ	GSK LN	United Kingdom	Leadership (A)
GRIFOLS	NR	GRF SM	Spain	Failure to disclose (F)
HCA	NR	HCA US	USA	Failure to disclose (F)
Healthscope	NR	HSA AU	Australia	Failure to disclose (F)
Hikma Pharmaceuticals	AQ	HIK LN	United Kingdom	Management (B-)
Intuitive Surgical Inc.	NR	ISRG US	USA	Failure to disclose (F)
Ipsen	AQ RV	IPN FP	France	Management (B)
Jazz Pharmaceuticals Plc	NR	JAZZ US	Ireland	Failure to disclose (F)
Johnson & Johnson	AQ	JNJ US	USA	Management (B)
Kyowa Hakko Kirin Co., Ltd.	AQ (SA)	4151 JP	Japan	Not scored
Life Healthcare Group Holdings Ltd	NR	LHC SJ	South Africa	Failure to disclose (F)
M3, Inc.	NR	2413 JP	Japan	Failure to disclose (F)
Mallinckrodt plc	DP	MNK US	USA	Failure to disclose (F)
Mediclinic International	AQ	MDC SJ	South Africa	Management (B)
Medtronic PLC	AQ	MDT US	Ireland	Management (B-)
Merck & Co., Inc.	AQ	MRK US	USA	Management (B)
Merck KGaA	AQ	MRK GR	Germany	Awareness (C)
Mitsubishi Tanabe Pharma Corporation	AQ (SA)	4508 JP	Japan	Not scored
Mylan Inc.	NR	MYL US	USA	Failure to disclose (F)
Netcare Limited	AQ	NTC SJ	South Africa	Management (B)
Novartis	AQ	NOVN VX	Switzerland	Leadership (A-)
Novo Nordisk A/S	DP	NOVOB DC	Denmark	Failure to disclose (F)
Olympus Corporation	AQ	7733 JP	Japan	Management (B)
Ono Pharmaceutical Co., Ltd.	AQ	4528 JP	Japan	Management (B)
Orion Oyj	NR	ORNBV FH	Finland	Failure to disclose (F)
Otsuka Holdings Co., Ltd.	NR	4578 JP	Japan	Failure to disclose (F)
PerkinElmer, Inc.	AQ RV	PKI US	USA	Disclosure (D)
Perrigo Co.	NR	PRGO US	Ireland	Failure to disclose (F)
Pfizer Inc.	AQ	PFE US	USA	Management (B)
Ramsay Health Care	NR	RHC AU	Australia	Failure to disclose (F)
Regeneron Pharmaceuticals, Inc.	AQ	REGN US	USA	Leadership (A-)
ResMed	NR	RMD US	USA	Failure to disclose (F)
Richter Gedeon Nyrt.	NR	RICHT HB	Hungary	Failure to disclose (F)
Roche Holding AG	AQ	ROG VX	Switzerland	Leadership (A-)
SANOFI	AQ	SAN FP	France	Management (B)
Santen Pharmaceutical Co., Ltd.	AQ (NP)	4536 JP	Japan	Management (B)
Shionogi & Co., Ltd.	NR	4507 JP	Japan	Failure to disclose (F)
Shire	NR	SHP LN	Ireland	Failure to disclose (F)
Sirtex Medical	NR	SRX AU	Australia	Failure to disclose (F)
Smith & Nephew	AQ (NP)	SN/ LN	United Kingdom	Awareness (C)
Sonova Holding AG	NR	SOON VX	Switzerland	Failure to disclose (F)
St. Jude Medical, Inc.	NR	STJ US	USA	Failure to disclose (F)
Stryker Corporation	NR	SYK US	USA	Failure to disclose (F)
Sumitomo Dainippon Pharma Co., Ltd.	AQ	4506 JP	Japan	Management (B-)
Sun Pharmaceutical Industries	NR	SUNP IN	India	Failure to disclose (F)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
System Corporation	AQ	6869 JP	Japan	Management (B)
Taisho Pharmaceutical Co., Ltd.	NR	4581 JP	Japan	Failure to disclose (F)
Takeda Pharmaceutical Company Limited	AQ	4502 JP	Japan	Leadership (A-)
Tenet Healthcare Corporation	NR	THC US	USA	Failure to disclose (F)
Terumo Corporation	AQ	4543 JP	Japan	Disclosure (D-)
Teva Pharmaceutical Industries Ltd	NR	TEVA IT	Israel	Failure to disclose (F)
Thermo Fisher Scientific Inc.	AQ RV	TMO US	USA	Awareness (C)
UCB SA	NR	UCB BB	Belgium	Failure to disclose (F)
Universal Health Services	NR	UHS US	USA	Failure to disclose (F)
Valeant Pharmaceuticals International, Inc.	AQ (L)	VRX US	USA	Not scored
Varian Medical Systems Inc	AQ	VAR US	USA	Management (B)
Vertex Pharmaceuticals Inc	NR	VRTX US	USA	Failure to disclose (F)
William Demant Holding A/S	AQ	WDH DC	Denmark	Awareness (C)
ZCL Chemicals	AQ RV	N/A	India	Not scored
Zimmer Biomet Holdings, Inc.	NR	ZBH US	USA	Failure to disclose (F)
Zoetis Inc	NR	ZTS US	USA	Failure to disclose (F)

