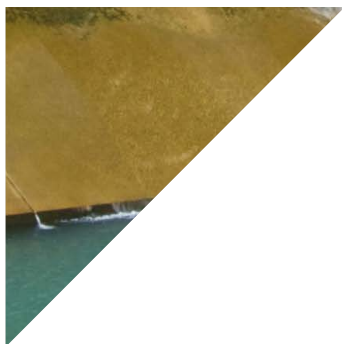


# Accelerating action

## CDP Global Water Report 2015

Written on behalf of 617 investors with US\$63 trillion in assets



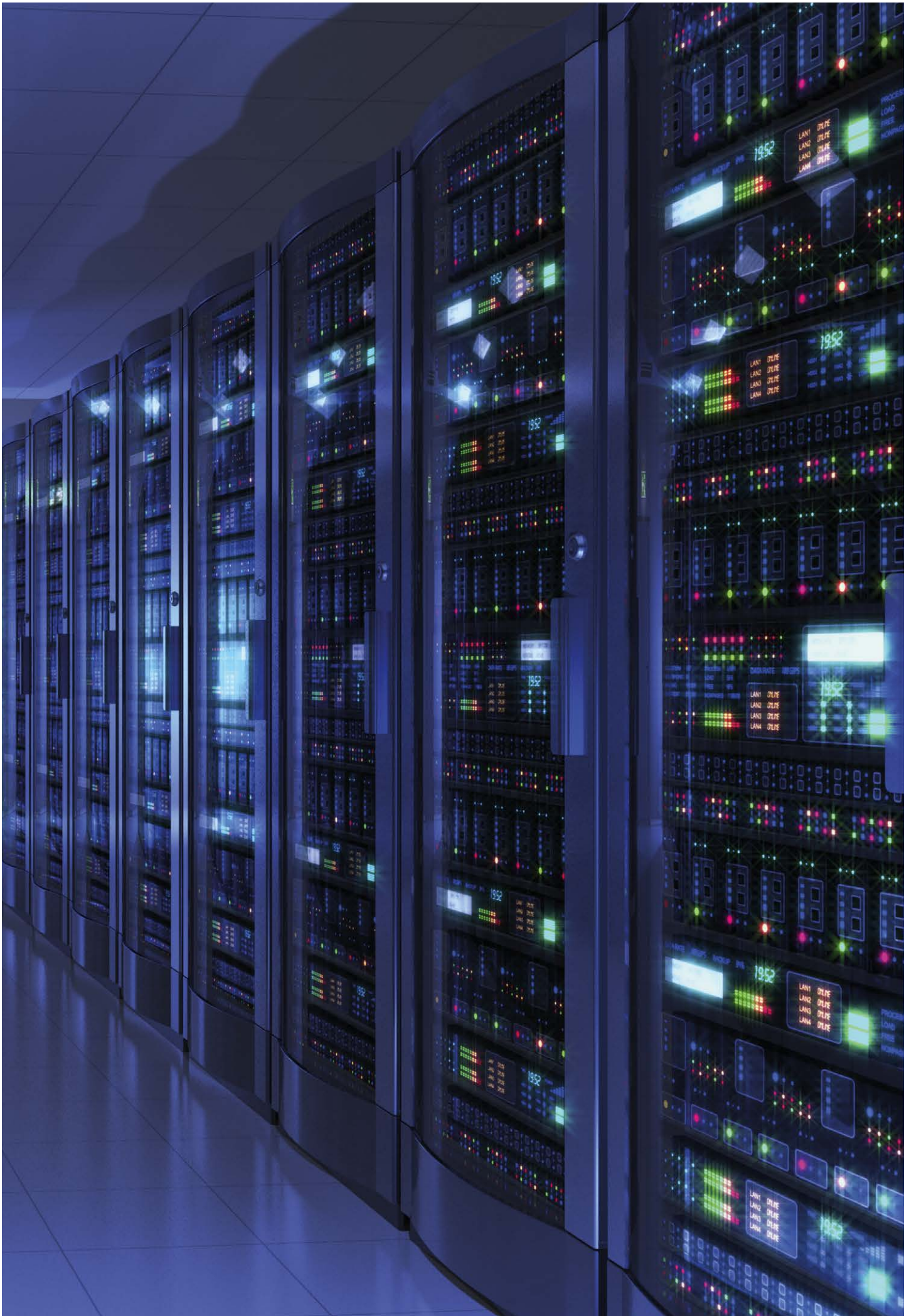
Water scoring partner



**NORGES BANK**  
INVESTMENT MANAGEMENT

Lead sponsor





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To read 2015 company responses in full, please go to  
[www.cdp.net/en-US/Results/Pages/responses.aspx](http://www.cdp.net/en-US/Results/Pages/responses.aspx)

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## CEO foreword

### The future of water security



Our investor signatories are interested in this information because water management presents a financial risk and opportunity to business. This year alone, companies reported detrimental impacts to their businesses from water challenges with a financial value totalling more than US\$2.5 billion.

**CDP was set up almost 15 years ago to serve investors. A small group of 35 institutions, managing US\$4 trillion in assets, wanted to see companies reporting reliable, comprehensive information about environmental risks and opportunities.**

Since then our investor base has grown enormously and the water program, launched in 2010, now represents the interests of 617 investors with US\$63 trillion in assets, and 18 multinational organizations with a combined procurement spend of US\$214 billion. The corporate world has responded positively to their requests for information, with 1,226 companies now disclosing through CDP's water program, generating the world's largest and most comprehensive dataset of publicly available corporate water information.

Our investor signatories are interested in this information because water management presents a financial risk and opportunity to business. This year alone, companies reported detrimental impacts to their businesses from water challenges with a financial value totalling more than US\$2.5 billion. CDP's water information offers valuable insights and this report highlights that companies have made considerable progress over the last five years in tackling these challenges. For the first time we can celebrate CDP's Water A List, which identifies companies that understand that the sustainable management of water is a business imperative and are acting to improve water security. Companies taking this approach are set to be the winners in an increasingly water-insecure world.

Addressing water challenges will create losers as well as winners and for our signatory investors, the insights we provide enables them to take action. They use CDP data to guide shareholder engagement and investment decisions to protect their investment portfolios, rewarding companies that are well positioned to succeed.

This year, in particular, momentum among investors has grown strongly. Nordic financial services group **Nordea** recently partnered with CDP to engage with 33 water-dependent emerging market companies in its Emerging Stars portfolio, to encourage these companies to enhance their resilience and better manage water risk. **Morgan Stanley** used CDP data to produce investment research on water risk in the power generation, copper mining and

food production sectors, identifying strategic water management factors that could lead to best in class financial outperformance in these sectors. And the **Association of Member Nominated Trustees** launched its Red Lines Guidelines, the most significant being that if a company fails to disclose to CDP, investors are advised to vote against the re-election of the chair of the Environmental Sustainability Committee or, in the absence of such a committee, against the re-election of the CEO.

This momentum comes at a crucial and exciting time. We celebrated the release of the new Sustainable Development Goals in September, particularly the increasing recognition of the important implementing role of the private sector, and look forward to COP21, the pivotal UN climate talks, in Paris in December. Both of these high level, intergovernmental meetings feature water stewardship as an instrument to tackle major societal and environmental challenges. Companies taking steps to manage their water use responsibly will find themselves in a strong position to contribute meaningfully to these important developments and realize significant competitive advantage.

Without doubt, improving water security globally is an ambitious undertaking, even with a long-term view. But the actions that companies are already taking show that corporate leaders understand the size of the challenge and the importance of addressing it. It is only through the provision of accurate information, that investors will be able to properly assess risks and opportunities in their portfolios. Progress is being made but there is much more to do to deliver a water secure world.

**Paul Simpson**  
CEO, CDP

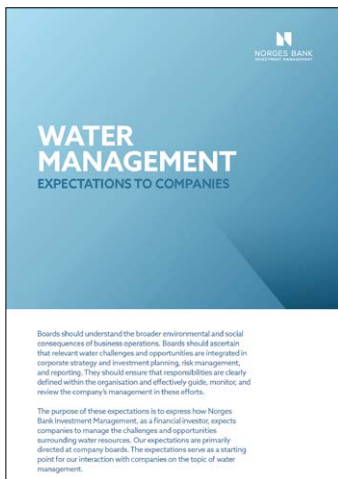


# Investor foreword

## Norges Bank Investment Management



**Norges Bank Investment Management is responsible for investing the assets of the Norwegian Government Pension Fund Global. 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 main 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 fund diversifies its investments globally across a large number of markets and securities. Our responsible investment work is organized along three main pillars; standard setting, ownership, and risk management. Water management has been an area of focus for the fund since 2009.

Water stress is a growing global concern that could challenge countries' economic prospects<sup>1</sup>. How companies manage water risks and opportunities may drive long-term returns. To communicate our perspective as a financial investor, we have established water management expectations. Our expectations are directed at company boards. These have been revised and were published on October 22nd to outline how we expect companies to manage such challenges and opportunities. We expect that boards should incorporate water management into strategy, investment planning, and risk management. We emphasize transparency and disclosure. We use such information to identify how water challenges may affect companies' performance and prospects. We assess, as relevant, whether the company board and management are taking steps to develop a long-term business strategy addressing such challenges. The expectations serve as a starting point for our interaction with companies on the topic of water management.

As an investor, we analyse opportunities and risks to our investments. Data availability and quality is a requirement for this work. We conduct a yearly assessment of water related management for companies in selected sectors. The findings from the assessment are used in the investment process and company dialogue. To increase the transparency and availability of such company information, we have been the lead sponsor of CDP's water program since inception. As CDP Water's sponsor we have provided guidance for how CDP Water can develop water data.<sup>2</sup>

We support initiatives which aim to increase coverage and data quality. As an active manager, granularity in the measurement and reporting at company and site level can contribute to understand the operational business resilience of companies to local water challenges and the relevance of risk mitigation strategies.

Through our work, we have identified challenges, including limited data coverage and lack of consistent reporting. We have therefore initiated several projects with experts and academics to develop non-financial data sets. In 2014 we initiated a project with Columbia University to research and develop non-financial datasets and possible links to financial performance of companies.

We welcome the role that CDP's water program has assumed in providing water related datasets and welcome the release of the 2015 report. We encourage CDP to further develop structured and standardized datasets while being responsive to companies and investors' feedback.

### **William Ambrose**

Global Head of Ownership Strategies, Norges Bank Investment Management

<sup>1</sup> IMF Staff Discussion Note, Is the Glass Half Empty or Half Full? Issues in Managing Water Challenges and Policy Instruments, published June 2015.

<sup>2</sup> <http://www.nbim.no/en/responsibility/submissions/submission-to-carbon-disclosure-project-cdp-water-programme-on-measurement-and-reporting/>

## Executive summary

Stanley Black & Decker uses CDP's water questionnaire and associated education programs and workshops as a framework to assist us in setting strategic and tactical initiatives on water stewardship that will lead to our more responsible use of freshwater resources, and to help ensure the right to water for current and future generations.

Stanley  
Black & Decker

**This year marks the sixth year of CDP's water program. Since its launch a large and growing number of institutional investors have begun using the platform to engage with companies on water exposures and opportunities. While substantial progress has been made in corporate water disclosure, companies' reliance on this precious resource is increasing at a time when water security around the world is worsening.**

This explains why 617 institutional investors, managing US\$63 trillion in assets, have come together through CDP's water program to ask 1,073 publicly listed companies<sup>1</sup> to provide information on how they are prepared for, and adapting to, worsening water security.

This year's 2015 Global Water Report analyzes the 405 companies that responded to their investor's request, offering a snapshot of the current global state of corporate water management. It also takes a deep dive into trends in water management over the last five years among some of the largest companies in the world that have been consistently reporting to the program. The report is intended to help companies that are sensitive to, or have major impacts on, water availability or quality, as well as inform investors and major multinationals about how their portfolio companies and suppliers are managing these risks, and positioning themselves to participate in the water value revolution.

### **The report finds that:**

**Acting to improve water security remains a fundamental business imperative for many companies.** Almost two-thirds of responding companies report exposure to water risk, with reported financial impacts in 2015 totaling more than US\$2.5 billion. Companies face constraints to growth from water scarcity, and changing patterns of consumer behavior are leading to reassessments of corporate strategy. However, some companies are identifying market opportunities from water stewardship. Disclosures to CDP vividly illustrate the compelling business case for action.

**Corporate water stewardship is becoming better understood, and leaders are emerging.** Engaged investors want to see strategic, corporate water stewardship integrated into standard business practice – and leading companies are beginning to do so. The water scoring methodology developed by CDP provides a blueprint for leadership on water issues, and can help companies work towards such leadership. The naming, for the first time, of those 8 companies joining CDP's Water A List will help raise performance across the market.

**Tackling water challenges remains a CSR issue and action is urgently needed to close the gap.** Analysis of responses over five years illustrates considerable progress in water management – but also serious areas of weakness. Supply chain risks, incomplete water risk assessments, a lack of meaningful water policies, and far from universal disclosure, all need to be addressed as a matter of urgency.

**Water stewardship offers clear benefits to at-risk companies.** Transforming business as usual operational approaches to water management into strategic water stewardship efforts reduces risk, enhances strategic preparedness, improves investor appeal and makes businesses more resilient. Through its water program, CDP is supporting companies and investors to take action and confront what is almost certain to be one of the defining environmental challenges of the 21<sup>st</sup> century, to their own benefit and to the benefit of their wider stakeholders.

<sup>1</sup> CDP's water program focuses on the largest companies in the world as determined by the MSCI All Country World Index (ACWI) filtered by those business activities with the ability to impact water resources, including the following Global Industry Classification Standard (GICS) sectors: Consumer Discretionary, Consumer Staples, Energy, Health Care, Industrials, Information Technology, Materials, and Utilities

Respondents that responded to investors request to disclose water related data

38%

Respondents reporting detrimental impacts related to water

27%

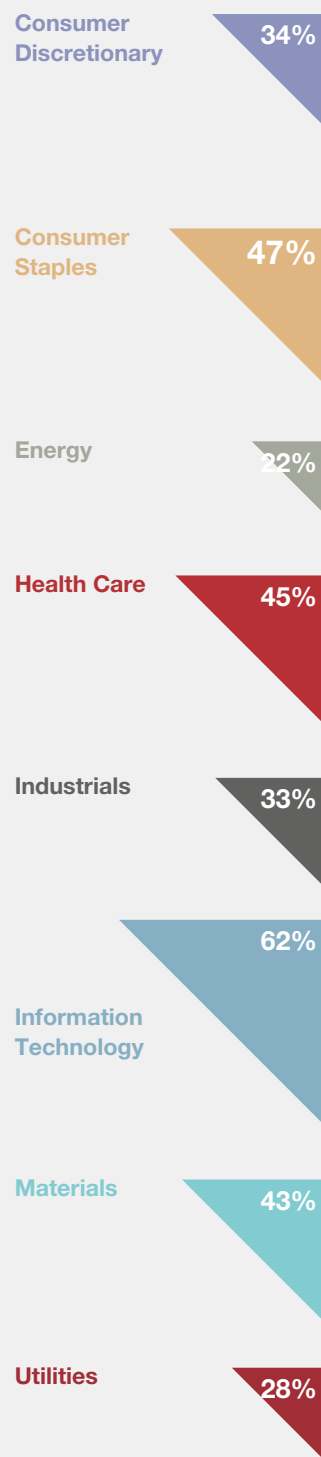
Number of risks reported

3201

Respondents reporting opportunities

73%

Figure 1: Response rate by sector



## An irreplaceable resource

The business case for action

### CDP's water program aims to catalyze action, to ensure that water security – one of the most pressing challenges facing the global economy – is accorded the strategic importance it deserves.