Industrials				
3M Company	AQ	MMM US	USA	Management (B)
ABB	DP	ABBV VX	Switzerland	Failure to disclose (F)
ACS Actividades de Construcción y Servicios	NR	ACS SM	Spain	Failure to disclose (F)
AerCap Holdings NV	NR	AER US	Netherlands	Failure to disclose (F)
Airbus Group	NR	AIR FP	Netherlands	Failure to disclose (F)
AKFEN HOLDİNG A.Ş.	DP	AKFEN TI	Turkey	Failure to disclose (F)
Alfa Laval Corporate AB	NR	ALFA SS	Sweden	Failure to disclose (F)
Allegion Plc	AQ (NP)	ALLE US	Ireland	Management (B-)
Allied Electronics Corporation Ltd (Altron)	AQ RV	AEL SJ	South Africa	Management (B-)
Alstom	DP	ALO FP	France	Failure to disclose (F)
Ametek, Inc.	NR	AME US	USA	Failure to disclose (F)
ANDRITZ AG	NR	ANDR AV	Austria	Failure to disclose (F)
Asahi Glass Co., Ltd.	AQ	5201 JP	Japan	Disclosure (D)
ASELSAN ELEKTRONİK SANAYİ VE TİCARET A.Ş.	NR	ASELS TI	Turkey	Failure to disclose (F)
Ashtead Group	NR	AHT LN	United Kingdom	Failure to disclose (F)
Assa Abloy	AQ	ASSAB SS	Sweden	Management (B)
Atlas Copco	DP	ATCOA SS	Sweden	Failure to disclose (F)
Aveng Ltd	AQ (NP) RV	AEG SJ	South Africa	Management (B)
BAE Systems	DP	BA/ LN	United Kingdom	Failure to disclose (F)
Barlworld	AQ	BAW SJ	South Africa	Management (B)
Bidvest Group Ltd	DP	BVT SJ	South Africa	Failure to disclose (F)
Boeing Company	NR	BA US	USA	Failure to disclose (F)
Bouygues	DP	EN FP	France	Failure to disclose (F)
Brenntag AG	NR	BNR GR	Germany	Failure to disclose (F)
Bunzl plc	DP	BNZL LN	United Kingdom	Failure to disclose (F)
Caterpillar Inc.	DP	CAT US	USA	Failure to disclose (F)
CIMIC Group	AQ	CIM AU	Australia	Management (B)
CITIC Limited	NR	267 HK	Hong Kong	Failure to disclose (F)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
CJ	NR	001040 KS	South Korea	Failure to disclose (F)
CNH Industrial NV	AQ	CNHI US	United Kingdom	Leadership (A-)
Cobham	DP	COB LN	United Kingdom	Failure to disclose (F)
Cummins Inc.	AQ	CMI US	USA	Management (B)
Daewoo E&C	NR	047040 KS	South Korea	Failure to disclose (F)
Dai Nippon Printing Co., Ltd.	AQ RV	7912 JP	Japan	Management (B)
Daikin Industries, Ltd.	AQ	6367 JP	Japan	Leadership (A-)
Danaher Corporation	AQ (NP)	DHR US	USA	Disclosure (D)
DCC PLC	DP	DCC LN	Ireland	Failure to disclose (F)
Deere & Company	AQ	DE US	USA	Management (B-)
Deutsche Post AG	AQ (NP) RV	DPW GR	Germany	Not scored
DOĞAN ŞİRKETLER GRUBU HOLDİNG A.Ş.	AQ (NP)	DOHOL TI	Turkey	Disclosure (D)
Doosan Heavy Industries & Construction	NR	034020 KS	South Korea	Failure to disclose (F)
Dover Corporation	NR	DOV US	USA	Failure to disclose (F)
Eaton Corporation	AQ (L)	ETN US	USA	Not scored
Emerson Electric Co.	AQ (L)	EMR US	USA	Not scored
Empresas CMPC	AQ	CMPC CI	Chile	Management (B-)
ENKA İNŞAAT VE SANAYİ A.Ş.	NR	ENKAI TI	Turkey	Failure to disclose (F)
Fanuc Corporation	AQ	6954 JP	Japan	Disclosure (D)
Fastenal Company	NR	FAST US	USA	Failure to disclose (F)
FERROVIAL	AQ	FER SM	Spain	Leadership (A-)
Flowserve Corporation	AQ (L)	FLS US	USA	Not scored
Fluor Corporation	AQ	FLR US	USA	Awareness (C)
Furukawa Electric Co., Ltd.	AQ (NP) RV	5801 JP	Japan	Awareness (C)
GEA Group AG	DP	G1A GR	Germany	Failure to disclose (F)
Geberit AG	AQ	GEBN VX	Switzerland	Management (B)
General Dynamics Corporation	NR	GD US	USA	Failure to disclose (F)
General Electric Company	AQ	GE US	USA	Management (B)
GS Engineering & Construction	NR	006360 KS	South Korea	Failure to disclose (F)
Hino Motors, Ltd.	AQ	7205 JP	Japan	Awareness (C)
Hitachi Construction Machinery Co., Ltd.	AQ RV	6305 JP	Japan	Not scored
Honeywell International Inc.	DP	HON US	USA	Failure to disclose (F)
Hoshizaki Electric Co., Ltd.	NR	6465 JP	Japan	Failure to disclose (F)
Hosken Consolidated Investments	AQ	HCI SJ	South Africa	Management (B)
Hyundai E&C	AQ	000720 KS	South Korea	Management (B)
IHI Corporation	DP	7013 JP	Japan	Failure to disclose (F)
Illinois Tool Works, Inc.	AQ (NP)	ITW US	USA	Awareness (C)
IMI plc	DP	IMI LN	United Kingdom	Failure to disclose (F)
Ingersoll-Rand Co. Ltd.	AQ	IR US	Ireland	Management (B)
ITOCHU Corporation	AQ (NP)	8001 JP	Japan	Awareness (C)
Jacobs Engineering Group Inc.	DP	JEC US	USA	Failure to disclose (F)
Jardine Matheson	NR	JM SP	Hong Kong	Failure to disclose (F)
Jardine Strategic	NR	JS SP	Hong Kong	Failure to disclose (F)
JTEKT Corporation	AQ (NP)	6473 JP	Japan	Management (B-)
Kajima Corporation	AQ	1812 JP	Japan	Management (B)
KAP Industrial Holdings Ltd	NR	KAP SJ	South Africa	Failure to disclose (F)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
Kawasaki Heavy Industries, Ltd.	AQ (NP)	7012 JP	Japan	Management (B)
KCC	NR	002380 KS	South Korea	Failure to disclose (F)
KOÇ HOLDİNG A.Ş.	NR	KCHOL TI	Turkey	Failure to disclose (F)
Komatsu Ltd.	AQ	6301 JP	Japan	Leadership (A-)
Kone Oyj	NR	KNEBV FH	Finland	Failure to disclose (F)
Kubota Corporation	AQ	6326 JP	Japan	Leadership (A-)
L-3 Communications Holdings, Inc.	NR	LLL US	USA	Failure to disclose (F)
LEGRAND	DP	LR FP	France	Failure to disclose (F)
Leonardo – Finmeccanica	NR	LDO IM	Italy	Failure to disclose (F)
LIXIL Group Corporation	AQ	5938 JP	Japan	Management (B)
Lockheed Martin Corporation	AQ	LMT US	USA	Management (B)
Makita Corporation	NR	6586 JP	Japan	Failure to disclose (F)
MAN SE	AQ (SA)	MAN GR	Germany	Not scored
Marubeni Corporation	AQ (NP)	8002 JP	Japan	Awareness (C)
Masco Corporation	NR	MAS US	USA	Failure to disclose (F)
Meggitt	AQ	MGGT LN	United Kingdom	Awareness (C)
Melrose PLC	DP	MRO LN	United Kingdom	Failure to disclose (F)
Metso	NR	MEO1V FH	Finland	Failure to disclose (F)
Mitsubishi Corporation	AQ (NP)	8058 JP	Japan	Leadership (A-)
Mitsubishi Electric Corporation	AQ	6503 JP	Japan	Leadership (A)
Mitsubishi Heavy Industries, Ltd.	AQ (NP) (L)	7011 JP	Japan	Not scored
Mitsui & Co., Ltd.	AQ (NP)	8031 JP	Japan	Management (B)
Murray & Roberts Holdings Limited	AQ RV	MUR SJ	South Africa	Not scored
Nabtesco Corporation	AQ RV	6268 JP	Japan	Management (B)
Nankai Electric Railway Co., Ltd.	AQ RV	9044 JP	Japan	Not scored
National Express Group Plc	AQ RV	NEX LN	United Kingdom	Management (B-)
NGK Insulators, Ltd.	AQ (NP)	5333 JP	Japan	Management (B)
Nidec Corporation	AQ (L)	6594 JP	Japan	Not scored
Nippon Sheet Glass Company, Ltd	AQ (NP) RV	5202 JP	Japan	Not scored
Northrop Grumman Corp	NR	NOC US	USA	Failure to disclose (F)
NSK Ltd.	AQ	6471 JP	Japan	Management (B)
NTN Corporation	AQ RV	6472 JP	Japan	Management (B)
Obayashi Corporation	NR	1802 JP	Japan	Failure to disclose (F)
Obrascon Huarte Lain (OHL)	AQ RV	OHL SM	Spain	Leadership (A-)
OCI N.V.	NR	OCI NA	Netherlands	Failure to disclose (F)
Osram Licht Ag	DP	OSR GR	Germany	Failure to disclose (F)
OTOKAR OTOMOTİV VE SAVUNMA SANAYİ A.Ş.	DP	OTKAR TI	Turkey	Failure to disclose (F)
Owens Corning	AQ RV	OC US	USA	Leadership (A-)
PACCAR Inc	NR	PCAR US	USA	Failure to disclose (F)
Pall Corporation	AQ RV	PLL US	USA	Not scored
Parker-Hannifin Corporation	AQ	PH US	USA	Management (B-)
Pentair, Inc.	NR	PNR US	United Kingdom	Failure to disclose (F)
Precision Castparts Corp.	DP	PCP US	USA	Failure to disclose (F)
Prismian SpA	NR	PRY IM	Italy	Failure to disclose (F)
Quanta Services Inc	NR	PWR US	USA	Failure to disclose (F)
Raytheon Company	AQ	RTN US	USA	Management (B)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
Republic Services, Inc.	NR	RSG US	USA	Failure to disclose (F)
Reunert	AQ	RLO SJ	South Africa	Management (B-)
Rexel	NR	RXL FP	France	Failure to disclose (F)
Rockwell Automation	AQ	ROK US	USA	Awareness (C)
Rockwell Collins, Inc.	AQ	COL US	USA	Disclosure (D)
Rolls-Royce	NR	RR/ LN	United Kingdom	Failure to disclose (F)
Roper Industries Inc	NR	ROP US	USA	Failure to disclose (F)
Rotork PLC	AQ RV	ROR LN	United Kingdom	Management (B-)
Royal BAM Group nv	AQ RV	BAMNB NA	Netherlands	Management (B-)
Royal Boskalis Westminster	DP	BOKA NA	Netherlands	Failure to disclose (F)
Royal Philips	AQ	PHIA NA	Netherlands	Management (B)
Safran	DP	SAF FP	France	Failure to disclose (F)
Saint-Gobain	AQ	SGO FP	France	Management (B)
Samsung C&T	NR	028260 KS	South Korea	Failure to disclose (F)
Samsung Engineering	NR	028050 KS	South Korea	Failure to disclose (F)
Samsung Heavy Industries Co Ltd	NR	010140 KS	South Korea	Failure to disclose (F)
Sandvik AB	AQ	SAND SS	Sweden	Management (B-)
Schindler Holding AG	DP	SCHP VX	Switzerland	Failure to disclose (F)
Schneider Electric	NR	SU FP	France	Failure to disclose (F)
Secom Co., Ltd.	AQ RV	9735 JP	Japan	Management (B)
Seibu Holdings Inc.	NR	9024 JP	Japan	Failure to disclose (F)
Sensata Technologies Holding NV	NR	ST US	Netherlands	Failure to disclose (F)
Shimizu Corporation	NR	1803 JP	Japan	Failure to disclose (F)
Siemens AG	DP	SIE GR	Germany	Not scored
Skanska AB	DP	SKAB SS	Sweden	Failure to disclose (F)
SKF	DP	SKFA SS	Sweden	Failure to disclose (F)
SM Investments	AQ RV	SM PM	Philippines	Not scored
SMC Corporation	NR	6273 JP	Japan	Failure to disclose (F)
Smiths Group	DP	SMIN LN	United Kingdom	Failure to disclose (F)
Snap-On Inc	NR	SNA US	USA	Failure to disclose (F)
Stanley Black & Decker, Inc.	AQ	SWK US	USA	Leadership (A-)
Stericycle Inc.	NR	SRCL US	USA	Failure to disclose (F)
Sulzer AG	DP	SUN SW	Switzerland	Failure to disclose (F)
Sumitomo Corporation	DP	8053 JP	Japan	Failure to disclose (F)
SunPower Corporation	AQ RV	SPWR US	USA	Not scored
T.ŞİŞE VE CAM FABRİKALARI A.Ş.	DP	SISE TI	Turkey	Failure to disclose (F)
Taisei Corporation	AQ	1801 JP	Japan	Management (B)
TAV HAVALİMANLARI HOLDİNG A.Ş.	AQ RV	TAVHL TI	Turkey	Awareness (C)
TEKFEN HOLDİNG A.Ş.	NR	TKFEN TI	Turkey	Failure to disclose (F)
Textron Inc.	DP	TXT US	USA	Failure to disclose (F)
Thales	NR	HO FP	France	Failure to disclose (F)
Toppan Printing Co., Ltd.	AQ RV	7911 JP	Japan	Management (B-)
Toshiba Corporation	AQ	6502 JP	Japan	Management (B)
Toto Ltd.	AQ	5332 JP	Japan	Management (B)
Toyota Tsusho Corporation	DP	8015 JP	Japan	Failure to disclose (F)
TRAKYA CAM SANAYİ A.Ş.	NR	TRKCM TI	Turkey	Failure to disclose (F)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
Travis Perkins	NR	TPK LN	United Kingdom	Failure to disclose (F)
TÜMOSAN MOTOR VE TRAKTÖR SANAYİ A.Ş.	AQ	TMSN TI	Turkey	Awareness (C)
TÜRK TRAKTÖR VE ZİRAAT MAKİNELERİ A.Ş.	NR	TTRAK TI	Turkey	Failure to disclose (F)
Union Pacific Corporation	AQ RV	UNP US	USA	Awareness (C)
UNITED RENTALS	NR	URI US	USA	Failure to disclose (F)
United Technologies Corporation	AQ	UTX US	USA	Management (B)
UPS	AQ (NP) RV	UPS US	USA	Awareness (C)
Vestas Wind Systems A/S	AQ (NP)	VWS DC	Denmark	Awareness (C)
Vinci	AQ	DG FP	France	Management (B-)
Volvo	NR	VOLVB SS	Sweden	Failure to disclose (F)
W.W. Grainger, Inc.	AQ (NP)	GWW US	USA	Awareness (C)
Wärtsilä Corporation	NR	WRT1V FH	Finland	Failure to disclose (F)
Waste Management, Inc.	AQ	WM US	USA	Management (B-)
WECKERLE	AQ (NP) RV	6302495Z GR	Germany	Not scored
Weir Group	NR	WEIR LN	United Kingdom	Failure to disclose (F)
Wolseley plc	DP	WOS LN	United Kingdom	Failure to disclose (F)
Xylem Inc	AQ	XYL US	USA	Management (B)
YAZICILAR HOLDİNG A.Ş.	NR	YAZIC TI	Turkey	Failure to disclose (F)
Zardoya Otis	NR	ZOT SM	Spain	Failure to disclose (F)
Zodiac	DP	ZC FP	France	Failure to disclose (F)

Information Technology

Advanced Micro Devices, Inc	AQ RV	AMD US	USA	Awareness (C)
Akamai Technologies Inc	AQ RV	AKAM US	USA	Awareness (C)
Alcatel - Lucent	DP	ALU FP	France	Failure to disclose (F)
Alps Electric Co., Ltd.	AQ (NP) (L)	6770 JP	Japan	Not scored
Altera Corp.	AQ (SA) RV	ALTR US	USA	Not scored
Amphenol Corporation	AQ (L)	APH US	USA	Not scored
Analog Devices, Inc.	AQ (NP)	ADI US	USA	Management (B)
Apple Inc.	DP	AAPL US	USA	Failure to disclose (F)
Applied Materials Inc.	AQ RV	AMAT US	USA	Awareness (C)
ARM Holdings	AQ	ARM LN	United Kingdom	Awareness (C)
ASML Holding	AQ (NP) RV	ASML NA	Netherlands	Management (B-)
AU Optronics	AQ RV	2409 TT	Taiwan	Not scored
Avago Technologies	NR	AVGO US	Singapore	Failure to disclose (F)
Bel Fuse Inc.	AQ (NP) RV	BELFA US	USA	Disclosure (D)
Broadcom Corporation	DP	AVGO US	USA	Failure to disclose (F)
Brother Industries, Ltd.	AQ RV	6448 JP	Japan	Leadership (A-)
CA Technologies	AQ (NP) RV	CA US	USA	Awareness (C)
Canon Inc.	AQ	7751 JP	Japan	Leadership (A-)
Cisco Systems, Inc.	AQ	CSCO US	USA	Management (B)
Corning Incorporated	DP	GLW US	USA	Failure to disclose (F)
Darfon Electronics Corp	AQ RV	8163 TT	Taiwan	Not scored
Datatec	NR	DTC SJ	South Africa	Failure to disclose (F)
Dell Inc.	AQ RV	DELL US	USA	Management (B)
EMC Corporation	DP	EMC US	USA	Failure to disclose (F)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
Ericsson	NR	ERICB SS	Sweden	Failure to disclose (F)
F5 Networks, Inc.	NR	FFIV US	USA	Failure to disclose (F)
First Solar Inc	NR	FSLR US	USA	Failure to disclose (F)
FujiFilm Holdings Corporation	AQ (NP)	4901 JP	Japan	Leadership (A-)
Fujitsu Ltd.	AQ RV	6702 JP	Japan	Management (B)
GOLD CIRCUIT ELECTRONICS LTD	AQ (NP) RV	2368 TT	Taiwan	Management (B-)
Hamamatsu Photonics K.K.	AQ	6965 JP	Japan	Awareness (C)
Harris Corporation	NR	HRS US	USA	Failure to disclose (F)
Hewlett Packard Enterprise Company	AQ (SA)	HPE US	USA	Not scored
Hewlett-Packard	AQ RV	N/A	USA	Management (B)
Hirose Electric Co., Ltd.	AQ	6806 JP	Japan	Awareness (C)
Hitachi, Ltd.	AQ RV	6501 JP	Japan	Management (B)
Hon Hai Precision Industry	AQ (NP)	2317 TT	Taiwan	Disclosure (D)
Hoya Corporation	AQ (NP)	7741 JP	Japan	Disclosure (D)
HP Inc	AQ (SA)	HPQ US	USA	Not scored
Ibiden Co., Ltd.	AQ RV	4062 JP	Japan	Management (B)
Infineon	AQ (NP)	IFX GR	Germany	Management (B)
Integrated Device Technology, Inc.	AQ RV	IDTI US	USA	Awareness (C)
Intel Corporation	AQ	INTC US	USA	Management (B)
International Business Machines (IBM)	AQ RV	IBM US	USA	Management (B-)
Juniper Networks, Inc.	AQ	JNPR US	USA	Management (B)
KLA-Tencor Corporation	AQ RV	KLAC US	USA	Not scored
Konica Minolta, Inc.	AQ	4902 JP	Japan	Leadership (A-)
Kyocera Corporation	AQ (NP)	6971 JP	Japan	Management (B)
Lexmark International, Inc.	AQ RV	LXK US	USA	Management (B)
LG Display	AQ	034220 KS	South Korea	Leadership (A)
LG Innotek	AQ	011070 KS	South Korea	Leadership (A-)
Linear Technology Corp.	AQ (NP)	LLTC US	USA	Management (B-)
Marvell Technology Group, Ltd.	AQ RV	MRVL US	USA	Not scored
MediaTek	AQ RV	2454 TT	Taiwan	Awareness (C)
Microchip Technology	NR	MCHP US	USA	Failure to disclose (F)
Micron Technology, Inc.	AQ	MU US	USA	Disclosure (D-)
Microsoft Corporation	AQ RV	MSFT US	USA	Leadership (A-)
Molex Incorporated	AQ RV	N/A	USA	Not scored
Motorola Solutions	AQ	MSI US	USA	Management (B-)
Murata Mfg. Co.	AQ	6981 JP	Japan	Management (B)
NEC Corporation	AQ	6701 JP	Japan	Management (B)
NetApp Inc.	AQ (NP) (L)	NTAP US	USA	Not scored
Nokia Group	DP	NOKIA FH	Finland	Failure to disclose (F)
Nordic Semiconductor ASA	AQ (NP) RV	NOD NO	Norway	Management (B-)
NVIDIA Corporation	AQ	NVDA US	USA	Management (B)
NXP Semiconductors	DP	NXPI US	Netherlands	Failure to disclose (F)
OMRON Corporation	AQ	6645 JP	Japan	Management (B)
Qorvo	NR	QRVO US	USA	Failure to disclose (F)
QUALCOMM Inc.	AQ	QCOM US	USA	Management (B)
Quanta Computer	AQ RV	2382 TT	Taiwan	Awareness (C)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
Renesas Electronics Corporation	AQ RV	6723 JP	Japan	Awareness (C)
Ricoh Co., Ltd.	AQ (NP)	7752 JP	Japan	Leadership (A-)
Rohm Co., Ltd.	AQ	6963 JP	Japan	Leadership (A-)
Samsung Electro-Mechanics Co., Ltd.	AQ	009150 KS	South Korea	Management (B)
Samsung Electronics	AQ (NP)	005930 KS	South Korea	Management (B)
Samsung SDI	AQ (NP) (L)	006400 KS	South Korea	Not scored
SanDisk Corporation	AQ (NP) (L)	SNDK US	USA	Not scored
Seagate Technology LLC	AQ	STX US	Ireland	Management (B)
Seiko Epson Corporation	NR	6724 JP	Japan	Failure to disclose (F)
SK Hynix	AQ (L)	000660 KS	South Korea	Not scored
Skyworks Solutions, Inc.	DP	SWKS US	USA	Failure to disclose (F)
SolarWorld AG	AQ (NP) RV	SWVK GR	Germany	Management (B)
STMicroelectronics Nv	AQ	STM IM	Switzerland	Management (B)
Symantec Corporation	AQ RV	SYMC US	USA	Management (B)
Taiwan Semiconductor Manufacturing	AQ (NP)	2330 TT	Taiwan	Management (B)
TDK Corporation	AQ	6762 JP	Japan	Management (B-)
TE Connectivity	AQ	TEL US	Switzerland	Management (B-)
Tech Mahindra	AQ RV	TECHM IN	India	Management (B)
Texas Instruments Incorporated	AQ	TXN US	USA	Disclosure (D)
Viavi Solutions Inc.	AQ RV	VIAV US	USA	Management (B-)
Western Digital Corp	AQ	WDC US	USA	Awareness (C)
Wistron Corp	AQ RV	3231 TT	Taiwan	Not scored
Xerox Corporation	AQ (NP) RV	XRX US	USA	Leadership (A-)
Xilinx Inc	AQ	XLNX US	USA	Disclosure (D)
Yahoo! Inc.	AQ RV	YHOO US	USA	Management (B)