Through its water questionnaire, which outlines a framework for corporate stewardship and its global disclosure system, CDP has built the world's largest database of primary corporate responses to water risk and opportunity.

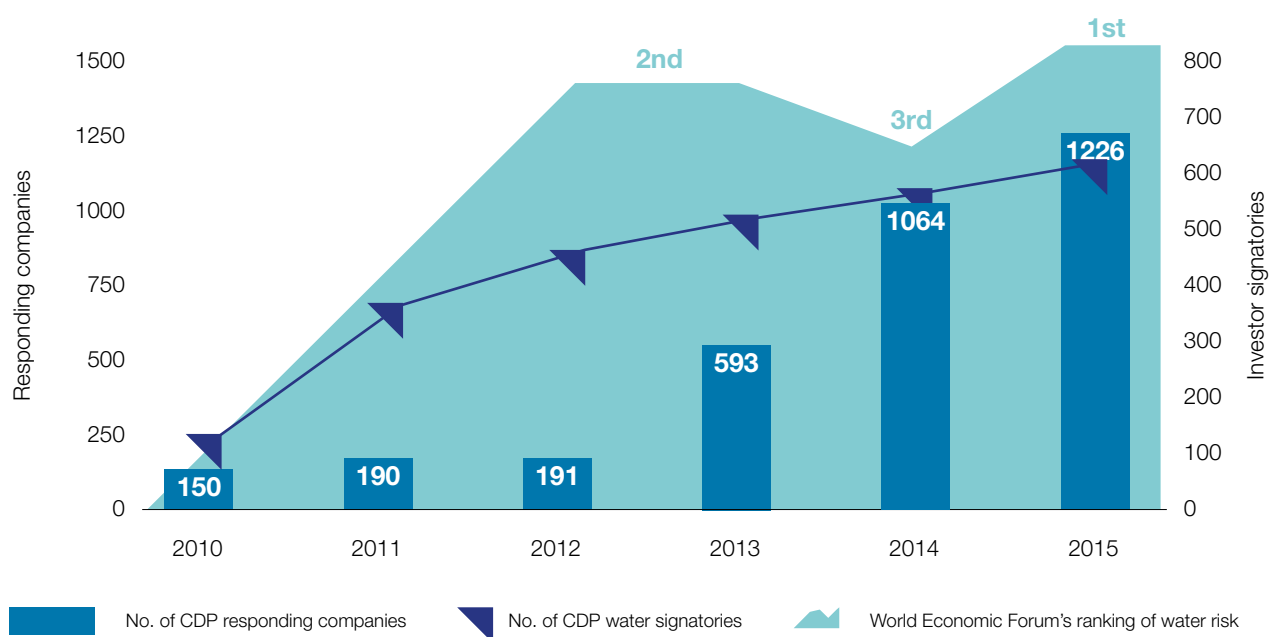
Analysis of this database provides a clear business case for water stewardship. It also highlights how the corporate response to water risk has, thus far, been inadequate and suggests that opportunities for business growth may be overlooked.

Much more needs to be done – particularly in the context of the latest warnings from science, which makes for worrying reading. Thirteen of the world's 37 largest aquifers have been depleted to the point where regional water availability is threatened<sup>2</sup>. Nearly two-thirds of China's groundwater, and a third of its surface water, was rated as unfit for

human contact last year.<sup>3</sup> California, the world's 8th largest economy is now in its fourth year of crippling drought. Despite Brazil's abundance of freshwater, Sao Paulo, its biggest city, is running dry, under the twin pressures of drought and underinvestment.

It comes as no surprise, then, to see water rising to the top of the World Economic Forum's annual risk ranking. While this is the 4th year that the water crises has been listed in the top 10 risks, it is noteworthy that, prior to 2012, it did not feature in the top 20 at all. The situation is very different today – as evidenced by the growing number of companies using CDP to guide their water management efforts.

Figure 2: Growth of CDP's water program and WEF's ranking of water crises



<sup>2</sup> Richey, A. S., B. F. Thomas, M.-H. Lo, J. T. Reager, J. S. Famiglietti, K. Voss, S. Swenson, and M. Rodell (2015), Quantifying renewable groundwater stress with GRACE, *Water Resource. Res.*, 51, 5217–5238, doi:HYPERLINK "http://dx.doi.org/10.1002/2015WR017349" "t "\_blank" "o "Link to external resource: 10.1002/2015WR017349" 10.1002/2015WR017349.

<sup>3</sup> 'More than 60pct of China's underground water rated unfit for human contact,' Reuters, 4 June 2015




  
**The global economy will favor businesses that take a pro-active approach to water stewardship.**

**Eurizon Capital (US\$215 billion)**


These investors are seeking assurance that their investments are well placed to generate favorable returns. They are looking to enhance value creation and avoid value destruction. They are expecting outperformance by championing corporate water stewardship.

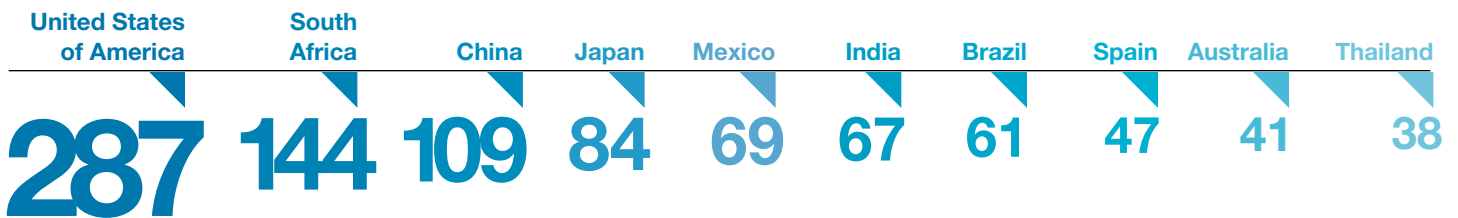
This increase in awareness among business is mirrored in the rise in the number of investors putting their names to the water disclosure request issued by CDP. Among environmental issues, water insecurity is of particular concern to investors. Water risk can manifest itself rapidly, with serious economic impacts.

In June, a warning from the Indian government about the outlook for this year's monsoon contributed to US\$23 billion being wiped off stock prices in less than two days<sup>4</sup>. Portuguese utility **EDP** told investors that the effects of drought on its hydropower-dependent Brazilian operations could amount to a US\$ 167 – 223 million on earnings this year.

Impacts like these are why a growing number of investors are seeking water-related disclosure from companies in which they invest. This year, on their behalf, we asked 1,073 of the world's largest publicly listed companies deemed to have high water vulnerability or impacts to disclose how they are managing these risks and seizing opportunities. This report presents analysis of data from the 405 companies that responded, or 38% of those approached.

Unlike fossil fuels there are no substitutes for water. The Water Resources Group forecasts demand for water to grow by 53% to 40% above current accessible and reliable water supply levels by 2030. The cost of inaction is becoming increasingly evident and the case for transforming business-as-usual corporate management practices remains clear and compelling.

**Figure 3: Number of risks reported by country**



<sup>4</sup> A \$23 billion stock drop shows India's rising water risks, Bloomberg, 17 June, 2015

### The responses to this year's information request underline the business case for action on water security. Companies report widespread risk and material impacts – but they also recognise that water stewardship offers the potential to reduce costs and increase revenues.

# 27%

More than a quarter of respondents have already seen water risk manifest itself as a detrimental impact to their business in the last reporting year.

Almost two-thirds (65%) of the companies that responded to investor requests for information report exposure to substantive water risk. Respondents identified on average, exposure to 8 water risks that could generate a substantive change in business, revenue or operations. A total of 2,413 individual risks were reported in direct operations, and 788 in supply chains, with almost half of all risks (44%) falling within the next three years. Physical risk drivers – increased water scarcity or stress – were the most commonly cited, although regulatory risk in the form of higher water prices was frequently mentioned.

Just 109 companies reported more than 267 impacts, with higher operating expenditure the most commonly named, followed by plant or production disruption leading to reduced output.

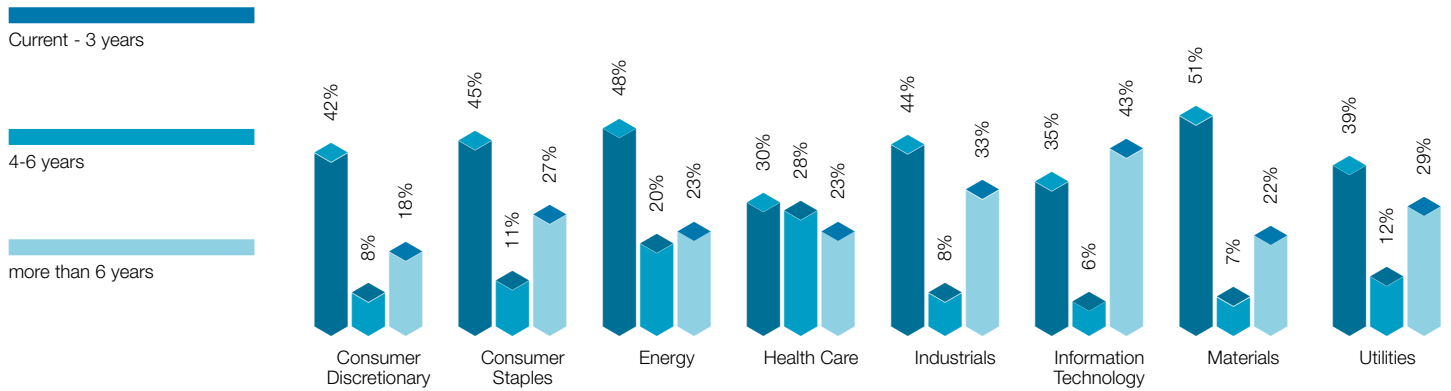
Some of these impacts run to the hundreds of millions of dollars. For example, Canadian energy company **Enbridge Inc.** this year reports estimated total clean-up costs of US\$725 million, approximately 2% of total revenue in 2014<sup>6</sup>, following a leak of crude oil into two rivers in Canada from one of its pipelines.

In 2014 alone, the company invested US\$1.2 billion in system integrity and leak detection programs in the US and Canada.

French utilities giant **ENGIE** reports a reduction in revenue resulting from the ongoing drought in Brazil; in 2014, the financial impact of the unfavorable hydrology was reported to cost the organization approximately US\$ 223 million, almost 3% of operating income<sup>7</sup> in 2014. Canadian energy company **Suncor Energy Inc.** reports potential capital expenditure and operation costs of US\$165 million to meet tighter regulatory requirements on refinery wastewater discharges, about 2.5% of 2014 capital expenditure<sup>8</sup>.

That these impacts are occurring in the energy sector, which has seen rates of disclosure fall to just one-third of potential exposed companies this year, is of particular concern and is explored in more detail in the Sector Summaries.

**Figure 4: Expected timeframe for risks to materialize (% of risks reported)**



**Figure 5: Sectors most exposed to substantive water risk**



Consumer Discretionary - 56%  
 Consumer Staples - 82%  
 Energy - 65%  
 Health Care - 55%  
 Industrials - 56%  
 Information Technology - 65%  
 Materials - 65%  
 Utilities - 75%

**Figure 6: Sectors most impacted by water in reporting period**



Consumer Discretionary - 16%  
 Consumer Staples - 43%  
 Energy - 43%  
 Health Care - 17%  
 Industrials - 20%  
 Information Technology - 5%  
 Materials - 35%  
 Utilities - 36%

For our consumers a lack of access to water is likely to result in a change of behavior such as reduced showering and clothes washing. It is likely that continued drought will further impact on our sales in personal care and homecare categories. It is not clear how long the drought will last in the region, but through long-term energy and water infrastructure we are preparing our operations for a new norm.

Unilever

**Some of these impacts threaten to constrain growth.**

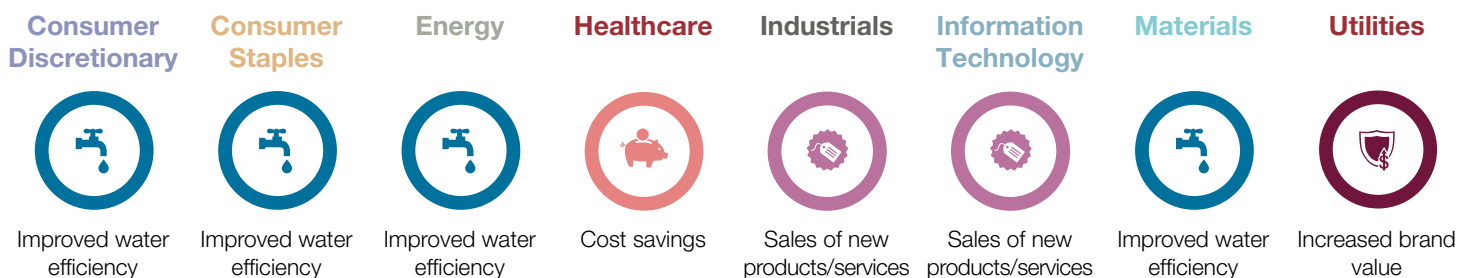
Water constraints at resources giant **Anglo-American Plc.’s** Los Bronces copper mine in Chile have led to “a material decrease in production”, the company says. **Waste Management Inc.** warns the severe drought in the southwest of the US threatens to hit the operational bottom line of facilities in the region. And **Unilever** warns that its operations in Brazil are likely to face requirements to reduce their power use, due to the effect of drought on hydropower production. Similarly, it fears its local consumers will have to change their behavior in response to long-term drought, with less washing translating into less demand for Unilever’s products – perhaps leading to ‘new norms’ in terms of consumer behavior.

While water stewardship may come at a price, it also promises opportunities to cut costs or increase revenues. No fewer than 73% of responding companies report that water offers operational, strategic, or market opportunities with many sectors reporting significant business opportunities to be realized in the next three years.

**These opportunities include:**

- Increased sales of goods and services such as those anticipated by pharmaceutical giant **Pfizer Inc.**, automobile parts and equipment maker **Johnson Controls**, and aerospace and defense company **Lockheed Martin Corporation** which report investing in new renewable energy offers including ocean thermal energy conversion (OTEC), wave and tidal power and waste-to-energy generation;
- Cost savings such as those reported by Swedish lock manufacturer **Assa Abloy** subsidiary **Mul-T-Lock**, drinks company **Anheuser Busch InBev** and hotel chain **Marriott International, Inc.** all of which report savings through water efficiency measures including improved water management (reduced consumption, increased efficiency) and the implementation of new technologies; and
- Supply chain resilience as pharma company **GlaxoSmithKline**, food producer **Tongaat Hulett Ltd** and paper product producer **Holmen Paper Madrid**, working with the local water supplier, developed advanced technology to use treated municipal wastewater in their mills and consequently become the first mill in Europe to manufacture paper based entirely on “recovered water.”

Figure 7: Top reported opportunities by sector





## Engaging supply chains on water stewardship

Launched as a pilot in 2013, CDP's supply chain water program enables multinational purchasing organizations to engage with suppliers on water stewardship efficiently and effectively. Members of CDP's supply chain program identify risks and opportunities, build capacity and ensure corporate water stewardship is delivered throughout the supply chain, often delivering increased business resilience and cost savings.