Materials				
Acacia Mining	DP	ACA LN	United Kingdom	Failure to disclose (F)
Adelaide Brighton	NR	ABC AU	Australia	Failure to disclose (F)
AECI Ltd Ord	AQ	AFE SJ	South Africa	Management (B)
African Rainbow Minerals	AQ	ARI SJ	South Africa	Management (B)
Agnico-Eagle Mines Limited	AQ	AEM CN	Canada	Awareness (C)
Air Liquide	AQ (NP) (L)	AI FP	France	Not scored
Air Products & Chemicals, Inc.	AQ (NP)	APD US	USA	Management (B)
Airgas	NR	ARG US	USA	Failure to disclose (F)
AKÇANSA ÇİMENTO SANAYİ VE TİCARET A.Ş.	AQ	AKCNS TI	Turkey	Management (B)
AkzoNobel	AQ	AKZA NA	Netherlands	Management (B)
Alacer Gold	NR	AQG AU	USA	Failure to disclose (F)
Alamos Gold Inc.	NR	AGI CN	Canada	Failure to disclose (F)
Alcoa Inc.	AQ	AA US	USA	Management (B-)
Altri SGPS SA	NR	ALTR PL	Portugal	Failure to disclose (F)
Alumina	AQ	AWC AU	Australia	Disclosure (D)
Amcor	AQ	AMC AU	Australia	Management (B)
Anglo American	AQ	AAL LN	United Kingdom	Leadership (A-)
Anglo American Platinum	AQ	AMS SJ	South Africa	Leadership (A)
AngloGold Ashanti	AQ	ANG SJ	South Africa	Management (B)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
Antofagasta	AQ	ANTO LN	United Kingdom	Management (B)
Aquarius Platinum	AQ RV	AQP AU	Bermuda	Management (B)
ArcelorMittal	AQ	MT NA	Luxembourg	Management (B-)
ARKEMA	DP	AKE FP	France	Failure to disclose (F)
Arrium	AQ RV	ARI AU	Australia	Management (B-)
Asahi Kasei Corporation	AQ (NP)	3407 JP	Japan	Disclosure (D)
Asian Bamboo AG	DP	5AB GR	Germany	Failure to disclose (F)
ASLAN ÇİMENTO A.Ş.	NR	ASLAN TI	Turkey	Failure to disclose (F)
Assore Ltd	NR	ASR SJ	South Africa	Failure to disclose (F)
Aurubis AG	DP	NDA GR	Germany	Failure to disclose (F)
Avery Dennison Corporation	AQ	AVY US	USA	Awareness (C)
Ball Corporation	AQ (NP)	BLL US	USA	Awareness (C)
Barrick Gold Corporation	AQ RV	ABX CN	Canada	Leadership (A-)
BASF SE	AQ	BAS GR	Germany	Leadership (A)
Beadell Resources	NR	BDR AU	Australia	Failure to disclose (F)
Bemis Company	AQ (NP) RV	BMS US	USA	Management (B-)
BHP Billiton	AQ	BHP AU	United Kingdom	Leadership (A-)
BillerudKorsnäs	AQ	BILL SS	Sweden	Management (B-)
Birla Carbon	AQ RV	N/A	USA	Management (B-)
BlueScope Steel	NR	BSL AU	Australia	Failure to disclose (F)
Boliden Group	NR	BOL SS	Sweden	Failure to disclose (F)
Boral	NR	BLD AU	Australia	Failure to disclose (F)
BORUSAN MANNESMANN BORU SANAYİ VE TİCARET A.Ş.	NR	BRSAN TI	Turkey	Failure to disclose (F)
Braskem S/A	AQ RV	BRKM3 BZ	Brazil	Management (B)
Catalyst Paper Corporation	AQ RV	CYT CN	Canada	Management (B-)
Centamin plc	DP	CEY LN	United Kingdom	Failure to disclose (F)
CF Industries Holdings, Inc.	NR	CF US	USA	Failure to disclose (F)
China Steel	AQ RV	2002 TT	Taiwan	Leadership (A-)
Chr. Hansen Holding A/S	NR	CHR DC	Denmark	Failure to disclose (F)
Cia. Siderurgica Nacional - CSN	AQ (NP) RV	CSNA3 BZ	Brazil	Management (B)
ÇİMSA ÇİMENTO SANAYİ VE TİCARET A.Ş.	AQ	CİMSA TI	Turkey	Management (B-)
Clariant AG	AQ RV	CLN VX	Switzerland	Management (B)
Coeur d'Alene Mines Corporation	NR	CDE US	USA	Failure to disclose (F)
CRH Plc	AQ	CRH ID	Ireland	Management (B)
Croda International	AQ	CRDA LN	United Kingdom	Management (B)
Daicel Corporation	AQ (NP)	4202 JP	Japan	Awareness (C)
Domtar Corporation	NR	UFS US	Canada	Failure to disclose (F)
DS Smith Plc	AQ RV	SMDS LN	United Kingdom	Leadership (A-)
DuluxGroup	NR	DLX AU	Australia	Failure to disclose (F)
Duratex S/A	AQ RV	DTEX3 BZ	Brazil	Management (B)
E.I. du Pont de Nemours and Company	AQ	DD US	USA	Management (B-)
Eastman Chemical Company	AQ (NP)	EMN US	USA	Management (B-)
Ecolab Inc.	AQ	ECL US	USA	Leadership (A-)
Eldorado Gold Corporation	AQ	ELD CN	Canada	Management (B)
Empresas CMPC	AQ	CMPC CI	Chile	Management (B-)
Ems-Chemie Holding AG	NR	EMSN SW	Switzerland	Failure to disclose (F)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.	DP	EREGL TI	Turkey	Failure to disclose (F)
EUROPAC Papeles Y Cartones de Europa SA	NR	PAC SM	Spain	Failure to disclose (F)
Evolution Mining	NR	EVN AU	Australia	Failure to disclose (F)
Evonik Industries AG	AQ	EVKIF US	Germany	Management (B)
FIRMENICH SA	AQ RV	4282549Z SM	Switzerland	Leadership (A-)
First Quantum Minerals Limited	AQ (NP)	FM CN	Canada	Management (B)
Fletcher Building	DP	FBU NZ	New Zealand	Failure to disclose (F)
FMC Corp	NR	FMC US	USA	Failure to disclose (F)
Fortescue Metals Group	AQ	FMG AU	Australia	Leadership (A-)
Freeport-McMoRan Inc.	AQ	FCX US	USA	Management (B-)
Fresnillo plc	AQ	FRES LN	Mexico	Management (B)
FUCHS PETROLUB SE	NR	FPE GR	Germany	Failure to disclose (F)
Givaudan SA	AQ (NP)	GIVN VX	Switzerland	Management (B)
Glencore plc	AQ (NP)	GLEN LN	Switzerland	Leadership (A-)
Gold Fields Limited	AQ	GFI SJ	South Africa	Leadership (A-)
Goldcorp Inc.	AQ (L)	G CN	Canada	Not scored
Grafica 43	AQ RV	Not available	Brazil	Not scored
Grupa Azoty S.A.	NR	ATT PW	Poland	Failure to disclose (F)
GÜBRE FABRİKALARI T.A.Ş.	NR	GUBRF TI	Turkey	Failure to disclose (F)
Hanwha Chemical Corp	NR	009830 KS	South Korea	Failure to disclose (F)
Harmony Gold Mining Co Ltd	AQ	HAR SJ	South Africa	Leadership (A)
HeidelbergCement AG	NR	HEI GR	Germany	Failure to disclose (F)
Hitachi Chemical Company, Ltd.	AQ RV	4217 JP	Japan	Awareness (C)
Hitachi Metals, Ltd.	AQ (NP)	5486 JP	Japan	Awareness (C)
Holmen	AQ	HOLMB SS	Sweden	Management (B-)
HudBay Minerals Inc.	AQ RV	HBM CN	Canada	Management (B-)
Hyosung Corporation	NR	004800 KS	South Korea	Failure to disclose (F)
Hyundai Steel Co	AQ	004020 KS	South Korea	Leadership (A-)
IAMGOLD Corporation	AQ	IMG CN	Canada	Management (B)
Iberpapel Gestión	NR	IBG SM	Spain	Failure to disclose (F)
Iluka Resources	NR	ILU AU	Australia	Failure to disclose (F)
Imerys	AQ	NK FP	France	Awareness (C)
Impala Platinum Holdings	AQ	IMP SJ	South Africa	Management (B)
Incitec Pivot	AQ	IPL AU	Australia	Awareness (C)
International Flavors & Fragrances Inc.	AQ (NP)	IFF US	USA	Management (B)
International Paper Company	DP	IP US	USA	Failure to disclose (F)
James Hardie Industries	AQ (NP)	JHX AU	Ireland	Management (B-)
JFE Holdings, Inc.	NR	5411 JP	Japan	Failure to disclose (F)
Johnson Matthey	AQ	JMAT LN	United Kingdom	Management (B)
JSR Corporation	AQ RV	4185 JP	Japan	Not scored
K + S AG	DP	SDF GR	Germany	Failure to disclose (F)
KARDEMİR KARABÜK DEMİR ÇELİK SANAYİ VE TİCARET A.Ş.	DP	KRDMD TI	Turkey	Failure to disclose (F)
KARTONSAN KARTON SANAYİ VE TİCARET A.Ş.	DP	KARTN TI	Turkey	Failure to disclose (F)
KAZ Minerals	AQ	KAZ LN	United Kingdom	Awareness (C)
KGHM Polska Miedź S.A.	NR	KGH PW	Poland	Failure to disclose (F)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