The program has experienced consistent growth, both in terms of the number of purchasing organizations (members) asking their suppliers to respond through CDP (up to 18 in 2015, from 4 in 2013) and the number of suppliers responding (up to 826 in 2015, from 229 in 2013).

Data is of critical importance to Members, and the manner in which they utilize supplier response data varies. Many Members incorporate this data on company websites, feature it in their corporate reports and work with suppliers to drive stewardship. For example, founding Member **L'Oreal** incorporates CDP's water data into individual supplier scorecards, which are used to inform discussions between procurement professionals and suppliers. Founding Member **Dell** informs their suppliers that "failure to meet (disclosure) requirements can impact their ranking and potentially diminish their ability to compete for Dell's business." Finally, other Members use data to explore collaborative projects reported by suppliers. In 2015 suppliers linked 34 projects on water management as a direct result of customer engagement through CDP.



**Allergan's response to CDP's water program has facilitated company-wide dialogue to drive continuously strong target-setting for water use. Allergan has now developed a ten-year vision to reduce water consumption by 50% across all of its operations by 2020.**

**Allergan**





An aerial photograph of terraced rice fields. The terraces are filled with water, reflecting the sky. A farmer is walking along a narrow path between the terraces, carrying a large basket on their shoulder. The fields are surrounded by lush green vegetation.

# CDP's Water A List





# A List leaders

## **CONSUMER DISCRETIONARY**

Ford Motor Company (USA)

Toyota Motor Corporation (Japan)

## **CONSUMER STAPLES**

Asahi Group Holdings, Ltd (Japan)

Colgate Palmolive Company (USA)

## **INFORMATION TECHNOLOGY**

Rohm Co., Ltd. (Japan)

## **MATERIALS**

Harmony Gold Mining Co Ltd (South Africa)

Kumba Iron Ore (South Africa)

Metsä Board (Finland)



## CDP's Water A List

### Defining leadership

Our analysis illustrates that water can be a significant driver for innovative growth but can also be a source of substantial business failure. Given the complex nature of water risks, business-as-usual operational approaches to water management may no longer be fit for purpose. A growing number of companies are recognizing that they may need to transform their approaches if they are to meet the challenge of water security and remain competitive.

What engaged investors want to see, and what leading companies are beginning to implement, are integrated, strategic, business plans that factor in water stewardship. The effective mitigation of corporate water risk and realization of opportunity involves not only an understanding of a company's water dependency, but the context in which it operates, and how this relates to other water users.

In 2013, CDP embarked on the development of a water scoring methodology that enables us to deepen the support we provide to responding companies and investors as they work to transform current standards of corporate water management to meaningful stewardship. This year, for the first time, CDP has applied this methodology across all responding companies. Of these, 8 companies have achieved an 'A' rating, joining CDP's Water A List.

Our approach, informed by insights gained from CDP's corporate water dataset as well as a range of stakeholders including the **Alliance for Water Stewardship**, the **UN CEO Water Mandate**, **Ceres**, the **World Resources Institute**, and **WWF**, assessed companies against a range of water stewardship actions which seek to establish best practice. **By scoring companies' water stewardship efforts, and recognizing leading companies, we aim to raise the market beyond where it would otherwise be on water issues.**

**The results have been used to benchmark corporate water performance, to help companies and their investors better understand the strengths and weaknesses of their water management. It is our intention that companies use this methodology to navigate their responses to improved water security and by investors and purchasers to identify those companies most likely to succeed in a water insecure future.**

**A comprehensive view of our benchmarking criteria can be found in CDP's Water Scoring Methodology available via CDP's website: [www.cdp.net](http://www.cdp.net).**



**Investor attitudes have changed over the last five years, as there is increasing recognition that there are environmental limits to economic growth. CDP data helps us analyse companies on the sector level comparing performance against their peers, understanding how companies are addressing risks, and also looking at opportunities.**

Schroders





## Commentary

### Select Members of CDP's Water Advisory Council

Water is the lifeblood of the economy. It is the element that binds us together creating deep and complex interdependencies between companies, communities and natural ecosystems. Pressure is growing for investors and companies to build long-term resilience to water security into their businesses.

As the Chinese proverb states, not only can water float a boat, it can sink it also. It is becoming increasingly apparent that the mismanagement of water can result in significant business and social failure but its sustainable management can also be a significant driver for innovative, sustainable growth for all.

The announcement of the new Sustainable Development Goals brings with it an air of opportunity. For the first time, the private sector as a whole is viewed as a key implementer with much to gain; and is expected to play a significant part in realizing the sustainable future that has been envisioned.

It is no coincidence therefore that we are supporting CDP as it brings about a step change in corporate water management, catalyzing a movement away from business as usual. Over the past six years, we have been working with CDP to pioneer the only global system to support companies in making and communicating meaningful and effective action to improve water security. This year marks a significant milestone as CDP formally introduces corporate water scoring.

CDP's water scores will catalyse and support the private sector in its role as implementers. The scores are a key component in driving improved disclosure and corporate water stewardship.

- ▶ **For investors,** scores will highlight those companies more prepared than others in the face of rising water challenges, and provide consistent performance data enabling comparisons within and between sectors.
- ▶ **For companies,** scores and associated benchmarking will help strengthen their response and further improve resilience.

As a not-for-profit that works to deliver sustainable economies, CDP strives to move the market ahead of where it would otherwise be on environmental issues. The developments this year will make an important contribution to improved water security for all.

Companies, governments and investors must move quickly, efficiently and collectively if the global challenges posed by water security are to be addressed. An improved and transparent data set, of sufficient granularity, will significantly support meaningful action. The markets will favor companies that lead a collaborative approach to water as a vital shared resource, to ensure sustainable revenue generation and contribute to a more resilient future.

We are proud to be part of this exciting initiative and we look forward to continued work with CDP to catalyze the rapid step change that is so desperately required.

**Magdalena Kettis, Nordea**  
**Piet Klop, PGGM**  
**Jason Morrison, Pacific Institute**  
**Stuart Orr, WWF International**

**Paul Reig, World Resource Institute**  
**Naomi Rosenthal, South Pole Group**  
**Hélène Valade, SUEZ**

**While it is important to celebrate the leaders, they also help to highlight a growing gap between the most advanced companies and those that are just starting to recognize water risk and opportunity.**

**We firmly believe that the disclosure and external communication of our performance on water management issues has a positive impact in our reputation.**

Endesa

**CDP provides the platform that investors need to obtain the information from companies on how they are managing and mitigating environmental risks. More and more investors are starting to see how environmental issues can materially impact their portfolios and are looking for ways to manage that. CDP provides the data they need to do that risk management, and that data will be increasingly needed and desired by investors going forward.**

CalSTERS

Table 1 tracks progress against a number of key strategic water stewardship activities for those companies that responded to CDP's water program this year. It is important to note that these indicators do not represent all of the water stewardship actions that corporate responses are assessed against.

This analysis reveals a number of areas of concern in terms of corporate action and implementation, with regards to effective water stewardship. Specifically:

**A lack of attention is paid to risks in companies' supply chains**

That only 24% of companies require their key suppliers to report to them or include suppliers in corporate water risk assessments is cause for concern. Customers are increasingly under pressure to engage directly with their suppliers to prevent disruption of critical goods and services and companies must look across their entire value chain to reduce impacts and enhance business resilience.

**There is room for improvement in water risk assessment.**

Almost half of companies (48%) are failing to conduct comprehensive monitoring of water withdrawals and discharges. Without such monitoring, effective water risk assessment is impossible. More progressive risk assessment requires an understanding of the physical and social contexts within which a company's water use and discharges take place. However, barely a quarter (26%) of companies can claim to consider water issues within the river basin context, and just 12% consider a broad range of river basin stakeholders, such as their suppliers, in their water risk assessments.

**Only a small percentage of companies have robust and comprehensive water policies in place.**

Just 11% of responding companies have water policies that can be considered robust and comprehensive. Such policies should be companywide, set performance standards for direct operations and supply chains, set out clear goals and guidelines for action, and recognize the human right to water, sanitation and hygiene.

**Disclosure is far from universal.**

Of concern to investors are those 668 companies that failed to disclose this year, almost two thirds (62%) of companies requested. Persistent non-responders are of particular concern, given the improved performance seen among those companies that do report to CDP. Without company-specific data, investors have no way to deepen their understanding of the water issues faced by these companies, and potentially protect their assets.

CDP provides investor signatories with tools to identify persistent non-responders and we are witnessing an increase in engagement. For example, 60 institutional investors managing a total \$2.6 trillion in assets last month urged more than a dozen big food and beverage companies to reveal water risks via CDP.<sup>9</sup>

Next year CDP will begin listing the largest persistent non-responders in our global water report.

**Table 1: The gap**

Stewardship Indicator	% of responding companies meeting requirement
Provide a complete and compressive disclosure to investors via CDP	<b>38%</b>
Regularly measure, monitor and disclose more than 75% of all water withdrawals by source, discharges by destination and consumption	<b>52%</b>
Require suppliers to report water use, risks and management and include this within water risk assessments	<b>24%</b>
Account for river basin conditions in comprehensive, companywide water risk assessments.	<b>35%</b>
Consider a broad range of river basin contextual issues and factor relevant issues into water risk assessments such as potential regulatory changes, or stakeholder conflicts concerning water resources at a local level	<b>26%</b>
Consider a broad range of river basin stakeholders and factor relevant issues into water risk assessments such as river basin management authorities, local communities or other water users at a local level	<b>12%</b>
Are able to identify and capitalize on water-related opportunities	<b>23%</b>
Disclose all water withdrawals by source, discharges by destination and consumption data for "at risk" facilities	<b>60%</b>
Ensure that strategic responsibility for water management resides with the highest decision-making level within the business	<b>53%</b>
Publish a company-wide water policy that includes: performance standards for both direct operations and supplier, procurement and contracting best practice, a commitment to customer education and acknowledges the human right to water, sanitation and hygiene	<b>11%</b>
Have achieved or are making progress against strategic water management targets and goals	<b>26%</b>
Have identified, taken action and developed a policy for managing environmental trade-offs and/or linkages	<b>27%</b>
Place responsibility for CDP water disclosure at the highest decision-making level within the business	<b>10%</b>

## Closing the gap

**The growing water crisis presents many businesses with a unique set of challenges. In some cases companies may be able to engineer solutions that secure their own water needs. However, this may do little to address the underlying risk drivers; those that do not take a stewardship approach may be overlooking substantive risks and missing opportunities.**



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

Aviva



CDP's water program provides companies with an effective framework for action in ways that will give confidence to their stakeholders, including investors, customers, policymakers and NGOs. Analyzing a selection of companies'<sup>10</sup> responses to CDP's water questionnaire over time (2011 – 2015) indicates that companies responding to the program, and using it to engage on water issues, are improving their performance and closing the gap:

### Reduced risk

Those companies that have been engaging with CDP for the past five years are now more able to identify risk in both direct operations (with 60% doing so in 2015, up from 55% in 2011) and in supply chains (44% from 27% in 2011). Analysis suggests that the more comprehensive this understanding, the more effective the response. For example, South African packaged food producer, **Tongaat Hulett Ltd**, report that they use "CDP's water questionnaire as a framework to help us contribute to water conservation and encourage greater awareness of the water scarcity challenges facing the region in which we operate. Disclosing water data to our investors for the past 5 years has enabled us to better account for this important shared resource whilst improving our management, monitoring, reporting and verification processes."

### Strategic preparedness

Those same companies are translating deeper understanding of water risks into more meaningful and effective governance. Almost two-thirds (64%) of these companies respondents report that oversight of water policy, strategy and planning now rests at board level, up from 57% in 2011, and a growing number are thinking critically about their future growth strategies.

### Greater supply chain resilience

The companies that have been engaging with CDP for the past five years are now scaling up their stewardship efforts throughout their supply chains. The companies are increasingly requesting their suppliers to report on water use, risks and management – rising from just 25% in 2011 to 45% this year.

**Ford Motor Company**, for example, has worked with CDP to ask 250 suppliers, representing almost 60% of the car giant's total procurement spend, to report their water management data. All suppliers to food company **Nestlé S.A** are required to demonstrate continual improvement against environmental performance metrics, including ones relating to water. US-based IT company **Seagate Technology Plc**, asks suppliers to report water data using the Electronic Industry Citizenship Coalition environmental reporting initiative (which is itself partly based on the CDP disclosure framework), and the company works with them to identify areas to improve performance.





Stakeholder engagement is extremely valuable in assessing our risks, but more importantly it helps us uncover new ideas and creative solutions that continue to position us as an industry leader in network innovation.

Juniper Networks, Inc



Figure 9: Respondents that undertake water risk assessments at the river basin scale



Consumer Discretionary - 20%  
Consumer Staples - 28%  
Energy - 17%  
Health Care - 33%  
Industrials - 18%  
Information Technology - 16%  
Materials - 23%  
Utilities - 25%

Figure 10: Respondents that factor estimates of future potential regulatory changes at a local level into water risk assessments



Consumer Discretionary - 43%  
Consumer Staples - 69%  
Energy - 61%  
Health Care - 48%  
Industrials - 46%  
Information Technology - 60%  
Materials - 60%  
Utilities - 71%

Figure 11: Respondents that have evaluated how water risks could impact business growth over next year or more



Consumer Discretionary - 36%  
Consumer Staples - 75%  
Energy - 22%  
Health Care - 36%  
Industrials - 33%  
Information Technology - 44%  
Materials - 34%  
Utilities - 32%

**Meaningful contribution to Sustainable Development Goals**

With the recent announcement of the new Sustainable Development Goals and the recognition of the role of the private sector in achieving these, leaders within the private sector are aligning their efforts to support the implementation of **Goal 6 – Ensure availability and sustainable management of water and sanitation for all**. They recognize the business case for investing in WASH, including increased employee productivity, access to new and expanded markets, and improved societal license to operate. As a corollary, companies are increasingly engaging with stakeholders at the river basin level, to ensure that all legitimate water and sanitation needs can be met.

French food company **Danone**, for example, considers it a “strategic imperative” to protect springs, which it believes can only be done with the participation of local stakeholders and in alignment with local development objectives. US industrial company **3M** requires facilities in water-stressed regions to produce water conservation plans that explicitly consider and address its impacts on local communities. US technology giant **Intel** establishes community advisory panels and working groups, and carries out community perception surveys to generate input on environmental impacts, among other things.



**Recognizing that water is a local resource, companies set their own water consumption targets dependent on the water environment in the respective country. This ensures action taken is area-specific and local water issues are acted upon. Finally, we recognize that access to clean water and sanitation is a fundamental human right.**

**Toyota Motor Corporation**



**To improve water efficiency in areas of water scarcity and better adapt to climate change, Nestlé completed a US\$9.2 million project to open our most water-efficient factory in Mexico. Through new technologies developed with project partners, Nestlé implemented processes that have removed the need for groundwater extractions and saves around 1.6m litres each day; amounting to roughly 15% of the total water used by Nestlé Mexico each year in its sites.**

**Nestlé**





## Barriers to collective action

Despite growing acknowledgement that water security poses a strategic business risk, meaningful action by companies remain elusive. Joint research by CDP and the International Water Stewardship Programme (IWaSP) investigated effective corporate approaches to water challenges.

Our findings reveal that many companies are still not realizing the full benefits of conducting local water risk assessments. While existing water-risk tools are commonly applied at country level there is little awareness of the necessity to engage with other stakeholders on a river basin or catchment level. This is a prerequisite to fully understand water risks and to develop effective response strategies.

While many companies do not yet directly engage with local governments, which is essential for long-term sustainable solutions, building trustful cooperation platforms and sharing best-practice approaches can help overcome the uncertainty preventing action and provide perspective for sustainable business plans along with achievable and attractive goals.

“Our joint research with CDP reconfirmed that the collaboration of companies, government and civil society needs to be strengthened to scale up good corporate water stewardship. We will incorporate the results of this research into our Water Risk and Action Framework, which enables and guides companies, government and civil society to work together to manage shared threats to water security.” - Andre Lammerding, Head of Water Stewardship, GIZ

<sup>5</sup> IWaSP is an innovative donor-funded programme that improves water security for poor communities and businesses in watersheds by supporting good corporate water stewardship and multi-stakeholder collective action. IWaSP is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) and the UK Department for International Development (DFID). IWaSP enables public sector, private sector and civil society actors to reach consensus on water risks and solutions, and partner to implement joint action plans. Currently IWaSP supports 12 partnerships in 7 countries with over 50 partners, improving ecosystem protection, water supply access, infrastructure investment and water governance.

<sup>6</sup> This research will be published later this year in November on CDP's website.

## Investor interventions in 2015

There has been a significant change in investor attitudes to environmental challenges. Debates of whether investors were permitted to look at ESG data, given the assumption it would compromise returns, are over. Today the assumption is that investors are obliged to take ESG factors into account. The headline assertion of Fiduciary Duty in the 21st Century is that failing to consider long-term investment value drivers, including water issues, in investment practice is a failure of fiduciary duty.

From BP's failures of governance and environmental protection, to Barrick Gold's multi-billion dollar hit on its mine in Chile - where it has failed to secure water rights - there are mounting examples of environmental factors having profound impacts on corporate valuations.

It is perhaps no surprise that 2015 has seen a plethora of investor interventions on water. We highlight the key initiatives below.

### Pension funds are preparing to vote

The Red Line Initiative, launched by the **Association of Member Nominated Trustees**, recommends voting policies for pension funds on ESG issues, including water. Of the five environmental policies, the most significant is that, if a company fails to disclose water data to CDP, pension funds are advised to vote against the re-election of the chair of the Environmental Sustainability Committee or, in the absence of such a committee, against the re-election of the Chairman.

### The sell-side is reacting

CDP and other corporate water data has been used as the basis for a large and growing volume

of mainstream, sell-side research. Buy and sell recommendations are being made based on corporate water exposures and response. For example, **Morgan Stanley** produced a series of sectorial research reports focused on:

- ▼ Metals & Mining: Copper and Water – expensive solutions
- ▼ Food Producers: Water as a risk to valuation
- ▼ Power Generation Utilities: navigating global water risk

### Corporate water risk valuation is maturing

- ▼ Bloomberg launched WRI's Aqueduct tool on its terminals and also released a Water Risk Valuation Tool that incorporates water risk into company valuation in the mining sector.
- ▼ Seven financial institutions from Europe and the Americas – **UBS, Robeco, Calvert Investments, Pax World, J Safra Sarasin, Banorte** and **Bancolombia** - worked with The Natural Capital Declaration to launch a Corporate Bonds Water Credit Risk Tool. The tool enables users to assess the credit strengths of corporations across electric utilities, beverages and mining sectors.

### Money is beginning to flow

The \$33.1 billion Swedish state buffer fund Fjärde AP-fonden (AP4) invited proposals from assets managers to develop a global equities portfolio focused on "the global water scarcity challenge."



## Conclusion

**Water security may well be the defining environmental issue of the 21st century. The potential impact is huge, the challenges posed are significant and the opportunities are great. While solutions may be complex, requiring coordinated action from businesses, individuals and governments, the costs of inaction – constrained social and economic growth – overshadow these complexities.**

This year's report is a call to all companies to close the gap. To take ownership of the water impact of the businesses they run, and to take responsibility for water externalities, building greater business resilience.

While a growing number of stakeholders have recognized that reporting can uncover risks and opportunities that would otherwise go unnoticed, disclosure has yet to be accepted as standard practice across all water-vulnerable industry sectors. This must change.

Disclosure is the first step in a process towards achieving greater water security. As we have seen, corporate water management tends to evolve from an initial focus on direct operations, to a wider appreciation of water

issues throughout a company's value chain, to its full integration into a company's strategic vision. CDP's water program is intended to help companies move through this process, recognizing that companies need to build capacity and understanding over time.

Our ultimate goal is to raise the market as a whole beyond where it would otherwise be in the fight to improve water security. We want all companies to improve their water stewardship. We anticipate that the pathway we have provided through our questionnaire, guidance and scoring methodology will enable those companies beginning their journey to work towards improved water stewardship and will continue to challenge those leading the way.



# Consumer Discretionary

# 34%

response rate (61/177)



The Bangladesh Water Partnership for Cleaner Textile (PaCT) seeks to improve wet processes in country. The joint work of 100 factories has contributed to saving 3,000 mgL of water, 4,500 mgL of discharged waste water and a 7% reduction in emissions. Visits to suppliers have enabled progress towards our zero discharge of undesirable substances commitment by 2020.

Inditex



## Key findings

- ▶ The low percentage of respondents (37%) engaging with their suppliers is worrying, given the reliance on the supply chain of this sector.
- ▶ 71% of those reporting opportunities expect them to be realised within the next three years including **Gap Inc.**, **Mazda Motor Corporation** and **Nokian Tyres**; however, a relatively high amount of respondents (34%) either have not yet identified opportunities or are unaware whether they exist.

## Risk analysis

- ▶ Fewer than half of respondents (43%) undertake a comprehensive risk assessment, and only 20% undertake river basin level assessments suggesting risks and opportunities may be going unnoticed; **H&M Hennes & Mauritz AB** and **LVMH** are among the few making assessments at the basin level.
- ▶ This sector is feeling the pressure of rising water pricing and increased water scarcity; **AT&T Inc.**, **Barloworld** and **Analog Devices** are looking to increase capital expenditure, invest in infrastructure and establish site specific targets respectively.

## Governance and Strategy

- ▶ 77% of respondents report water has been integrated into their business strategy, including **Delphi Automotive Plc**, **Johnson Controls** and **Sony Corporation**; however only 11% of companies report aligning public policy positions with stewardship initiatives.
- ▶ This sector has the second highest percentage of respondents with strong policies that acknowledge WASH (11%), including **Hilton Worldwide, Inc.**, **Toyota Motor Corporation** and **Ford Motor Company**.

## Current State

# 16%

of respondents have experienced detrimental water-related business impacts in the reporting year

# 64%

of respondents have evaluated how water risks could impact business growth over the next year or more

### Top impacts reported

- ▶ Higher operating costs
- ▶ Closure of operations
- ▶ Fines/penalties

## Risk

### Respondents exposed to water risk

# 56%

of respondents exposed to substantive water risk

# 28%

of respondents exposed to water risk in direct operations and supply chain

# 3%

of respondents don't know if they are exposed to water risk

### Top countries where respondents report facility level risk

- China
- India
- Mexico
- South Africa

### Top risks anticipated within the next three years

- ▶ Higher operating costs
- ▶ Closure of operations
- ▶ Property damage

### Top mitigation strategies to deal with the predicted risks

- ▶ Increased investment in new technology
- ▶ Establish site-specific targets
- ▶ Infrastructure maintenance

## Supply Chain

# 37%

of respondents require key suppliers to report water use, risks and management

# 25%

of respondents require more than 50% of their procurement spend to report on water

# 66%

of respondents report opportunities related to water

## Top opportunities

-  Improved water efficiency
-  Cost savings
-  Increased brand value

# SECTOR PROFILE



## Ford Motor Company

At Ford Motor Company, we're proud of how we have been transforming our company, from the vehicles we make to the way in which we make them. Between 2000 and 2014, we cut our total global water use by 62%, or more than 10 billion gallons, and achieved our original water-reduction goal two years ahead of schedule.

As we build on our strong foundation and continue to transform to meet the needs of the future, we are driven by three priorities:

- ▼ Accelerating our pace of progress on the One Ford plan
- ▼ Delivering product excellence with passion
- ▼ Driving innovation in every part of our business

These three priorities drive our sustainability strategy, including how we approach emissions, energy and water issues. We are also committed to making our data transparent to anyone who wants to see it.

Since 2012, we have recognized a basic human right to clean, affordable drinking water and adequate and accessible sanitation. Through our water strategy, we seek to uphold and respect that right.

We have focused on reducing our water impacts since 2000, when we first began setting year-over-year reduction targets as part of our Global Water Management Initiative. The introduction of innovative manufacturing technologies, such as 3-Wet Painting and Minimum Quantity Lubrication (MQL), have contributed to our reduction in water use. Minimum Quantity Lubrication or "dry-machining" uses a process to lubricate cutting tools with a very small amount of oil, rather than the conventional "wet-machining" process that required large amounts of metal-working fluids and water to cool and lubricate the tools. For a typical production line, MQL can save more than 280,000 gallons of water per year.

Our efforts around water have evolved over the years, and we have moved beyond merely reducing the water footprint of our own facilities to working more holistically outside our corporate walls, addressing water concerns in our supply chain and our broader communities.

We believe that business has a key role to play in finding sustainable solutions to current and future global water challenges. As an industry leader with nearly 195,000 employees worldwide, and manufacturing facilities or distribution channels across six continents, our reach enables large-scale positive impact.

This profile is collaborative content sponsored by Ford Motor Company



# Consumer Staples

# 47%

response rate (68/145)



In 2014, CCE invested over \$59 million in process innovation, including water efficiency improvements. Since 2007, their investments to enhance water efficiency within manufacturing operations has facilitated the avoidance of cumulative associated costs valued at approximately \$27 million.

Coca-Cola Enterprises, Inc.



## Key findings

- 82% of respondents report risk, the highest of any sector. Almost half (43%) experienced detrimental impacts in the last reporting year. Watch out for penalties and fines - more than a third of respondents (37%) incurred them.
- While 75% report opportunities, 25% of the remaining respondents either don't see or know if they exist. For those that report opportunities, nearly 70% expect they will be realised within the next three years, including **L'Oréal** that report increased brand value, **Associated British Foods** that report cost savings and **Kirin Holdings Co Ltd** that report improved water efficiency.

## Risk analysis

- 71% of respondents report undertaking assessments that cover both direct operations and supply chain, significantly more than any other sector. Encouragingly more than a quarter (28%) of respondents consider river basin issues including **Bunge, Danone** and **Imperial Tobacco Group**.
- The sector is driven by physical risks including increased water scarcity, increased water stress and drought; the top mitigation response indicates more advanced stewardship practice as respondents begin to engage with other river basin users to improve water security.

## Governance and Strategy

- 76% of respondents report board level oversight of water; however only 9% report a publicly available, companywide water policy that includes direct operations, supplier best practice and acknowledges WASH including **Colgate Palmolive Company, Coca-Cola HBC AG** and **Unilever**.
- This sector is a strong performer as it relates to governance, with the highest percentage of respondents integrating water into their business strategies (87%), including **Clorox Company, KAO Corporation** and **Whole Foods Market, Inc.**
- The sector has the highest proportion of respondents reporting an increase in water CAPEX and OPEX year on year (22%), potentially a result of the sector's high level of detrimental impacts felt, and the high level of risks and opportunities perceived within the sector.

## Current State

# 43%

of respondents have experienced detrimental water-related business impacts in the reporting year

# 71%

of respondents have evaluated how water risks could impact business growth over the next year or more

### Top impacts reported

- Higher operating costs
- Water supply disruption
- Plant/ production disruption leading to reduced output

## Risk

### Respondents exposed to water risk

**82%** of respondents exposed to substantive water risk

**68%** of respondents exposed to water risk in direct operations and supply chain

**9%** of respondents don't know if they are exposed to water risk

### Top countries where respondents report facility level risk

USA  
Mexico  
Brazil  
India

### Top risks anticipated within the next three years

- Higher operating costs
- Plant / production disruption leading to reduced output
- Water supply disruption

### Top mitigation strategies to deal with the predicted risks

- Engagement with other stakeholders in the river basin
- Establish site-specific targets
- Promote best practice and awareness

## Supply Chain

# 55%

of respondents require key suppliers to report water use, risks and management

# 22%

of respondents require more than 50% of their procurement spend to report on water

# 75%

of respondents report opportunities related to water

## Top opportunities



Cost savings



Improved water efficiency



Increased brand value





## SECTOR PROFILE

### **SAB Miller**

SABMiller undertake a high-level water risk assessment of all their facilities using WWF's Water Risk Filter and WBCSD's global water tool. By March 2015, they had carried out assessments in facilities representing 63% of their volume, with a view to assess the remaining facilities by end of 2016.

SABMiller have launched an internal project linked to identifying opportunities, in line with the company's 2020 water target to reduce water use to 3.0 litres of water per litre of beer by 2020.

In an effort to achieve this target, actions have been taken to reduce water use ratio and cost savings have been realised as a result. Cost savings of US\$117 million were reported in financial year 2014/2015 from water and energy related initiatives. Since 2010, accumulated savings amount to more than US\$300 million.

SABMiller has developed further opportunities to ensure business continuity. They aim to secure shared water resources for both business and local communities by forming a detailed understanding of individual brewery water risks. One brewery in Colombia draws its water from the heavily used Cauca River. Increasing contamination of water drawn from the river has resulted in a group of private and public sector organisations joining to protect the ecosystem, so clean water flows can be maintained for everybody.





# Energy

# 22%

response rate (23/106)

Suncor has been a leader in improving collaboration among industry peers through organizations such as COSIA. This is a key example of collaborative efforts to reduce the likelihood of water issues and lays the groundwork for further breakthroughs in environmental performance in Canada. There have been 145 water technology contributions with an estimated value of \$184M.

Suncor

### Key findings

- For the fifth consecutive year, the Energy sector has the lowest response rate, with less than a quarter of respondents providing critical water related information to their investors.
- The low response rate is worrying given respondents from the sector experienced the greatest number of detrimental impacts in the last reporting year (43%), including higher operating costs, fines and penalties and brand damage.
- High levels of risk (65%) and opportunity (86%) also justifies greater levels of transparency. Particularly as 60% anticipate opportunities to be realized within the next three years; examples include **Exxaro Resources Ltd, Husky Energy Inc.,** and **Worley Parsons** who report cost savings, competitive advantage and climate change adaptation respectively.

### Risk Analysis

- Less than a quarter of respondents in this sector (22%) report a companywide risk assessment that covers both direct operations and supply chain, with only 17% of these undertaking a risk assessment at a basin level, including **Noble Energy, Inc.,** and **Hess Corporation.**
- While this sector is feeling the pressure from physical risk drivers predominantly, reputational risks are also reported with community opposition acting as a motive for respondents to take action.

### Governance and Strategy

- Just over half of respondents in the Energy sector report board level oversight of water - the lowest among all sectors.
- Significant room for improvement on the policy front with no respondents reporting a comprehensive and robust water policy; only 17% of respondents align their public policy position with their water stewardship goals.
- Despite this, 87% of respondents have water integrated into their business strategy, including **CONSOL Energy Inc.,** and **Encana Corporation,** who site the exploration of water valuation practices as a benefit for doing so. This is an encouraging step, however must be tempered by the lack of Board level oversight tied to this.