Kingsgate Consolidated	NR	KCN AU	Australia	Failure to disclose (F)
Kinross Gold Corporation	NR	K CN	Canada	Failure to disclose (F)
Klabin S/A	AQ RV	KLBN4 BZ	Brazil	Management (B)
Kobe Steel., Ltd.	AQ RV	5406 JP	Japan	Awareness (C)
Koninklijke DSM	DP	DSM NA	Netherlands	Failure to disclose (F)
KONYA ÇİMENTO SANAYİİ A.Ş.	NR	KONYA TI	Turkey	Failure to disclose (F)
Korea Zinc Co Ltd	NR	010130 KS	South Korea	Failure to disclose (F)
KOZA ALTIN İŞLETMELERİ A.Ş.	NR	KOZAL TI	Turkey	Failure to disclose (F)
Kumba Iron Ore	AQ	KIO SJ	South Africa	Leadership (A)
Kuraray Co., Ltd.	NR	3405 JP	Japan	Failure to disclose (F)
LafargeHolcim Ltd	NR	LHN VX	Switzerland	Failure to disclose (F)
LANXESS AG	NR	LXS GR	Germany	Failure to disclose (F)
Lee & Man Paper Manufacturing	NR	2314 HK	Hong Kong	Failure to disclose (F)
LG Chem Ltd	AQ	051910 KS	South Korea	Management (B)
Linde AG	AQ (NP)	LIN GR	Germany	Management (B-)
Lonmin	AQ RV	LMI LN	United Kingdom	Management (B)
Lotte Chemical Corp	NR	011170 KS	South Korea	Failure to disclose (F)
Lynas Corporation	AQ (NP)	LYC AU	Australia	Management (B-)
LyondellBasell Industries Cl A	NR	LYB US	USA	Failure to disclose (F)
Mahindra Sanyo Special Steel Pvt. Ltd	AQ RV	0821582D IN	India	Not scored
Martin Marietta Materials, Inc.	NR	MLM US	USA	Failure to disclose (F)
Medusa Mining	NR	MML AU	Australia	Failure to disclose (F)
Metsä Board	AQ	METSB FH	Finland	Leadership (A)
Miquel Y Costas	AQ (NP)	MCM SM	Spain	Management (B-)
Mitsubishi Chemical Holdings Corporation	AQ (NP)	4188 JP	Japan	Management (B)
Mitsubishi Materials Corporation	AQ	5711 JP	Japan	Management (B)
Mitsui Chemicals, Inc.	AQ (NP) (L)	4183 JP	Japan	Not scored
Mondi Limited	AQ (SA)	MND SJ	South Africa	Not scored
Mondi PLC	AQ	MNDI LN	United Kingdom	Management (B)
Monsanto Company	AQ (L)	MON US	USA	Not scored
Nampak Ltd	NR	NPK SJ	South Africa	Failure to disclose (F)
New Gold Inc.	AQ (L)	NGD CN	Canada	Not scored
Newcrest Mining	AQ (L)	NCM AU	Australia	Not scored
Newmont Mining Corporation	AQ	NEM US	USA	Management (B)
Nine Dragons Paper Holdings	NR	2689 HK	Hong Kong	Failure to disclose (F)
Nippon Paint Co., Ltd.	NR	4612 JP	Japan	Failure to disclose (F)
Nippon Paper Industries Co Ltd	AQ (NP)	3863 JP	Japan	Disclosure (D)
Nippon Steel & Sumitomo Metal Corporation	AQ (NP)	5401 JP	Japan	Disclosure (D-)
Nitto Denko Corporation	AQ (NP)	6988 JP	Japan	Awareness (C)
Norsk Hydro	AQ	NHY NO	Norway	Management (B-)
Northam Platinum Ltd	AQ	NHM SJ	South Africa	Management (B)
Novozymes A/S	AQ (NP)	NZYMB DC	Denmark	Disclosure (D)
Nucor Corporation	NR	NUE US	USA	Failure to disclose (F)
Nufarm	NR	NUF AU	Australia	Failure to disclose (F)
Oji Holdings Corporation	AQ (NP)	3861 JP	Japan	Management (B)
OMNIA HOLDINGS LTD	AQ	OMN SJ	South Africa	Leadership (A-)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
Orica	NR	ORI AU	Australia	Failure to disclose (F)
Orora	AQ (NP)	ORA AU	Australia	Management (B-)
Owens-Illinois	AQ	OI US	USA	Awareness (C)
PanAust	AQ RV	PNA AU	Australia	Management (B)
PETKİM PETROKİMYA HOLDİNG A.Ş.	NR	PETKM TI	Turkey	Failure to disclose (F)
Petropavlovsk Plc	NR	POG LN	United Kingdom	Failure to disclose (F)
Polyus Gold	NR	PGIL LN	Russia	Failure to disclose (F)
POSCO	AQ	005490 KS	South Korea	Management (B)
Potash Corporation of Saskatchewan Inc.	AQ RV	POT CN	Canada	Management (B-)
PPC Ltd	NR	PPC SJ	South Africa	Failure to disclose (F)
PPG Industries, Inc.	AQ (NP)	PPG US	USA	Awareness (C)
Praxair, Inc.	AQ (NP)	PX US	USA	Awareness (C)
PTT Global Chemical	AQ RV	PTTGC TB	Thailand	Management (B)
Ramelius Resources	NR	RMS AU	Australia	Failure to disclose (F)
Randgold Resources	NR	RRS LN	United Kingdom	Failure to disclose (F)
Resolute Forest Products Inc.	AQ RV	RFP US	Canada	Management (B)
Resolute Mining	NR	RSG AU	Australia	Failure to disclose (F)
Rexam	AQ	REX LN	United Kingdom	Management (B)
Rio Tinto	NR	RIO AU	United Kingdom	Failure to disclose (F)
Royal Bafokeng Platinum Ltd	AQ RV	RBP SJ	South Africa	Leadership (A)
Sandfire Resources NL	AQ	SFR AU	Australia	Management (B)
Sappi	DP	SAP SJ	South Africa	Failure to disclose (F)
Saracen Mineral Holdings	NR	SAR AU	Australia	Failure to disclose (F)
Scaw South Africa (pty) Ltd	AQ (NP) RV	0325554D SJ	South Africa	Management (B-)
Sealed Air Corp.	DP	SEE US	USA	Failure to disclose (F)
Semapa - Sociedade de Investimento e Gestao SGPS SA	NR	SEM PL	Portugal	Failure to disclose (F)
Sherwin-Williams Company	AQ	SHW US	USA	Management (B)
Shin-Etsu Chemical Co., Ltd.	AQ (NP)	4063 JP	Japan	Awareness (C)
Sibanye Gold Ltd	NR	SGL SJ	South Africa	Failure to disclose (F)
Sika Services AG	AQ	SIK VX	Switzerland	Disclosure (D)
Silver Lake Resources	NR	SLR AU	Australia	Failure to disclose (F)
Sims Metal Management	AQ RV	SGM AU	Australia	Management (B)
SK Chemicals	NR	006120 KS	South Korea	Failure to disclose (F)
Smurfit Kappa Group PLC	AQ RV	SKG ID	Ireland	Management (B)
SODA SANAYÍ A.Ş.	DP	SODA TI	Turkey	Failure to disclose (F)
Solvay S.A.	AQ	SOLB BB	Belgium	Management (B)
South32	AQ	S32 AU	Australia	Management (B)
Southern Copper Corporation	NR	SCCO US	Peru	Failure to disclose (F)
Stora Enso Oyj	DP	STERV FH	Finland	Failure to disclose (F)
Sumitomo Chemical Co., Ltd.	AQ (NP)	4005 JP	Japan	Disclosure (D)
Sumitomo Metal Mining Co., Ltd.	AQ	5713 JP	Japan	Leadership (A-)
Symrise AG	AQ	SY1 GR	Germany	Leadership (A-)
Syngenta AG	AQ	SYNN VX	Switzerland	Management (B)
Synthomer plc	AQ RV	SYNT LN	United Kingdom	Management (B)
Synthos S.A.	NR	SNS PW	Poland	Failure to disclose (F)
Taiheiyo Cement Corporation	AQ (NP) RV	5233 JP	Japan	Management (B-)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
TANAX, INC.	AQ RV	N/A	Japan	Awareness (C)
Tata Chemicals	AQ RV	TTCH IN	India	Management (B-)
Tata Steel	AQ RV	TATA IN	India	Management (B)
Teck Resources Limited	AQ	TCK/B CN	Canada	Management (B)
The Dow Chemical Company	AQ (NP)	DOW US	USA	Management (B-)
The Mosaic Company	AQ (NP)	MOS US	USA	Leadership (A-)
thyssenkrupp AG	AQ (NP)	TKA GR	Germany	Management (B-)
Titan Cement	NR	TITK GA	Greece	Failure to disclose (F)
Toray Industries, Inc.	DP	3402 JP	Japan	Failure to disclose (F)
Troy Resources	NR	TRY AU	Australia	Failure to disclose (F)
Umicore	DP	UMI BB	Belgium	Failure to disclose (F)
UPM-Kymmene Corporation	AQ	UPM1V FH	Finland	Leadership (A-)
Vale	AQ	VALE3 BZ	Brazil	Management (B)
Voestalpine AG	DP	VOE AV	Austria	Failure to disclose (F)
Vulcan Materials Company	NR	VMC US	USA	Failure to disclose (F)
WestRock Company	DP	WRK US	USA	Failure to disclose (F)
Yara International ASA	NR	YAR NO	Norway	Failure to disclose (F)