### Current State

## 43%

of respondents have experienced detrimental water-related business impacts in the reporting year

## 65%

of respondents have evaluated how water risks could impact business growth over the next year or more

#### Top impacts reported

- Higher operating costs
- Fines/ penalties
- Closure of operations

### Risk

#### Respondents exposed to water risk

## 65%

of respondents exposed to substantive water risk

## 22%

of respondents exposed to water risk in direct operations and supply chain

## 0%

of respondents don't know if they are exposed to water risk

#### Top countries where respondents report facility level risk

- USA
- Canada
- South Africa
- Australia

#### Top risks anticipated within the next three years

- Higher operating costs
- Brand damage
- Property damage

#### Top mitigation strategies to deal with the predicted risks

- Infrastructure investment
- Promote best practice and awareness
- Increased investment in new technology

### Supply Chain

## 71%

of respondents require key suppliers to report water use, risks and management

## 4%

of respondents require more than 50% of their procurement spend to report on water

## 83%

of respondents report opportunities related to water

### Top opportunities



Cost savings



Improved water efficiency



Improved community relations;

A black and white photograph of an offshore oil rig at sea. The rig is silhouetted against a bright sky, with a large flare emitting a bright flame on the right side. The ocean is visible in the foreground and middle ground.

# SECTOR PROFILE

Of most concern is disclosure in the Energy sector, which has fallen to 33% in 2015 by the Global 500 sample, after hovering near 50% in earlier years. This is despite high levels of water risk faced by energy companies. Of those from the sector that disclosed to CDP in recent years, more than 65% acknowledged exposure to water risks that could generate a substantive change in their business, revenue or operations.

Meanwhile, a lack of focus on strategic water issues raises the risk of stranded assets. Such stranding is more often considered in terms of climate risk, where future shifts away from carbon-intensive energy sources risks destroying demand for higher-carbon fossil fuels. But insufficient water supply could similarly force energy companies to write off investments: research from **Ceres** found that nearly half of oil and gas wells in the US are in water basins with high or extremely high water stress.<sup>[1]</sup> This August, Alberta's energy regulator imposed restrictions on water withdrawals from oil sands operators in parts of the Canadian province, in response to dry weather and low stream flow, in an early sign of the water risks that could imperil billions of dollars-worth of projects.<sup>[2]</sup>

Energy companies are also likely to be overlooking water-related opportunities. Four in five responding companies in the sector believe that water presents strategic, operational or market opportunities – but with disclosure rates so low, it is possible that many of these potential sources of value creation go unexploited.

<sup>1</sup> Hydraulic Fracking and Water Stress; Growing Competitive Demands for Water, Ceres, 2013.  
<sup>2</sup> Drought affecting Alberta oil and gas projects', The Canadian Press, 17 August 2015.



## Health care

# 45%

response rate (42/93)



Our Ansong site in South Korea has been exposed to increased water and wastewater prices which have averaged 5% per year for the past decade. Bayer has introduced several initiatives to reduce water use, including employee awareness campaigns, more stringent monitoring of water consumption and leakages, and recycling cooling water from water plants.

Bayer AG



### Key findings

- 55% of respondents report that water poses a substantive risk to their business – the lowest proportion of any sector. With only 38% of respondents undertaking a comprehensive risk assessment, this suggests water risks and opportunities may not yet be fully understood.
- 5% of respondents remain unaware of water risk exposure and 12% are unaware of opportunities. Opportunities are available however, and 56% of respondents report they will be realised within the next three years, including **Biogen Inc.**, **Netcare Limited** and **SANOFI** who anticipate increased research & development, cost savings and supply chain resilience respectively.

### Risk analysis

- This sector has the highest number of respondents undertaking a risk assessment at a basin level (33%) including **Roche Holding AG**, **Shire** and **Varian Medical Systems Inc.**
- 14% of respondents report medium-high financial impacts of potential risks, which is relatively low, however 100% of these respondents say these risks are likely to materialise, and 83% of anticipated risks to impact within the next three years, something for investors to be aware of.
- This sector is feeling the pressure from a number of physical risk drivers including increased and projected water stress and increased water scarcity; **Aspen Pharmacare Holdings, Merck & Co., Inc.** and **Takeda Pharmaceutical Company Limited** plan to implement a group-wide water strategy, invest in infrastructure and establish site-specific targets to mitigate the risk.

### Governance and Strategy

- 76% of respondents report water issues are integrated into their business strategy including **AstraZeneca**, **CSL** and **Daiichi Sankyo Co., Ltd**, however, there is comparatively low level of Board oversight (60%).
- Only 10% of respondents align their public policy position with water stewardship and only 5% acknowledge WASH including **AbbVie Inc.**

### Current State

## 17%

of respondents have experienced detrimental water-related business impacts in the reporting year

## 64%

of respondents have evaluated how water risks could impact business growth over the next year or more

#### Top impacts reported

- Higher operating costs
- Plant / production disruption leading to reduced output
- Water supply disruption

### Risk

#### Respondents exposed to water risk

## 55%

 of respondents exposed to substantive water risk

## 36%

 of respondents exposed to water risk in direct operations and supply chain

## 5%

 of respondents don't know if they are exposed to water risk

#### Top countries where respondents report facility level risk

USA  
Brazil  
China  
India

#### Top risks predicted within the next three years

- Higher operating costs
- Plant / production disruption leading to reduced output
- Closure of operations

#### Top mitigation strategies to deal with the predicted risks

- Infrastructure investment
- Establish site-specific targets
- Engagement with public policy makers

### Supply Chain

## 28%

of respondents require key suppliers to report water use, risks and management

## 10%

of respondents require more than 50% of their procurement spend to report on water

## 57%

of respondents report opportunities related to water

### Top opportunities



Cost savings



Improved water efficiency



Improved community relations





## SECTOR PROFILE

### **Biogen Inc.**

Water is crucial for Biogen's operations and responsible water management is a key element of its company-wide Environmental Health, Safety and Sustainability Policy and Strategy.

Biogen use WWF's Water Risk tool to assess facility-level water and supplier risk based on geography by water basin. The tool evaluates each facility for physical, regulatory and reputational risks. The Water Risk tool is also used to assess Biogen's critical suppliers. They have reached out to their top 10 suppliers to initiate engagement on how to effectively reduce supply chain impacts. Efforts focus on improving efficiency so as to benefit from both impact reduction and cost savings.

Biogen have also taken action to reduce water risks and realise cost savings in direct operations. A goal has been set to reduce water use intensity by 80% by 2020, compared to a 2006 baseline. In 2014, intensity figures have been reduced by 72%. Finally, water usage from reclaimed or reused water has increased by 80% in 2014, compared to a 2006 baseline.



# Industrials

# 33%

response rate (52/160)

The prolonged drought in South-West US is disrupting our water supply, if the drought persists, mitigation and compliance costs are projected to impact operational bottom line. In response, we help facilities implement reduction and conservation measures such as upgrading to more efficient water fixtures, outlining new internal water policies, and encouraging measuring, monitoring and reporting consumption.

Waste Management, Inc.

### Key findings

- While 76% of respondents report opportunities, there is room for improvement for the 24% of respondents who don't yet see or are unaware of the existence of opportunities. 63% of respondents reporting opportunities expect them to be realised within the next three years, including **Assa Abloy** and **Asahi Glass Co. Ltd.** both of which report cost savings.

### Risk Analysis

- Just over a third of respondents (37%) undertake a robust water risk assessments, the second highest across sectors, however it is of concern that a further 6% of respondents are unaware whether or not they are exposed to water risk.
- Of those that do assess water risks, only 17% look at the river basin level, the critical scale to assess water security. Companies such as **Royal Philips, Stanley Black & Decher, Inc.** and **Vinci** are among those assessing risks in a comprehensive and robust manner.

- This sector is being driven by physical risks, notably potential declines in access to water due to water scarcity and stress. **Hosken Consolidated Investments**, based in South Africa, report that increased water scarcity may lead to increased operational costs, brand damage and disruption of operations.

### Governance and Strategy

- 78% of respondents report that water issues are integrated into their business strategy including the **Toshiba Corporation**.
- However, very few respondents include WASH into their water policy; this alongside the very low percentage of companies aligning their public policy position with their water stewardship goals (6%) indicates improvements to be made.
- Only 4% of respondents' water CAPEX and OPEX increased year on year, this could be due to the low level of detrimental impacts experienced (20%) or further evidence of limited understanding of water risks and opportunities.

### Current State

## 20%

of respondents have experienced detrimental water-related business impacts in the reporting year

## 61%

of respondents have evaluated how water risks could impact business growth over the next year or more

#### Top impacts reported

- Property damage
- Plant/Production disruption leading to reduced output
- Water supply disruption

### Risk

#### Respondents exposed to water risk

## 56%

 of respondents exposed to substantive water risk

## 29%

 of respondents exposed to water risk in direct operations and supply chain

## 6%

 of respondents don't know if they are exposed to water risk

#### Top countries where respondents report facility level risk

- China
- USA
- India
- Japan

#### Top risks predicted within the next three years

- Higher operating costs
- Brand damage
- Plant/Production disruption reducing output

#### Top mitigation strategies to deal with the predicted risks

- Establish site-specific targets
- Infrastructure investment
- Infrastructure maintenance

### Supply Chain

## 51%

of respondents require key suppliers to report water use, risks and management




## 13%

of respondents require more than 50% of their procurement spend to report on water

## 75%

of respondents report opportunities related to water

#### Top opportunities

-  Sales of new products/services
-  Improves water efficiency
-  Cost savings; Increased brand value





## SECTOR PROFILE

### **Xylem**

Xylem's CEO has publicly called for collaboration to solve the world's pressing water issues. Through Xylem Watermark, its corporate social responsibility signature citizenship effort, they undertake work with Mercy Corps, China Women's Development Foundation and Avina. Xylem is also an active participant in collaborations including the International Water Association, Water Environment Foundation, Stockholm International Water Institute, Water for People, Planet Water, UNGC, and UNGC Nordic Network.

Xylem Watermark enables the company to work with non-profit partners to support and aid the implementation of school and community-based projects that provide access to water and WASH education to students, teachers and families. The program helps the company extend efforts address water challenges facing some of the world's most vulnerable communities.

Xylem also provides fully functioning access to water supply, adequate sanitation and hygiene (WASH) to all its workers. They recognize employees' rights to a safe environment and ensure access to clean toilet facilities through its Corporate Health Program. In addition, its Corporate Drinking Water Management Policy ensures that all employees have a safe, clean and adequate supply of drinking water.



# Information Technology

# 62%

response rate (43/69)



Taiwan Semiconductor Manufacturing is responding to the risk of closure of its operation because of increasing water scarcity by engaging with public policy makers and sharing best practice with other industries. Collaborations with the central government to establish water saving goals and local water allocation will be undertaken and experiences shared.

Taiwan Semiconductor Manufacturing



### Key findings

- Only 5% of respondents reported negative impacts due to water in the last reporting year, however of those impacts reported, the closure of operations is prominent.
- While close to two thirds report opportunities (63%), many of which are anticipated to be realised in the next three years, this is noticeably fewer than other sectors. Examples include **Cisco Systems, Inc.** reporting cost savings related to water and **QUALCOMM Inc.** reporting opportunities for innovation.
- Given the relatively high risk exposure reported here, the small number of respondents engaging with suppliers on these issues is of concern and suggests that risks and opportunities may be being overlooked.

### Risk analysis

- While more than half (56%) of respondents undertake a companywide risk assessment that covers both direct operations and supply chain; only 16% of respondents undertake a risk assessment at a basin level; this is low and improvements are needed given the considerable percentage of respondents reporting exposure to substantive water related risks (65%).
- This sector is feeling the pressure from physical risk drivers; for example **Broadcom Corporation** report scarce water resources in the Colorado River basin could result in increasing operating costs due to price increases in the Western United States.

### Governance and Strategy

- No respondents within this sector include WASH into a comprehensive and robust water policy. Worryingly, only 7% of IT respondents align their public policy position with their water stewardship goals.
- While 77% have water integrated into their business strategies, including **Canon Inc., TE Connectivity, Intel Corporations** and **Fujitsu**, this sector is amongst the lowest comparatively, so improvements can still be made.
- 16% of respondents' water CAPEX and OPEX increased year on year in the last reporting period.

### Current State

## 5%

of respondents have experienced detrimental water-related business impacts in the reporting year

## 58%

of respondents have evaluated how water risks could impact business growth over the next year or more

#### Top impacts reported

- Closure of operations
- Higher operating costs

### Risk

#### Respondents exposed to water risk

**65%** of respondents exposed to substantive water risk

**42%** of respondents exposed to water risk in direct operations and supply chain

**5%** of respondents don't know if they are exposed to water risk

#### Top countries where respondents report facility level risk

- China
- USA
- Japan
- Thailand

#### Top risks predicted within the next three years

- Higher operating costs
- Closure of operations
- Brand damage

#### Top mitigation strategies to deal with the predicted risks

- Infrastructure investment
- Establish site-specific targets
- Engagement with public policy makers

### Supply Chain

## 9%

of respondents require key suppliers to report water use, risks and management

## 37%

of respondents require more than 50% of their procurement spend to report on water

## 63%

of respondents report opportunities related to water

### Top opportunities



Cost savings



Sales of new products/services



Improved water efficiency



## SECTOR PROFILE

### **QUALCOMM Inc.**

QUALCOMM are aware that although they use water risk projections through 2050 to inform water risk assessments at the river basin level, water scarcity may be more severe and progress more quickly than projections suggest. To address this risk, they have incorporated various water sustainability and conservation measures in a newly constructed 278,000 square-foot building in San Diego, CA. Measures including drip irrigation, drought-tolerant landscaping, ultra-low-flow and high-efficiency water fixtures, a bio-retention system that removes contaminants from storm-water runoff, and a green roof that reduces runoff and encourages biodiversity – all of which will save over 776,000 gallons of water annually.

QUALCOMM recognize the linkages between saving water and energy. In its San Diego facilities, they have made gains in water conservation by utilizing reclaimed water instead of potable water for irrigation and air conditioning. Where there is not access to reclaimed water for cooling towers, they avoid consuming potable water through careful management of treated water, enabling longer use before needing to flush the system and refill it.

In order to ensure their commitment to water is maintained through its supply chain, they adopted the EICC Code of Conduct, participate in CDP's water and climate change programs, and submit information via the EICC Environmental Reporting Tool. In 2014, all top semiconductor suppliers provided QUALCOMM with data on their water use, which will be used to set benchmarks for future sustainability strategies. Ninety percent of their top suppliers have clear goals for reducing water consumption.





# Materials

**43%**  
response rate (88/205)

We developed a revolutionary technique to process iron ore in regions of high rainfall that eliminates the use of water. The technology reduces water consumption by 93% when compared to the traditional method. The implementation of the new technology in Carajás has eliminated water use in 10 of 17 beneficiation lines, reducing water use by 10 million m<sup>3</sup> per year.

Vale

## Key findings

With 81% of Materials respondents reporting opportunities, there are clear advantages to be had; 70% of companies are expecting these to be realised within the next three years including **Ecolab** who invested US\$197 million in 2014 in research and development to realize opportunities to expand its market share in water and energy optimizing solutions.

## Risk analysis

65% of Materials respondents report exposure to water risk, and higher operating costs are the most likely impact, as reported by **Freeport-McMoRan, Inc.** that reports that a potential loss of a water right could materially and adversely affect their mining operations by increasing costs, forcing them to curtail operations, prevent expansions or forcing premature closures.

Less than half of respondents (41%) undertake a companywide risk assessment that covers both direct operations and supply chain; 23% undertake assessments at the river basin level, including **AkzoNobel, IAMGOLD Corporation** and **Holmen**.

## Governance and Strategy

Only 17% of respondents align their public policy position with water stewardship goals and a minimal 3% acknowledge WASH; much more needs to be done to incorporate WASH into comprehensive business strategies, and the sector can look to companies including **BASF SE, Linde AG** and **Kumba Iron Ore** that have strong water policies.

86% of respondents have water integrated into their business strategy including **BHP Billiton** and **Duratex S/A** reporting the benefit of the exploration of water valuation practices from doing so.

17% of respondents report CAPEX and OPEX increases year on year, which is high compared to other sectors and likely is the result of the high number of companies experiencing impacts (35%) but also realising water related opportunities (81%).

## Current State

**35%**

of respondents have experienced detrimental water-related business impacts in the reporting year

**74%**

of respondents have evaluated how water risks could impact business growth over the next year or more

### Top impacts reported

- Higher operating costs
- Plant/production disrupt leading to reduced output
- Transport disruption

## Risk

### Respondents exposed to water risk

**65%** of respondents exposed to substantive water risk

**32%** of respondents exposed to water risk in direct operations and supply chain

**2%** of respondents don't know if they are exposed to water risk

### Top countries where respondents report facility level risk

- South Africa
- USA
- Australia
- China

### Top risks predicted within the next three years

- Higher operating costs
- Plant/production disruption leading to reduced output
- Delays in permitting

### Top mitigation strategies to deal with the predicted risks

- Infrastructure investment
- Increased capital expenditure
- Engagement with public policy makers

## Supply Chain

**54%**

of respondents require key suppliers to report water use, risks and management

**18%**

of respondents require more than 50% of their procurement spend to report on water

**81%**

of respondents report opportunities related to water

## Top opportunities



Cost savings



Increased brand value



Improved community relations



# SECTOR PROFILE



## Metsä Board

Metsä Board is Europe's leading supplier of paperboards for packaging, with production in Finland and Sweden. Water is essential in making pulp and paperboard, and Metsä Board's main water usage is fresh water. The majority of raw material used in our paperboard comes from northern forests that do not draw on recycled, brackish or processed water. In 2014, almost all water used was surface water from rivers and lakes. When groundwater is used, the intake volume is determined and controlled according to each mill's environmental permit. Metsä Board continuously seeks new ways to reduce use of fresh water and 95% of water used for paperboard production is returned to its source, with process waters being carefully cleaned before release back into the watercourse, ensuring the environment surrounding our mills is not affected by our water use.

In 2013, we launched an extensive development project to decrease water usage and material efficiency by reducing water intake and fibre loss. It will also improve the efficiency of sludge and wastewater management. The target is a 10% reduction on 2010 levels of specific process water use by 2020, tracking performance on a quarterly basis. Consumption of process water has already decreased by 15% since 2010. All Metsä Board mill sites were evaluated on their specific water usage, using the WBCSD Global Water Tool and improvement projects have been launched. The investment in 2014-2015 alone was around EUR9 million. For example during 2014, Tako board mill has been able to reduce the loading of suspended solids to watercourse by over 50%.

Metsä Board aims to decrease the impact of its wood supply on water in forestry operations. We have defined actions to meet this target and developed indicators to follow their implementation. For example, together with our partners, we ensure that when a tree is harvested, four new ones are planted. Sustainable forest management also includes environmental impact assessment of future forest operations, as forests have a crucial role in a region's natural water cycle. Metsä Board's mills, located in Northern Europe, have abundant water sources, and do not compete with food production, forestry or household water use at any level.

This profile is collaborative content sponsored by Metsä Board





## Utilities

# 28%

response rate (28/100)



Gas Natural has experienced a 32% increase in environmental taxes on water used for hydropower production. This is a financial impact of almost \$1.9 million more than last year. Gas Natural have therefore been working to improve management and regulation of the flows that feed our hydroelectric power plants.

Gas Natural



### Key findings

- With a 28% response rate, the Utilities sector is among the least transparent of water dependent sectors, with almost three quarters failing to meet their investor's disclosure expectations.
- 75% of respondents report exposure to water related risk, and more than a third (36%) experienced water-related negative impacts in the last reporting period.
- Opportunities are available however with 70% of respondents, such as **EDF**, **E.ON SE** and **NRG Energy Inc**, reporting cost savings, increased brand value and improved water efficiency opportunities, all of which they anticipate realizing within the next three years.

### Risk analysis

- While 61% of respondents undertake a companywide risk assessment that covers both direct operations and supply chains, only 25% undertake a risk assessment at a basin level including **Sempra Energy**, **National Grid**, **RusHydro JSC**.
- This sector is feeling the pressure from physical risk drivers, with the changing availability of water being a key concern, followed by potential changes in water-related regulations. Other sectors and investors should take note of the severity of the problem in the Utilities sector, as the impact here may be felt more broadly across the economy.

### Governance and Strategy

- 86% of respondents integrate water into their business strategy, including **Centrica** and **Entergy Corporation**.
- Only 29% of respondents align their public policy position with water stewardship goals and less than a fifth acknowledge the human right to water, sanitation and hygiene (WASH). There is significant room for improvement here, particularly in light of Sustainable Development Goal 6 on Water & Sanitation. The sector can look to **Endesa** and **Iberdrola SA** who have already recognized WASH in their publicly available water policies.
- 14% of respondents report an increase in CAPEX and OPEX year on year, high compared to other sectors, however given the high percentage of companies (82%) that have reported water-related opportunities, and the high level of risk within direct operations (75%), we would expect more investment.

### Current State

## 36%

of respondents have experienced detrimental water-related business impacts in the reporting year

## 89%

of respondents have evaluated how water risks could impact business growth over the next year or more

#### Top impacts reported

- Higher operating costs
- Plant/production disrupt leading to a reduced output
- Transport disruption

### Risk

#### Respondents exposed to water risk

## 75%

 of respondents exposed to substantive water risk

## 32%

 of respondents exposed to water risk in direct operations and supply chain

## 0%

 of respondents don't know if they are exposed to water risk

#### Top countries where respondents report facility level risk

USA  
Spain  
Mexico  
Brazil

#### Top risks predicted within the next three years

- Higher operating costs
- Reduction in revenue
- Closure of operations

#### Top mitigation strategies to deal with the predicted risks

- Engagement with public policy makers
- Increased investment in new technology
- Infrastructure investment

### Supply Chain

## 56%

of respondents require key suppliers to report water use, risks and management

## 7%

of respondents require more than 50% of their procurement spend to report on water

## 82%

of respondents report opportunities related to water

### Top opportunities



Cost savings



Improved water efficiency



Increased brand value



# SECTOR PROFILE

## Endesa

Integrated water management is one of the cornerstones of Endesa's Sustainability Plan. Programs focus on promoting efficient water consumption, improving water quality by controlling spillages and wastewater generation, practicing integrated management of reservoirs aimed at controlling invasive species, and managing river flows with specific programmes to ensure minimum volumes.

WBCSD's Global Water Tool is used to identify facilities located in water stressed areas, the Climate Vulnerability Assessment is used to consider the effects of climate change on facilities and the Enel Group's Mapping of Environmental Compliance is used to assess facilities compliance with water regulations. Endesa have a methodology to calculate the water footprint of operations, both direct and indirect, to promote closer relations with suppliers.

Endesa firmly believe that disclosure and external communication of their performance on water management issues has a positive impact on their reputation. Endesa recognize the value in setting and achieving goals to maintain this reputation. A global target to reduce water consumption by 10% by 2020, compared to 2010 baseline was set. In 2014, the real percentage of achievement of the target was 180%.

# 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 only  
Respondents exposed to risks in supply chain only  
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 (>1%) total volume of water withdrawal data by source for at risk facilities  
Respondents that verify (>1%) 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
61	68	23	42	52	43	88	28	405
40	53	20	40	42	30	56	23	304
21	15	3	2	10	13	32	5	101
34%	47%	22%	45%	33%	62%	43%	28%	38%
177	145	106	93	160	69	205	100	1064
16%	43%	43%	17%	20%	5%	35%	36%	27%
64%	71%	65%	64%	61%	58%	74%	89%	68%
44%	78%	61%	60%	38%	53%	65%	64%	58%
37%	55%	71%	28%	51%	9%	54%	56%	46%
43%	71%	22%	38%	37%	56%	41%	61%	47%
20%	28%	17%	33%	18%	16%	23%	25%	23%
74%	78%	87%	76%	69%	77%	84%	86%	78%
59%	53%	70%	62%	58%	56%	67%	79%	61%
56%	82%	65%	55%	56%	65%	65%	75%	65%
43%	69%	61%	48%	46%	60%	60%	71%	57%
36%	75%	22%	36%	33%	44%	34%	32%	41%
28%	68%	22%	36%	29%	42%	32%	32%	38%
66%	75%	83%	57%	76%	63%	81%	82%	73%
90%	94%	100%	98%	85%	95%	94%	89%	93%
67%	78%	78%	88%	67%	79%	78%	89%	75%
23%	29%	26%	21%	15%	19%	27%	43%	25%
16%	26%	9%	17%	8%	12%	18%	32%	18%
62%	76%	57%	60%	65%	67%	73%	71%	68%
11%	9%	0%	5%	2%	0%	3%	18%	6%
11%	16%	17%	10%	6%	7%	17%	29%	14%
77%	87%	87%	76%	78%	77%	86%	86%	82%
13%	22%	17%	10%	4%	16%	17%	14%	15%
16%	37%	35%	12%	18%	5%	22%	14%	20%
\$769,972	\$4,128,903	\$10,883,357	\$84,173	\$508,850	\$5,008	\$8,888,209	\$57,851	\$25,326,323
59%	62%	26%	43%	43%	40%	49%	46%	49%
20%	18%	13%	26%	27%	23%	16%	7%	19%
10%	10%	39%	14%	14%	21%	18%	14%	16%
57%	65%	52%	50%	44%	51%	58%	64%	56%

## 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 only  
Respondents exposed to risks in supply chain only  
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 (>1%) total volume of water withdrawal data by source for at risk facilities  
Respondents that verify (>1%) 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



Australia	Canada	France	Germany	Japan	South Africa	South Korea	Switzerland	USA	United Kingdom
14	11	20	12	75	25	12	10	133	28
8	9	13	7	43	23	7	7	113	27
6	2	7	5	32	2	5	3	20	1
25%	50%	51%	39%	52%	47%	32%	38%	41%	38%
55	22	39	31	143	53	38	26	321	74
29%	36%	40%	33%	7%	72%	33%	50%	24%	46%
64%	55%	85%	67%	63%	68%	75%	80%	66%	71%
43%	82%	50%	67%	71%	48%	67%	70%	46%	64%
21%	0%	55%	50%	27%	32%	42%	60%	41%	46%
29%	9%	60%	75%	36%	44%	42%	40%	30%	50%
29%	9%	5%	8%	21%	4%	0%	20%	17%	18%
64%	45%	75%	58%	53%	60%	50%	30%	52%	61%
71%	64%	60%	67%	72%	68%	50%	30%	52%	68%
43%	73%	70%	67%	71%	84%	75%	60%	61%	64%
43%	73%	65%	58%	68%	80%	75%	60%	56%	57%
21%	9%	50%	50%	45%	64%	25%	40%	40%	57%
43%	73%	70%	67%	71%	84%	75%	60%	61%	64%
50%	73%	80%	75%	72%	84%	67%	60%	73%	79%
86%	100%	90%	92%	88%	100%	75%	100%	89%	93%
57%	82%	75%	92%	87%	84%	75%	90%	68%	79%
0%	9%	50%	50%	21%	44%	42%	50%	16%	25%
7%	0%	40%	50%	12%	16%	33%	50%	9%	11%
57%	45%	80%	100%	85%	100%	33%	100%	47%	93%
0%	0%	10%	42%	4%	8%	0%	20%	4%	4%
14%	27%	15%	17%	4%	12%	8%	10%	17%	18%
71%	73%	95%	92%	75%	80%	58%	80%	68%	75%
7%	9%	10%	8%	11%	28%	17%	20%	10%	11%
14%	45%	25%	17%	9%	16%	8%	40%	23%	25%
\$1,500	\$9,926,265	\$428,983	\$173,728	\$400,766	\$873,918	\$700,000	\$246,515	\$2,937,142	\$118,339
43%	18%	80%	58%	37%	56%	50%	50%	46%	75%
57%	36%	80%	75%	63%	72%	58%	80%	63%	89%
43%	45%	85%	75%	56%	76%	58%	70%	56%	79%
50.00%	45.45%	70.00%	83.33%	52.00%	72.00%	58.33%	80.00%	55.64%	78.57%

## Appendix III

### Response status and sector by company

#### Responders

##### 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

Company name	Response status	Ticker	Country HQ
<b>Consumer Discretionary</b>			
AccorHotels	AQ (NP)	AC FP	France
adidas AG	DP	ADS GR	Germany
Aisin Seiki Co., Ltd.	DP	7259 JP	Japan
AKSA AKRİLİK KİMYA SANAYİİ A.Ş.	AQ	AKSA TI	Turkey
ARÇELİK A.Ş.	DP	ARCLK TI	Turkey
Aristocrat Leisure	NR	ALL AU	Australia
Asics Corporation	NR	7936 JP	Japan
Astra International	NR	ASII IJ	Indonesia
AutoNation, Inc.	NR	AN US	USA
AutoZone, Inc.	NR	AZO US	USA
Barratt Developments plc	DP	BDEV LN	United Kingdom
Bed Bath & Beyond Inc.	NR	BBBY US	USA
Best Buy Co., Inc.	AQ	BBY US	USA
BMW AG	AQ (NP)	BMW GR	Germany
BorgWarner	DP	BWA US	USA
Bridgestone Corporation	AQ (NP)	5108 JP	Japan
BRİSA BRIDGESTONE SABANCI LASTİK SAN.VE TİC.A.Ş.	AQ (L)	BRISA TI	Turkey
Burberry Group	NR	BRBY LN	United Kingdom
CarMax Inc.	NR	KMX US	USA
Carnival Corporation	AQ	CCL US	USA
Casio Computer Co., Ltd.	AQ (NP)	6952 JP	Japan
CCC	NR	CCC PW	Poland
Chipotle Mexican Grill	NR	CMG US	USA
Christian Dior	AQ (NP) (L)	CDI FP	France
Coach, Inc.	NR	COH US	USA
Compagnie Financière Richemont SA	DP	CFR VX	Switzerland
Compass	AQ (L)	CPG LN	United Kingdom
Continental AG	DP	CON GR	Germany
Coway Co Ltd	AQ	021240 KS	South Korea
Crown Resorts	NR	CWN AU	Australia
D.R. Horton, Inc.	NR	DHI US	USA
Daihatsu Motor Co., Ltd.	NR	7262 JP	Japan
Daimler AG	DP	DAI GR	Germany
Darden Restaurants, Inc.	AQ	DRI US	USA
Delphi Automotive Plc	AQ	DLPH US	United Kingdom
Denso Corporation	AQ (NP)	6902 JP	Japan
Dixons Carphone	DP	DC/ LN	United Kingdom
Dollar General Corporation	NR	DG US	USA
Dollar Tree Inc	NR	DLTR US	USA
Domino's Pizza Enterprises	NR	DMP AU	Australia
Don Quijote Holdings Co., Ltd.	NR	7532 JP	Japan
Dr. Ing. h. c. F. Porsche AG	AQ (SA)	3407753Z GR	Germany
Echo Entertainment Group	NR	EGP AU	Australia
Electrolux	NR	ELUXB SS	Sweden
Family Dollar Stores, Inc.	NR	FDO US	USA
Famous Brands Limited	DP	FBR SJ	South Africa
FF Group (Folli Follie)	NR	FFGRP GA	Greece
Fiat Chrysler Automobiles NV	AQ (L)	FCA IM	Italy
Flight Centre	NR	FLT AU	Australia
Ford Motor Company	AQ (L)	F US	USA
FORD OTOMOTİV SANAYİ A.Ş.	NR	FROTO TI	Turkey
Foschini Group Ltd	DP	TFG SJ	South Africa
Fossil, Inc.	NR	FOSL US	USA
Fuji Heavy Industries Ltd.	NR	7270 JP	Japan
Galaxy Entertainment Group	NR	27 HK	Hong Kong
GameStop Corp.	NR	GME US	USA
Gap Inc.	AQ	GPS US	USA