Telecommunication Services

AT&T Inc.	AQ RV	T US	USA	Not scored
Sprint Corporation	AQ RV	S US	USA	Not scored

Utilities

Aboitiz Power Corporation	NR	AP PM	Philippines	Failure to disclose (F)
ACCIONA S.A.	AQ RV	ANA SM	Spain	Leadership (A)
AGL Energy	NR	AGL AU	Australia	Failure to disclose (F)
AGL Resources	NR	AGL US	USA	Failure to disclose (F)
AKENERJİ ELEKTRİK ÜRETİM A.Ş.	AQ RV	AKENR TI	Turkey	Management (B)
AKSA ENERJİ ÜRETİM A.Ş.	NR	AKSEN TI	Turkey	Failure to disclose (F)
Ameren Corporation	AQ	AEE US	USA	Management (B)
American Electric Power Company, Inc.	AQ	AEP US	USA	Management (B)
APA Group	DP	APA AU	Australia	Failure to disclose (F)
AusNet Services	NR	AST AU	Australia	Failure to disclose (F)
AYGAZ A.Ş.	NR	AYGAZ TI	Turkey	Failure to disclose (F)
Calpine Corporation	NR	CPN US	USA	Failure to disclose (F)
Celsia SA ESP	AQ RV	CELSIA CB	Colombia	Management (B-)
CenterPoint Energy, Inc.	NR	CNP US	USA	Failure to disclose (F)
Centrica	AQ	CNA LN	United Kingdom	Leadership (A)
CEZ	NR	CEZ CP	Czech Republic	Failure to disclose (F)
Cheung Kong Infrastructure Holdings	NR	1038 HK	Hong Kong	Failure to disclose (F)
Chubu Electric Power Co., Inc.	DP	9502 JP	Japan	Failure to disclose (F)
CLP Holdings Limited	AQ (NP) (L)	2 HK	Hong Kong	Management (B)
CMS Energy Corporation	AQ	CMS US	USA	Management (B)
Colbun SA	AQ (NP) RV	COLBUN CI	Chile	Management (B-)
Companhia Energetica Minas Gerais - CEMIG	AQ RV	CMIG3 BZ	Brazil	Management (B)
Consolidated Edison, Inc.	DP	ED US	USA	Failure to disclose (F)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
CPFL Energia SA	AQ	CPFE3 BZ	Brazil	Management (B)
Dominion Resources, Inc.	AQ	D US	USA	Management (B)
Drax Group	DP	DRX LN	United Kingdom	Failure to disclose (F)
DTE Energy Company	AQ	DTE US	USA	Management (B-)
Duet Group	NR	DUE AU	Australia	Failure to disclose (F)
Duke Energy Corporation	DP	DUK US	USA	Failure to disclose (F)
E.ON SE	AQ	EOAN GR	Germany	Management (B)
EDF	AQ	EDF FP	France	Management (B)
Edison International	NR	EIX US	USA	Failure to disclose (F)
EDP - Energias de Portugal S.A.	AQ	EDP PL	Portugal	Management (B)
EDP Renováveis SA	NR	EDPR PL	Spain	Failure to disclose (F)
Electric Power Development Co.,Ltd (J-POWER)	DP	9513 JP	Japan	Failure to disclose (F)
ENAGAS	AQ	ENG SM	Spain	Management (B-)
Endesa	AQ	ELE SM	Spain	Leadership (A-)
ENEA S.A.	NR	ENA PW	Poland	Failure to disclose (F)
Enel Green Power SpA	AQ (SA)	EGPW IM	Italy	Not scored
ENEL SpA	AQ	ENEL IM	Italy	Management (B)
ENERGA SA	NR	ENG PW	Poland	Failure to disclose (F)
Enersis SA	NR	ENERSIAM CI	Chile	Failure to disclose (F)
ENGIE	AQ	ENGI FP	France	Leadership (A-)
Entergy Corporation	NR	ETR US	USA	Failure to disclose (F)
Eversource Energy	NR	ES US	USA	Failure to disclose (F)
Exelon Corporation	AQ	EXC US	USA	Leadership (A-)
FirstEnergy Corporation	AQ (L)	FE US	USA	Not scored
Fortum Oyj	DP	FUM1V FH	Finland	Failure to disclose (F)
Gas Natural SDG SA	AQ	GAS SM	Spain	Leadership (A-)
Great Plains Energy, Inc.	NR	GXP US	USA	Failure to disclose (F)
GS EPS	NR	N/A	South Korea	Failure to disclose (F)
HK Electric Investments	AQ RV	2638 HK	Hong Kong	Awareness (C)
Hong Kong & China Gas Company Limited	AQ (NP) (L)	3 HK	Hong Kong	Not scored
Iberdrola SA	AQ	IBE SM	Spain	Management (B)
Integrus Holding, Inc.	AQ (SA)	1292813D US	USA	Not scored
Korea District Heating Corp.	AQ (NP)	071320 KS	South Korea	Management (B)
Korea East-West Power	NR	KEWSPO KS	South Korea	Failure to disclose (F)
Korea Electric Power Corp	NR	015760 KS	South Korea	Failure to disclose (F)
Korea Hydro & Nuclear Power Co., Ltd	NR	N/A	South Korea	Failure to disclose (F)
Korea Midland Power	NR	KOMIPO KS	South Korea	Failure to disclose (F)
Korea South-East Power	NR	KOSEPCO KS	South Korea	Failure to disclose (F)
Korea Southern Power	NR	KOSPO KS	South Korea	Failure to disclose (F)
Korea Western Power	NR	KOWEPO KS	South Korea	Failure to disclose (F)
K-water	NR	1275Z KS	South Korea	Failure to disclose (F)
Kyushu Electric Power Co Inc	DP	9508 JP	Japan	Failure to disclose (F)
National Grid PLC	AQ	NG/ LN	United Kingdom	Management (B)
NextEra Energy, Inc.	NR	NEE US	USA	Failure to disclose (F)
NiSource Inc.	AQ	NI US	USA	Disclosure (D)
NRG Energy Inc	AQ	NRG US	USA	Leadership (A-)

Company	Response Status	Ticker	Country HQ	CDP Band and Score
Osaka Gas Co., Ltd.	AQ	9532 JP	Japan	Management (B-)
Pennon Group	AQ RV	PNN LN	United Kingdom	Management (B)
Pepco Holdings, Inc.	AQ (SA)	POM US	USA	Not scored
PG&E Corporation	AQ (L)	PCG US	USA	Not scored
Pinnacle West Capital Corporation	AQ	PNW US	USA	Management (B)
Polska Grupa Energetyczna (PGE) SA	NR	PGE PW	Poland	Failure to disclose (F)
Posco Energy	NR	PSCPWZ KS	South Korea	Failure to disclose (F)
PPL Corporation	DP	PPL US	USA	Failure to disclose (F)
Public Power Corporation SA	NR	PPC GA	Greece	Failure to disclose (F)
Public Service Enterprise Group Inc.	NR	PEG US	USA	Failure to disclose (F)
R.E.E.	NR	REE SM	Spain	Failure to disclose (F)
RWE AG	DP	RWE GR	Germany	Failure to disclose (F)
SCANA Corporation	NR	SCG US	USA	Failure to disclose (F)
Sempra Energy	AQ	SRE US	USA	Management (B)
SK E&S	NR	SKECLZ KS	South Korea	Failure to disclose (F)
Snam S.P.A	AQ	SRG IM	Italy	Leadership (A-)
Spark Infrastructure Group	NR	SKI AU	Australia	Failure to disclose (F)
SSE	AQ	SSE LN	United Kingdom	Management (B)
Suez	DP	SEV FP	France	Failure to disclose (F)
TAURON Polska Energia S.A.	NR	TPE PW	Poland	Failure to disclose (F)
TECO Energy, Inc.	NR	TE US	USA	Failure to disclose (F)
Terna	DP	TRN IM	Italy	Failure to disclose (F)
The AES Corporation	AQ (NP)	AES US	USA	Management (B)
The Chugoku Electric Power Company	NR	9504 JP	Japan	Failure to disclose (F)
The Kansai Electric Power Co., Inc.	NR	9503 JP	Japan	Failure to disclose (F)
The Southern Company	NR	SO US	USA	Failure to disclose (F)
The Tokyo Electric Power Company Holdings, Inc (TEPCO)	AQ	9501 JP	Japan	Leadership (A-)
Tohoku Electric Power Co., Inc.	NR	9506 JP	Japan	Failure to disclose (F)
Tokyo Gas Co., Ltd.	NR	9531 JP	Japan	Failure to disclose (F)
Tractebel Energia SA	AQ (SA)	EGIE3 BZ	Brazil	Not scored
VEOLIA	DP	VIE FP	France	Failure to disclose (F)
WEC Energy Group	AQ	WEC US	USA	Awareness (C)
Xcel Energy Inc.	AQ (L)	XEL US	USA	Not scored
ZORLU ENERJİ ELEKTRİK ÜRETİM A.Ş.	NR	ZOREN TI	Turkey	Failure to disclose (F)

Appendix V

Investor signatories

643 financial institutions with assets of US\$67 trillion were signatories to CDP's 2016 water questionnaire, dated February 1st 2016.

Key: 2016 Water members in blue and bold

CDP provides investors with critical environmental data infrastructure to integrate sustainability within the investment process. As a CDP investor signatory or member, you will gain free access to the world's largest database of climate change, water and forest risk commodity information on thousands of disclosing companies.