Company name	Response status	Ticker	Country HQ
Garmin Ltd	NR	GRMN US	Switzerland
General Motors Company	AQ	GM US	USA
Genuine Parts Company	NR	GPC US	USA
GKN	AQ	GKN LN	United Kingdom
Goodyear Tire & Rubber Company	AQ	GT US	USA
H&M Hennes & Mauritz AB	AQ (L)	HMB SS	Sweden
Hankook Tire Co Ltd	AQ (NP) (L)	161390 KS	South Korea
Harley-Davidson, Inc.	NR	HOG US	USA
Harman International Industries Inc	NR	HAR US	USA
Harvey Norman Holdings	NR	HVN AU	Australia
Hasbro, Inc.	NR	HAS US	USA
Hermes International	DP	RMS FP	France
Hilton Worldwide, Inc.	AQ (L)	HLT US	USA
Honda Motor Company	NR	7267 JP	Japan
HUGO BOSS AG	DP	BOSS GR	Germany
Husqvarna AB	NR	HUSQB SS	Sweden
Hyundai Motor Co	NR	005380 KS	South Korea
Imperial Holdings	DP	IPL SJ	South Africa
Inditex	AQ (L)	ITX SM	Spain
Intercontinental Hotels Group	DP	IHG LN	United Kingdom
Isetan Mitsukoshi Holdings Ltd.	NR	3099 JP	Japan
Isuzu Motors Limited	DP	7202 JP	Japan
Johnson Controls	AQ	JCI US	USA
Jumbo	DP	BELA GA	Greece
Kering	AQ (L)	KER FP	France
Kingfisher	DP	KGF LN	United Kingdom
Kohl's Corporation	DP	KSS US	USA
Koito Manufacturing Co., Ltd.	AQ (NP) (L)	7276 JP	Japan
L Brands, Inc.	NR	LB US	USA
Las Vegas Sands Corporation	NR	LVS US	USA
Leggett & Platt, Inc.	AQ (NP) (L)	LEG US	USA
Lennar Corporation	NR	LEN US	USA
LG Electronics	AQ (NP) (L)	066570 KS	South Korea
Lowe's Companies, Inc.	NR	LOW US	USA
LPP S.A.	NR	LPP PW	Poland
Luxottica Group	DP	LUX IM	Italy
LVMH	AQ	MC FP	France
Macy's, Inc.	NR	M US	USA
Magna International Inc.	AQ (L)	MG CN	Canada
Marks and Spencer Group plc	DP	MKS LN	United Kingdom
Marriott International, Inc.	AQ (L)	MAR US	USA
Mattel, Inc.	DP	MAT US	USA
Mazda Motor Corporation	AQ	7261 JP	Japan
McDonald's Corporation	AQ (NP)	MCD US	USA
MENDERES TEKSTİL SANAYİ VE TİCARET A.Ş.	DP	MNDRS TI	Turkey
Merlin Entertainments Group	NR	MERL LN	United Kingdom
Michael Kors Holdings Ltd	NR	KORS US	Hong Kong
Michelin	AQ (NP) (L)	ML FP	France
Mitsubishi Motors Corporation	NR	7211 JP	Japan
Mohawk Industries, Inc.	AQ (NP) (L)	MHK US	USA
Mr Price Group Ltd	DP	MPC SJ	South Africa
Namco Bandai Holdings Inc.	AQ	7832 JP	Japan
Newell Rubbermaid Inc.	NR	NWL US	USA
Next	DP	NXT LN	United Kingdom
NGK Spark Plug Co., Ltd.	AQ (NP)	5334 JP	Japan
NIKE Inc.	AQ (NP)	NKE US	USA
Nikon Corporation	AQ	7731 JP	Japan
Nissan Motor Co., Ltd.	NR	7201 JP	Japan
NOK Corporation	DP	7240 JP	Japan
Nokian Tyres	AQ	NRE1V FH	Finland
Nordstrom, Inc.	NR	JWN US	USA
OPAP SA	NR	OPAP GA	Greece
O'Reilly Automotive	NR	ORLY US	USA
Oriental Land Co Ltd.	NR	4661 JP	Japan
Panasonic Corporation	AQ (NP)	6752 JP	Japan
Pandora A/S	DP	PNDORA DC	Denmark
Persimmon	DP	PSN LN	United Kingdom
Petsmart, Inc.	NR	PETM US	USA
Pirelli	AQ (NP)	PC IM	Italy
Polo Ralph Lauren Corporation	NR	RL US	USA

Company name	Response status	Ticker	Country HQ
PSA Peugeot Citroen	DP	UG FP	France
Pulte Homes Inc	NR	PHM US	USA
PVH Corp	NR	PVH UN	USA
Renault	DP	RNO FP	France
Ross Stores Inc	NR	ROST US	USA
Royal Caribbean Cruises Ltd	DP	RCL US	USA
Sands China LTD	NR	1928 HK	Hong Kong
Sekisui Chemical Co., Ltd.	AQ	4204 JP	Japan
Sekisui House, Ltd.	AQ	1928 JP	Japan
Sky City Entertainment Group	DP	SKC NZ	New Zealand
Sodexo	AQ (L)	SW FP	France
Sony Corporation	AQ	6758 JP	Japan
Sports Direct International	DP	SPD LN	United Kingdom
Staples, Inc.	AQ	SPLS US	USA
Starbucks Corporation	AQ (L)	SBUX US	USA
Starwood Hotels & Resorts Worldwide, Inc	AQ	HOT US	USA
Steinhoff International Holdings	DP	SHF SJ	South Africa
Sumitomo Electric Industries, Ltd.	AQ (NP) (L)	5802 JP	Japan
Sun International Ltd	AQ (NP)	SUI SJ	South Africa
Super Group	DP	SPG SJ	South Africa
Suzuki Motor Corporation	AQ (NP)	7269 JP	Japan
Swatch Group	DP	UHRN SW	Switzerland
Tabcorp Holdings	NR	TAH AU	Australia
Target Corporation	AQ	TGT US	USA
Tatts Group	AQ (NP)	TTS AU	Australia
Taylor Wimpey Plc	AQ	TW/ LN	United Kingdom
Tesla Motors, Inc.	NR	TSLA US	USA
The Home Depot, Inc.	NR	HD US	USA
Tiffany & Co.	NR	TIF US	USA
TJX Companies, Inc.	NR	TJX US	USA
TOFAŞ TÜRK OTOMOBİL FABRİKASI A.Ş.	AQ	TOASO TI	Turkey
Toyota Industries Corporation	AQ	6201 JP	Japan
Toyota Motor Corporation	AQ	7203 JP	Japan
Tractor Supply Co.	NR	TSCO US	USA
Truworths International	DP	TRU SJ	South Africa
Tsogo Sun Holdings Ltd	AQ (SA)	TSH SJ	South Africa
TUI Group	NR	TUI1 GR	United Kingdom
Under Armour Inc	NR	UA US	USA
Urban Outfitters, Inc.	NR	URBN US	USA
USS Co., Ltd.	NR	4732 JT	Japan
VF Corporation	NR	VFC US	USA
Volkswagen AG	IN*	VOW3 GR	Germany
Whirlpool Corporation	NR	WHR US	USA
Whitbread	DP	WTB LN	United Kingdom
William Hill	DP	WMH LN	United Kingdom
Woolworths Holdings Ltd	AQ	WHL SJ	South Africa
Wyndham Worldwide Corporation	DP	WYN US	USA
Wynn Resorts, Limited	NR	WYNN US	USA
Yamaha Motor Co., Ltd.	DP	7272 JP	Japan
Yum! Brands, Inc.	AQ (NP)	YUM US	USA
<b>Consumer staples</b>			
Aeon Co., Ltd.	NR	8267 JP	Japan
Ajinomoto Co.Inc.	AQ	2802 JP	Japan
Altria Group, Inc.	AQ (L)	MO US	USA
Ambev - Cia de Bebidas das Américas	AQ (SA)	ABEV3 BZ	Brazil
AmorePacific Corporation	AQ (L)	090430 KS	South Korea
ANADOLU EFES BİRACILIK VE MALT SANAYİİ A.Ş.	NR	AEFES TI	Turkey
Anheuser Busch InBev	AQ	ABI BB	Belgium
Arca Continental, SAB de CV	NR	AC* MM	Mexico
Archer Daniels Midland	DP	ADM US	USA
Aryzta AG	DP	ARYN VX	Switzerland
Asahi Group Holdings, Ltd.	AQ	2502 JP	Japan
Associated British Foods	AQ (L)	ABF LN	United Kingdom
Avi Ltd	DP	AVI SJ	South Africa
Avon Products, Inc.	NR	AVP US	USA
Barry Callebaut AG	AQ (L)	BARN SW	Switzerland
Beiersdorf AG	AQ	BEI GR	Germany
BİM BİRLEŞİK MAĞAZALAR A.Ş.	DP	BIMAS TI	Turkey

Company name	Response status	Ticker	Country HQ
BİZİM TOPTAN SATIŞ MAĞAZALARI A.Ş.	NR	BİZİM TI	Turkey
BRF S.A	AQ (NP)	BRFS3 BZ	Brazil
British American Tobacco	AQ	BATS LN	United Kingdom
Brown-Forman Corporation	AQ (L)	BF/B US	USA
Bunge	AQ	BG US	USA
Calbee, Inc.	NR	2229 JP	Japan
Campbell Soup Company	AQ	CPB US	USA
Carlsberg Breweries A/S	NR	CARLB DC	Denmark
Carrefour	AQ (NP)	CA FP	France
Casino Guichard-Perrachon	DP	CO FP	France
China Mengniu Dairy Company Limited	NR	2319 HK	Hong Kong
Chocoladefabriken Lindt & Sprüngli AG	AQ (NP)	LISN SW	Switzerland
CJ Cheiljedang	AQ (NP)	097950 KS	South Korea
Clicks Group Ltd	DP	CLS SJ	South Africa
Clorox Company	AQ	CLX US	USA
Coca-Cola Amatil	NR	OCL AU	Australia
Coca-Cola Enterprises, Inc.	AQ (L)	CCE US	USA
Coca-Cola Femsa Sab-Ser I	NR	KOFL MM	Mexico
Coca-Cola HBC AG	AQ	CCH LN	Switzerland
COCA-COLA İÇECEK A.Ş.	AQ (L)	CCOLA TI	Turkey
Colgate Palmolive Company	AQ (L)	CL US	USA
Colruyt	DP	COLR BB	Belgium
ConAgra Foods, Inc.	AQ (L)	CAG US	USA
Constellation Brands, Inc.	AQ	STZ US	USA
Costco Wholesale Corporation	NR	COST US	USA
CVS Health	AQ	CVS US	USA
Danone	AQ (L)	BN FP	France
Delhaize Group	NR	DELB BB	Belgium
Dia	NR	DIA SM	Spain
Diageo Plc	AQ	DGE LN	United Kingdom
Dr Pepper Snapple Group Inc	NR	DPS US	USA
Estee Lauder Companies Inc.	NR	EL US	USA
Eurocash S.A.	NR	EUR PW	Poland
General Mills Inc.	AQ	GIS US	USA
Grupo Bimbo, S.A.B. de C.V.	AQ (NP) (L)	BIMBOA MM	Mexico
Heineken Holding NV	AQ (SA)	HEIO NA	Netherlands
Heineken NV	AQ	HEIA NA	Netherlands
Henan Shuanghui Investment & Development (A)	NR	000895 CH	China
Henkel AG & Co. KGaA	AQ (NP) (L)	HEN3 GR	Germany
Hindustan Unilever	NR	HUVR IN	India
Hitejinro	NR	000080 KS	South Korea
Hormel Foods	AQ	HRL US	USA
ICA Gruppen	DP	ICA SS	Sweden
Illovo Sugar Ltd	AQ	ILV SJ	South Africa
Imperial Tobacco Group	AQ (L)	IMT LN	United Kingdom
ITC Limited	DP	ITC IN	India
J Sainsbury Plc	NR	SBRY LN	United Kingdom
Japan Tobacco Inc.	AQ (NP)	2914 JP	Japan
Jerónimo Martins SGPS SA	DP	JMT PL	Portugal
KAO Corporation	AQ	4452 JP	Japan
Kellogg Company	AQ	K US	USA
Kerry Group PLC	DP	KYG ID	Ireland
Keurig Green Mountain	DP	GMCR US	USA
Kikkoman Corporation	NR	2801 JP	Japan
Kimberly-Clark Corporation	AQ	KMB US	USA
Kirin Holdings Co Ltd	AQ (L)	2503 JP	Japan
Koninklijke Ahold	AQ	AH NA	Netherlands
Kraft Foods	NR	KRFT US	USA
Kroger	NR	KR US	USA
Kweichow Moutai	NR	600519 CH	China
LAWSON, Inc.	NR	2651 JP	Japan
LG Household & Health Care	NR	051900 KS	South Korea
L'Oréal	AQ (L)	OR FP	France
Lorillard Inc.	NR	LO US	USA
Lotte Chilsung	NR	005300 KS	South Korea
Magnit	NR	MGNT RM	Russia
Massmart Holdings Ltd	DP	MSM SJ	South Africa
McCormick & Company, Incorporated	AQ	MKC US	USA
Mead Johnson Nutrition Company	AQ	MJN US	USA

\*Response withdrawn due to legal enquiry into misstated diesel emissions Sep 2015.