3Sisters Sustainable Management LLC
 AB
 Aberdeen Asset Management
ABRAPP - Associação Brasileira das Entidades
 Fechadas de Previdência Complementar
 Achmea BV
ACTIAM
 Active Earth Investment Management
 Acuity Investment Management
 Addenda Capital Inc.
 AEGON-INDUSTRIAL Fund Management Co., Ltd
 AGF Investment Inc.
 AK PORTFÖY YÖNETİMİ A.Ş.
 Alberta Investment Management Corporation (AIMCo)
 Alberta Teachers Retirement Fund
 Alecta
 Align Impact LLC
 Alliance Trust
Allianz Global Investors
 Allianz Group
 Alquity Investment Management Ltd
 Altira Group
 AMF
 AmpegaGerling Investment GmbH
 Amundi AM
 ANBIMA – Associação Brasileira das Entidades dos
 Mercados Financeiro e de Capitais
 Antera Gestão de Recursos S.A.
 APG Group
 Appleseed Fund
 Apsara Capital LLP
 Arabesque Asset Management
 Arisaig Partners
 Arjuna Capital
 ASM Administradora de Recursos S.A.
 ASN Bank
 Assicurazioni Generali Spa
 ATI Asset Management
 Atlantic Asset Management Pty Ltd

Ausbil Investment Management
 Australian Ethical Investment
 AustralianSuper
 Avaron Asset Management AS
Aviva Investors
Aviva plc
 BAE Systems Pension Scheme
 Baillie Gifford & Co.
 BaltCap
 Banco Bradesco S/A
 Banco BTG Pactual SA
 Banco Comercial Português SA
 Banco da Amazônia S.A.
 Banco do Brasil Previdência
 Banco do Brasil S/A
 Banco Popular Espanol S.A.
 Banco Sabadell
 Banco Santander
 Banesprev – Fundo Banespa de Seguridade Social
 Bank J. Safra Sarasin AG
Bank of America
 Bankhaus Schelhammer & Schattera AG
 Bankinter
 Banque Libano-Française
 Barclays
 Basellandschaftliche Kantonalbank
 BASF Sociedade de Previdência Complementar
 Baumann and Partners S.A.
 Bayern LB
 BayernInvest Kapitalanlagegesellschaft mbH
 BBC Pension Trust Ltd
 BBVA
 Becker College
 Bedfordshire Pension Fund
 Beetle Capital
 Bentall Kennedy
 Berenberg Bank
 BioFinance Administração de Recursos de Terceiros
 Ltda
 Blom Investment Bank
 Blumenthal Foundation
 BM&FBOVESPA
 BMO Global Asset Management
 BNP Paribas Investment Partners
Boston Common Asset Management, LLC
BP Investment Management Limited
 Brasilprev Seguros e Previdência S/A.
 Breckinridge Capital Advisors
 British Airways Pensions
British Columbia Investment Management Corporation
 Brown Advisory
 BSW Wealth Partners
 BT Financial Group
 BT Investment Management
 CAAT Pension Plan
 Cadiz Holdings Limited
 CAI Corporate Assets International AG
 Caisse de dépôt et placement du Québec
 Caisse des Dépôts

Caixa de Previdência dos Funcionários do Banco do
 Nordeste do Brasil (CAPEF)
 Caixa Econômica Federal
 Caixa Geral de Depósitos
 Caja de Ingenieros
California Public Employees' Retirement System (CalPERS)
California State Teachers' Retirement System (CalSTRS)
 California State Treasurer
 California State University, Northridge Foundation
Calvert Investment Management, Inc
 Canada Pension Plan Investment Board (CPPIB)
 Canadian Labour Congress Staff Pension Fund
 Candriam Investors Group
 CAPESESP
 Capital Innovations, LLC
Capricorn Investment Group
 CareSuper
 Caser Pensiones E.G.F.P
 Cathay Financial Holding
 Catherine Donnelly Foundation
Catholic Super
 CBRE Group, Inc.
 Cbus Superannuation Fund
CCLA Investment Management Ltd
 CDF Asset Management
 Cedrus Asset Management
 Celeste Funds Management
 Central Finance Board of the Methodist Church
 CERES-Fundação de Seguridade Social
 Change Investment Management
 Christian Brothers Investment Services Inc.
 Christian Super
 Christopher Reynolds Foundation
 Church Commissioners for England
 Church of England Pensions Board
 Cleantech Invest AG
ClearBridge Investments
 CM-CIC Asset Management
 Columbia Threadneedle Investments
 Comgest
 Comité syndical national de retraite Bâtirent
 Commlnsure
 Commonwealth Bank of Australia
 Commonwealth Superannuation Corporation
 Compton Foundation, Inc.
 Confluence Capital Management LLC
 Connecticut Retirement Plans and Trust Funds
 Conser Invest
 Crayna Capital, LLC
 Credit Agricole
 CTBC Financial Holding Co., Ltd
 Cultura Bank
 Daegu Bank
 Daesung Capital Management
 Daiwa Securities Group Inc.
 Dana Investment Advisors
 de Pury Pictet Turrettini & Cie S.A.
 Degroof Petercam
 DekaBank Deutsche Girozentrale

Delta Lloyd Asset Management
Demeter Partners
Deutsche Bank AG
Development Bank of Japan Inc.
DIP - Danske civil- og akademiingenjører
Pensionskasse
DLM INVISTA ASSET MANAGEMENT S/A
DNR Capital
Domini Social Investments LLC
Dongbu Insurance
DoubleDividend Management BV
Doughty Hanson & Co.
Earth Capital Partners LLP
East Capital AB
Ecofi Investissements - Groupe Credit Cooperatif
Ecofin Limited
EdenTree Investment Management
Edward W. Hazen Foundation
EEA Group Ltd
EGAMO
Eko
Ekobanken - Din Medlemsbank
Elan Capital Partners
Element Investment Managers
ELETRA - Fundação Celg de Seguros e Previdência
Elo Mutual Pension Insurance Company
Environment Agency Pension fund
Environmental Investment Services Asia
Epworth Investment Management
Equilibrium Capital Group
equinet Bank AG
Erik Penser Fondkommission
Erste Asset Management
Erste Group Bank AG
Essex Investment Management Company, LLC
ESSSuper
Ethos Foundation
Etica SGR
Eureka Funds Management
Eurizon Capital SGR S.p.A.
Evangelical Lutheran Church in Canada Pension Plan for Clergy and Lay Workers
Evangelical Lutheran Foundation of Eastern Canada
Evangelisch-Luth. Kirche in Bayern
FACEB – Fundação de Previdência dos Empregados da CEB
FAELCE – Fundacao Coelce de Seguridade Social
FAPERS- Fundação Assistencial e Previdenciária da Extensão Rural do Rio Grande do Sul
Federal Finance
Fédérés Gestion d'Actifs
FIDURA Capital Consult GmbH
FIM Asset Management Ltd
FIM Services
Finance S.A.
Financiere de l'Echiquier
FIPECq - Fundação de Previdência Complementar dos Empregados e Servidores da FINEP, do IPEA, do CNPq
First Affirmative Financial Network
First Commercial Bank
First State Superannuation Scheme

First Swedish National Pension Fund (AP1)
Firststrand Limited
Florida State Board of Administration (SBA)
Folketrygdfondet
Folksam
Fondation de Luxembourg
Fondo Pegaso
Fondo Pensione Gruppo Intesa Sanpaolo - FAPA
Fonds de Réserve pour les Retraites – FRR
Formuesforvaltning AS
Foundation North
FRANKFURT-TRUST Investment Gesellschaft mbH
Friends Fiduciary Corporation
Fukoku Capital Management Inc
FUNCEF - Fundação dos Economizários Federais
Fundação AMPLA de Seguridade Social - Brasileiros
Fundação Atlântico de Seguridade Social
Fundação Attilio Francisco Xavier Fontana
Fundação Banrisul de Seguridade Social
Fundação Chef de Assistência e Seguridade Social – Fachesf
Fundação Corsan - dos Funcionários da Companhia Riograndense de Saneamento
Fundação de Assistência e Previdência Social do BNDES - FAPES
FUNDAÇÃO ELETROBRÁS DE SEGURIDADE SOCIAL - ELETROS
Fundação Itaipu BR - de Previdência e Assistência Social
FUNDAÇÃO ITAUBANCO
Fundação Itaúsa Industrial
Fundação Rede Ferroviária de Seguridade Social – Refer
FUNDAÇÃO SANEPAR DE PREVIDENCIA E ASSISTENCIA SOCIAL FUSAN
Fundação Sistel de Seguridade Social (Sistel)
Fundação Vale do Rio Doce de Seguridade Social - VALIA
FUNDIÁGUA - FUNDAÇÃO DE PREVIDENCIA COMPLEMENTAR DA CAESB
Futuregrowth Asset Management
GameChange Capital LLC
GEAP Fundação de Seguridade Social
Gemway Assets
General Equity Group AG
Generation Investment Management
Genus Capital Management
German Equity Trust AG
Global Forestry Capital S.a.r.l.
Globalance Bank
GLS Gemeinschaftsbank eG
GOOD GROWTH INSTITUT für globale Vermögensentwicklung mbH
Good Super
Government Employees Pension Fund (“GEPP”), Republic of South Africa
GPT Group
Greater Manchester Pension Fund
Green Alpha Advisors
Green Cay Asset Management
Green Century Capital Management

Green Science Partners
GROUPAMA EMEKLİLİK A.Ş.
GROUPAMA SİGORTA A.Ş.
Groupe Crédit Coopératif
GROUPE OFI AM
Grupo Santander Brasil
Gruppo Monte Paschi
Hannon Armstrong Sustainable Infrastructure Capital, Inc
Harbour Asset Management
Harrington Investments, Inc
Hauck & Aufhäuser Asset Management GmbH
Hazel Capital LLP
Healthcare of Ontario Pension Plan (HOOPP)
Helaba Invest Kapitalanlagegesellschaft mbH
Henderson Global Investors
Hermes Fund Managers
HESTA Super
HIP Investor
Holden & Partners
HSBC Fundo de Pensão Multipatrocinado
HSBC Holdings plc
Humanis
Hyundai Marine & Fire Insurance Co., Ltd.
Hyundai Securities Co., Ltd.
IBK Securities
IDBI Bank Ltd
Iguana Investimentos
Illinois State Board of Investment
Ilmarinen Mutual Pension Insurance Company
Impax Asset Management Group plc
Independent Planning Counsel
Industrial Bank of Korea
Industrial Development Corporation
Inflection Point Capital Management
ING Group
Insight Investment Management (Global) Ltd
Instituto Infraero de Seguridade Social - INFRAPREV
Instituto Sebrae De Seguridade Social - SEBRAEPREV
Integre Wealth Management of Raymond James
IntReal KAG
Investec plc
Investing for Good
Irish Life Investment Managers
Itaú Asset Management
Itaú Unibanco Holding S.A.
Jantz Management LLC
Jessie Smith Noyes Foundation
JMEPS Trustees Limited
JOHNSON & JOHNSON SOCIEDADE PREVIDENCIARIA
Johnson Private Wealth Management
JPMorgan Chase & Co.
Jubitz Family Foundation
Jupiter Asset Management
Kagiso Asset Management
Kaiser Ritter Partner Privatbank AG (Schweiz)
KB Kookmin Bank
KBC Asset Management NV
KCPS and Company

KDB Asset Management Co., Ltd.
Kepler Cheuvreux
KEPLER-FONDS KAG
KEVA

KeyCorp

KfW Bankengruppe
Killik & Co LLP
Kiwi Property Group
Kleinwort Benson Investors

KLP

Korea Technology Finance Corporation
KPA Pension
La Banque Postale Asset Management
La Financiere Responsable

Laird Norton Family Foundation
Lampe Asset Management GmbH
LBBW Asset Management Investmentgesellschaft mbH
LD Lønmodtagernes Dyrtdsfond

Legal and General Investment Management

Legg Mason, Inc.

LGT Capital Management Ltd.
LGT Capital Partners
Light Green Advisors, LLC
Limestone Investment Management
Living Planet Fund Management Company S.A.
Lloyds Banking Group
Local Authority Pension Fund Forum
Local Government Super
LocalTapiola (LähiTapiola)
LOGOS PORTFÖY YÖNETİMİ A.Ş.

London Pensions Fund Authority

Lothian Pension Fund
LUCRF Super
Ludgate Investments Limited

Maine Public Employees Retirement System

MainFirst Bank AG
MAMA Sustainable Incubation AG
MAPFRE
Maple-Brown Abbott
Marc J. Lane Investment Management, Inc.
Martin Currie
Maryknoll Sisters
Maryland State Treasurer
Mediobanca
Meeschaert Gestion Privée
Mellon Capital Management
Mendesprev Sociedade Previdenciária
Mercer
Merck Family Fund
Mercy Investment Services, Inc.
Mergence Africa Investments (Pty) Limited
Merseyside Pension Fund
MetallRente GmbH
Metrus – Instituto de Seguridade Social
Metzler Investment GmbH
MFS Investment Management
MFS Investment Management Canada Limited
Midas International Asset Management
Miller/Howard Investments
Mirae Asset Global Investments Co. Ltd.
Mirae Asset Securities

Missionary Oblates of Mary Immaculate
Mistra, The Swedish Foundation for Strategic
Environmental Research
Mitsubishi UFJ Financial Group, Inc.
Mitsui Sumitomo Insurance Co.,Ltd
Mizuho Financial Group, Inc.
MN

Momentum Outcome-based Solutions
Monega Kapitalanlagegesellschaft mbH
Mongeral Aegon Seguros e Previdência S.A.
Montanaro Asset Management Limited

Morgan Stanley

MTAA Superannuation Fund
Nathan Cummings Foundation, The

National Australia Bank

National Bank of Canada
National Grid Electricity Group of the Electricity Supply
Pension Scheme
National Grid UK Pension Scheme
National Pensions Reserve Fund of Ireland
National Union of Public and General Employees
(NUPGE)

Natixis SA

Natural Investments LLC

Nedbank Limited

Needmor Fund

NEI Investments

Nelson Capital Management, LLC
NEST - National Employment Savings Trust

Neuberger Berman

New Alternatives Fund Inc.
New Amsterdam Partners LLC
New Forests
New Mexico State Treasurer
New Resource Bank

New York State Common Retirement Fund (NYSCRF)

Newground Social Investment
Newton Investment Management Limited
NGS Super
NH-CA Asset Management
Nikko Asset Management Co., Ltd.
NN Group NV
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NORD/LB Kapitalanlagegesellschaft AG

Nordea Investment Management

Norfolk Pension Fund

Norges Bank Investment Management (NBIM)

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OceanRock Investments Inc.
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ÖKOWORLD LUX S.A.
OMERS Administration Corporation

Ontario Teachers' Pension Plan
OP Wealth Management
Oppenheim & Co Limited
Opplysningsvesenets fond (The Norwegian Church
Endowment)
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Osmosis Investment Management
Overlook Investments Limited
PAI Partners
Park Foundation
Parnassus Investments
Pax World Funds
PCJ Investment Counsel Ltd.
Pensioenfonds Vervoer
Pension Protection Fund
Pensionsmyndigheten
People's Choice Credit Union
Perpetual Investments
PETROS - Fundação Petrobras de Seguridade Social

PFA Pension

PGGM
Phillips, Hager & North Investment Management Ltd.
PhiTrust Active Investors
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Pioneer Investments
Piper Hill Partners, LLC
PKA

Plato Investment Management
Pluris Sustainable Investments SA
PNC Financial Services Group, Inc.
Porto Seguro S.A.

POSTALIS - Instituto de Seguridade Social dos
Correios e Telégrafos
PREVHAB PREVIDÊNCIA COMPLEMENTAR

PREVI Caixa de Previdência dos Funcionários do Banco do Brasil

PREVIG Sociedade de Previdência Complementar
Previnorte - Fundação de Previdência Complementar
Progressive Asset Management, Inc.
Provincial Rheinland Holding
Prudential Investment Management
Psagot Investment House Ltd
PSP Investments
Q Capital Partners Co. Ltd
QBE Insurance Group

QIC
Quilter Cheviot Asset Management
Quotient Investors LLC
Rabobank Group

Raiffeisen Fund Management Hungary Ltd.
Raiffeisen Kapitalanlage-Gesellschaft m.b.H.
Railpen Investments

Rathbone Greenbank Investments

RBC Global Asset Management

Real Grandeza Fundação de Previdência e Assistência Social

REI Super
Reynders McVeigh Capital Management
River Twice Capital Advisors, LLC

Robeco

RobecoSAM AG

Robert & Patricia Switzer Foundation

Rockefeller Asset Management

Rose Foundation for Communities and the Environment

Rothschild & Cie Gestion Group

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Royal London Asset Management

RREEF Investment GmbH

Ruffer Investment Company

Russell Investments

Sampension KP Livsforsikring A/S

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Service Employees International Union Benefit Funds

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Smith Pierce, LLC

SNW Asset Management

Social(k)

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SouthPeak Investment Management

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Sprucegrove Investment Management Ltd

Standard Chartered

Standard Chartered Korea Limited

Standard Life Investments

Standish Mellon Asset Management

State Street Corporation

StatewideSuper

Stewart Investors

Stockland

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Stratus Group

Superfund Asset Management GmbH

Sustainable Capital

Sustainable Development Capital LLP

Sustainable Insight Capital Management (SICM)

Svenska Handelsbanken

Svenska Kyrkan, Church of Sweden

Svenska Kyrkans Pensionskassa

Swedbank

Swift Foundation

Sycomore Asset Management

Symphonia sgr

Syntrus Achmea Asset Management

T.GARANTİ BANKASI A.Ş.

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Tasplan Super

TD Asset Management (TD Asset Management Inc. and

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Telluride Association

Telstra Super

Terra Alpha Investments LLC

Terra Global Capital, LLC

TerraVerde Capital Management LLC

TfL Pension Fund

The Brainerd Foundation

The Bullitt Foundation

The Central Church Fund of Finland

The Children's Investment Fund Foundation

The Clean Yield Group

The Council of Lutheran Churches

The Daly Foundation

The Joseph Rowntree Charitable Trust

The Korea Teachers Pension

The New School

The Pension Plan For Employees of the Public Service

Alliance of Canada

The Pinch Group

The Russell Family Foundation

The Sandy River Charitable Foundation

The Sisters of St. Ann

The Sustainability Group

The United Church of Canada - General Council

The University of Edinburgh Endowment Fund

The Wellcome Trust

Third Swedish National Pension Fund (AP3)

Thomas Schumann Capital

Tobam

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Toronto Atmospheric Fund

Trillium Asset Management, LLC

Triodos Bank

Tri-State Coalition for Responsible Investment

Trusteam Finance

Turner Investments

UBI Banca

UBS**UBS Global Asset Management**

Union Asset Management Holding AG

Union Investment Privatfonds GmbH

Unionen

UNISON staff pension scheme

UniSuper

Unitarian Universalist Association

Unity College

Universities Superannuation Scheme (USS)

University of California

University of Massachusetts Foundation

University of Toronto

University of Toronto Asset Management Corporation

(UTAM)

University of Washington

Vancity Group of Companies

Veris Wealth Partners

Veritas Pension Insurance

Vexiom Capital, L.P.

VicSuper

Victorian Funds Management Corporation

VIETNAM HOLDING ASSET MANAGEMENT LTD.

Vinva Investment Management

Vision Super

Voigt & Collegen

Vontobel Holding AG

Waikato Community Trust

Walden Asset Management, a division of Boston Trust

& Investment Management Company

WARBURG - HENDERSON Kapitalanlagegesellschaft

für Immobilien mbH

Water Asset Management, LLC

Wespath Investment Management

West Midlands Pension Fund

West Yorkshire Pension Fund

Westfield Capital Management Company, LP

Westpac Banking Corporation

WHEB Asset Management

White Owl Capital AG

Whitley Asset Management

Woori Bank

Xoom Capital

York University

Youville Provident Fund Inc.

Yuanta Financial Holdings

Zevin Asset Management

Zurich Cantonal Bank

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Paul Simpson
Chief Executive Officer

Frances Way
Co-Chief Operating Officer

Sue Howells
Co-Chief Operating Officer

Morgan Gillespy
Head of Water

Orlaith Delargy
Program Manager, Water

James Lott
Senior Program Officer, Water

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Mercer

Jeremy Burke
Green Investment Bank

Jeremy Smith
Disciple Media

Kate Hampton
Children's Investment Fund Foundation

Martin Wise
Relationship Capital Partners

Takejiro Sueyoshi

CDP Advisors

Lord Adair Turner

Rear Admiral Neil Morisetti CB

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Companies

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Organizations

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Scoring partners

EY Korea, FCS, KOSIF, KPMG Japan, RepRisk, South Pole Group and Quick