Company name	Response status	Ticker	Country HQ
Meiji Holdings Co Ltd	NR	2269 JP	Japan
METRO AG	DP	MEO GR	Germany
METRO TİCARİ VE MALİ YATIRIMLAR A.Ş.	NR	METRO TI	Turkey
MİGROS TİCARET A.Ş.	DP	MGROS TI	Turkey
Molson Coors Brewing Company	NR	TAP US	USA
Mondelez International Inc	AQ (L)	MDLZ US	USA
Monster Beverage Corporation	NR	MNST US	USA
Morrison Supermarkets	NR	MRW LN	United Kingdom
Nestlé	AQ	NESN VX	Switzerland
NH Foods Ltd.	AQ (NP)	2282 JP	Japan
Nissin Foods Holdings Co., Ltd.	NR	2897 JP	Japan
Nutreco Holding	NR	NUO NA	Netherlands
Oceana	DP	OCE SJ	South Africa
Orion	AQ (NP)	001800 KS	South Korea
Orkla ASA	AQ (L)	ORK NO	Norway
PepsiCo, Inc.	AQ (L)	PEP US	USA
Pernod Ricard	AQ	RI FP	France
Philip Morris International	AQ	PM US	USA
Pick 'n Pay Stores Ltd	AQ (NP)	PIK SJ	South Africa
Pioneer Foods	AQ (L)	PFJ SJ	South Africa
Procter & Gamble Company	NR	PG US	USA
RCL Foods Ltd	AQ (L)	RCL SJ	South Africa
Reckitt Benckiser	AQ (NP)	RB/ LN	United Kingdom
Remy Cointreau	AQ (NP)	RCO FP	France
Reynolds American Inc.	DP	RAI US	USA
SABMiller	AQ (L)	SAB LN	United Kingdom
Safeway Inc.	NR	SWY US	USA
Saputo Inc.	NR	SAP CN	Canada
SCA	AQ	SCAB SS	Sweden
Seven & I Holdings Co., Ltd.	NR	3382 JP	Japan
Shiseido Co., Ltd.	AQ	4911 JP	Japan
Shoprite Holdings Ltd	DP	SHP SJ	South Africa
Suntory Beverage & Food	NR	2587 JP	Japan
Swedish Match	AQ (NP) (L)	SWMA SS	Sweden
Sysco Corporation	AQ (L)	SYU US	USA
TAT GIDA SANAYİ A.Ş.	DP	TATGD TI	Turkey
Tate & Lyle	AQ (NP) (L)	TATE LN	United Kingdom
Tesco	DP	TSCO LN	United Kingdom
TESCO KİPA	AQ (SA)	KIPA TI	Turkey
The Coca-Cola Company	AQ	KO US	USA
The Hershey Company	AQ	HSY US	USA
The J.M. Smucker Company	AQ	SJM US	USA
The Spar Group Ltd	DP	SPP SJ	South Africa
Tiger Brands	AQ (L)	TBS SJ	South Africa
Tongaat Hulett Ltd	AQ	TON SJ	South Africa
Treasury Wine Estates	NR	TWE AU	Australia
Tyson Foods, Inc.	DP	TSN US	USA
ÜLKER BİSKÜVİ SANAYİ A.Ş.	NR	ULKER TI	Turkey
Uni-Charm Corporation	AQ	8113 JP	Japan
Unilever Nv Cva	AQ (SA)	UNA NA	Netherlands
Unilever plc	AQ	ULVR LN	United Kingdom
Uni-president Enterprises	NR	1216 TT	Taiwan
Wal Mart de Mexico	AQ (NP)	WALMEX* MM	Mexico
Walgreen Boots Alliance	DP	WBA US	USA
Wal-Mart Stores, Inc.	AQ (NP) (L)	WMT US	USA
Wesfarmers	NR	WES AU	Australia
Whole Foods Market, Inc.	AQ	WFM US	USA
Woolworths Limited	NR	WOW AU	Australia
Yakult Honsha Co Ltd.	NR	2267 JP	Japan
<b>Energy</b>			
Amec Foster Wheeler	DP	AMFW LN	United Kingdom
Anadarko Petroleum Corporation	AQ	APC US	USA
Apache Corporation	AQ	APA US	USA
Baker Hughes Incorporated	AQ	BHI US	USA
BG Group	AQ	BG/ LN	United Kingdom
BP	DP	BP/ LN	United Kingdom
Cabot Oil & Gas Corporation	NR	COG US	USA
Caltex Australia	DP	CTX AU	Australia
Cameco Corporation	NR	CCO CN	Canada

Company name	Response status	Ticker	Country HQ
Cameron International Corporation	NR	CAM US	USA
Canadian Natural Resources Limited	AQ (L)	CNQ CN	Canada
Chesapeake Energy Corporation	NR	CHK US	USA
Chevron Corporation	DP	CVX US	USA
China Shenhua Energy	NR	1088 HK	China
Cimarex Energy Co.	NR	XEC US	USA
CNOOC	NR	883 HK	China
Coal India	NR	COAL IN	India
ConocoPhillips	NR	COP US	USA
CONSOL Energy Inc.	AQ	CNX US	USA
Denbury Resources Inc	NR	DNR US	USA
Devon Energy Corporation	AQ	DVN US	USA
Diamond Offshore Drilling	NR	DO US	USA
Ecopetrol Sa	AQ	ECOPETL CB	Colombia
Enbridge Inc.	AQ	ENB CN	Canada
Eni SpA	DP	ENI IM	Italy
Enso International Incorporated	NR	ESV US	United Kingdom
EOG Resources, Inc.	AQ	EOG US	USA
EQT Corporation	DP	EQT US	USA
Exxaro Resources Ltd	AQ	EXX SJ	South Africa
Exxon Mobil Corporation	DP	XOM US	USA
FMC Technologies	NR	FTI US	USA
Galp Energia SGPS SA	DP	GALP PL	Portugal
Gazprom OAO	AQ (L)	GAZP RM	Russia
Grupa Lotos S.A.	NR	LTS PW	Poland
Halliburton Company	AQ	HAL US	USA
Helmerich & Payne	NR	HP US	USA
Hess Corporation	AQ	HES US	USA
Husky Energy Inc.	AQ (L)	HSE CN	Canada
Imperial Oil	NR	IMO CN	Canada
Inpex Corporation	NR	1605 JP	Japan
IPEK DOĞAL ENERJİ KAYNAKLARI ARAŞTIRMA VE ÜRETİM A.Ş.	NR	IPEKE TI	Turkey
JX Holdings, Inc	NR	5020 JP	Japan
Kinder Morgan Inc.	DP	KMI US	USA
Lubelski Węgiel BOGDANKA S.A.	NR	LWB PW	Poland
Lukoil OAO	DP	LKOH RX	Russia
Lundin Petroleum	DP	LUPE SS	Sweden
Marathon Oil Corporation	DP	MRO US	USA
Marathon Petroleum	DP	MPC US	USA
MOL Nyrt.	AQ	MOL HB	Hungary
Murphy Oil Corporation	DP	MUR US	USA
Nabors Industries Ltd.	NR	NBR US	Bermuda
National Oilwell Varco, Inc.	NR	NOV US	USA
Neste Corporation	NR	NESTE FH	Finland
New Hope	NR	NHC AU	Australia
Newfield Exploration Co	NR	NFX US	USA
Noble Corporation	NR	NE US	USA
Noble Energy, Inc.	AQ (L)	NBL US	USA
Novatek OAO	AQ (L)	NVTK RM	Russia
Occidental Petroleum Corporation	AQ	OXY US	USA
Oil & Natural Gas	NR	ONGC IN	India
Oil Search	AQ (NP) (L)	OSH AU	Australia
OMV AG	DP	OMV AV	Austria
OMV PETROL OFİSİ A.Ş.	NR	PTOFS TI	Turkey
Oneok Inc.	NR	OKE US	USA
Origin Energy	NR	ORG AU	Australia
PETROCHINA Company Limited	NR	857 HK	China
Petrofac	NR	PFC LN	United Kingdom
Petróleo Brasileiro SA - Petrobras	DP	PETRA BZ	Brazil
Phillips 66	DP	PSX US	USA
Pioneer Natural Resources	NR	PXD US	USA
Polski Koncern Naftowy ORLEN	NR	PKN PW	Poland
Polskie Górnictwo Naftowe i Gazownictwo SA	NR	PGN PW	Poland
PTT	AQ (NP)	PTT TB	Thailand
QEP Resources	NR	QEP US	USA
Range Resources Corp.	NR	RRC US	USA
Reliance Industries	NR	RIL IN	India
Repsol	DP	REP SM	Spain
Rosneft OAO	NR	ROSN RM	Russia

Company name	Response status	Ticker	Country HQ
Royal Dutch Shell	DP	RDSA NA	Netherlands
Saipem	DP	SPM IM	Italy
Santos	NR	STO AU	Australia
Sasol Limited	AQ (L)	SOL SJ	South Africa
Schlumberger Limited	NR	SLB US	USA
Seadrill Management Ltd	DP	SDRL NO	Norway
S-Oil Corp	NR	010950 KS	South Korea
Southwestern Energy	NR	SWN US	USA
Spectra Energy Corp	DP	SE US	USA
Statoil ASA	DP	STL NO	Norway
Subsea 7	NR	SUBC NO	Norway
Suncor Energy Inc.	AQ	SU CN	Canada
Surgutneftegas OAO	NR	SNGSP RM	Russia
Tatneft OAO	NR	TATN RM	Russia
Technip Sa	NR	TEC FP	France
Tenaris S.A.	NR	TEN IM	Luxembourg
Tesor Corporation	NR	TSO US	USA
Total	NR	FP FP	France
TransCanada Corporation	NR	TRP CN	Canada
Transneft OAO	NR	TRNFP RM	Russia
Transocean Ltd.	NR	RIGN VX	Switzerland
TÜPRAŞ-TÜRKİYE PETROL RAFİNERİLERİ A.Ş.	NR	TUPRS TI	Turkey
TURCAS PETROL A.Ş.	NR	TRCAS TI	Turkey
Valero Energy Corporation	DP	VLO US	USA
Vopak	NR	VPK NA	Netherlands
Williams Companies, Inc.	NR	WMB US	USA
Woodside Petroleum	NR	WPL AU	Australia
WorleyParsons	AQ	WOR AU	Australia
<b>Health Care</b>			
Abbott Laboratories	AQ	ABT US	USA
AbbVie Inc	AQ (L)	ABBV US	USA
Actavis plc.	NR	ACT US	Ireland
Actelion Ltd	NR	ATLN VX	Switzerland
Aetna Inc.	AQ	AET US	USA
Alexion Pharmaceuticals	NR	ALXN US	USA
Allergan, Inc.	AQ	AGN US	USA
Amgen, Inc.	AQ	AMGN US	USA
Ansell	DP	ANN AU	Australia
Anthem Inc	AQ	ANTM US	USA
Aspen Pharmacare Holdings	AQ	APN SJ	South Africa
Astellas Pharma Inc.	AQ	4503 JP	Japan
AstraZeneca	AQ	AZN LN	United Kingdom
Baxter International Inc.	DP	BAX US	USA
Bayer AG	AQ	BAYN GR	Germany
Becton, Dickinson and Co.	AQ	BDX US	USA
Biogen Inc.	AQ	BIIB US	USA
Boston Scientific Corporation	AQ	BSX US	USA
Bristol-Myers Squibb	AQ	BMJ US	USA
Carefusion Corp	NR	CFN US	USA
Celgene Corporation	AQ	CELG US	USA
Cerner Corp	NR	CERN US	USA
Chugai Pharmaceutical Co., Ltd.	AQ (L)	4519 JP	Japan
Cigna	DP	CI US	USA
Cochlear	NR	COH AU	Australia
Coloplast A/S	AQ (NP) (L)	COLOB DC	Denmark
Covidien Ltd.	AQ	COV US	Ireland
CR Bard Inc	NR	BCR US	USA
CSL	AQ	CSL AU	Australia
Daiichi Sankyo Co., Ltd.	AQ	4568 JP	Japan
DENTSPLY International Inc.	NR	XRAY US	USA
Edwards Lifesciences Corp	AQ	EW US	USA
EİS ECZACİBAŞI İLAÇ, SINAI VE FİNANSAL YATIRIMLAR SANAYİ VE TİCARET A.Ş.	NR	ECILC TI	Turkey
Eisai Co., Ltd.	NR	4523 JP	Japan
Elekta	NR	EKTAB SS	Sweden
Eli Lilly & Co.	AQ	LLY US	USA
Essilor International	AQ (NP)	EI FP	France
Getinge	NR	GETIB SS	Sweden
Gilead Sciences, Inc.	NR	GILD US	USA

Company name	Response status	Ticker	Country HQ
GlaxoSmithKline	AQ	GSK LN	United Kingdom
GRIFOLS	DP	GRF SM	Spain
HCA	NR	HCA US	USA
Healthscope Limited	NR	HSO AU	Australia
Hikma Pharmaceuticals	DP	HIK LN	United Kingdom
Hospira, Inc.	AQ	HSP US	USA
Humana Inc.	NR	HUM US	USA
Intuitive Surgical Inc.	NR	ISRG US	USA
Johnson & Johnson	AQ (L)	JNJ US	USA
Kyowa Hakko Kirin Co., Ltd.	AQ (SA)	4151 JP	Japan
Life Healthcare Group Holdings Ltd	DP	LHC SJ	South Africa
Mallinckrodt plc	AQ (NP) (L)	MNK US	USA
Mediclinic International	AQ	MDC SJ	South Africa
Medtronic PLC	AQ	MDT US	Ireland
Merck & Co., Inc.	AQ	MRK US	USA
Mitsubishi Tanabe Pharma Corporation	AQ (SA)	4508 JP	Japan
Mylan Inc.	NR	MYL US	USA
Netcare Limited	AQ	NTC SJ	South Africa
Novartis	AQ	NOVN VX	Switzerland
Novo Nordisk A/S	DP	NOVOB DC	Denmark
Olympus Corporation	AQ	7733 JP	Japan
Ono Pharmaceutical Co., Ltd.	AQ	4528 JT	Japan
Orion Oyj	DP	ORNBV FH	Finland
Perrigo Co.	NR	PRGO US	Ireland
Pfizer Inc.	AQ	PFE US	USA
Primary Health Care	NR	PRY AU	Australia
Ramsay Health Care	NR	RHC AU	Australia
Regeneron Pharmaceuticals, Inc.	DP	REGN US	USA
ResMed	NR	RMD US	USA
Richter Gedeon Nyrt.	NR	RICHT HB	Hungary
Roche Holding AG	AQ	ROG VX	Switzerland
SANOFI	AQ	SAN FP	France
Santen Pharmaceutical Co., Ltd.	NR	4536 JT	Japan
Shire	AQ	SHP LN	Ireland
Smith & Nephew	DP	SN/ LN	United Kingdom
Sonova Holding AG	DP	SOON VX	Switzerland
St. Jude Medical, Inc.	NR	STJ US	USA
Stryker Corporation	NR	SYK US	USA
Sun Pharmaceutical Industries	NR	SUNP IN	India
Sysmex Corporation	AQ (L)	6869 JP	Japan
Taisho Pharmaceutical Co., Ltd.	NR	4581 JT	Japan
Takeda Pharmaceutical Company Limited	AQ	4502 JP	Japan
Tenet Healthcare Corporation	AQ	THC US	USA
Terumo Corporation	AQ (L)	4543 JP	Japan
Teva Pharmaceutical Industries Ltd	DP	TEVA IT	Israel
UCB SA	NR	UCB BB	Belgium
UnitedHealth Group Inc	AQ	UNH US	USA
Universal Health Services	NR	UHS US	USA
Valeant Pharmaceuticals International, Inc.	NR	VRX US	USA
Varian Medical Systems Inc	AQ	VAR US	USA
Vertex Pharmaceuticals Inc	NR	VRTX US	USA
William Demant Holding A/S	NR	WDH DC	Denmark
Zimmer Holdings, Inc.	NR	ZBH US	USA
Zoetis Inc	DP	ZTS US	USA
<b>Industrials</b>			
3M Company	AQ	MMM US	USA
ABB	NR	ABBN VX	Switzerland
ACS Actividades de Construcción y Servicios	DP	ACS SM	Spain
Airbus Group	DP	AIR FP	Netherlands
Alfa Laval Corporate AB	NR	ALFA SS	Sweden
Allegion Plc	DP	ALLE US	Ireland
Alstom	DP	ALO FP	France
Ametek, Inc.	NR	AME US	USA
ANDRITZ AG	NR	ANDR AV	Austria
Asahi Glass Co., Ltd.	AQ	5201 JP	Japan
ASELSAN ELEKTRONİK SANAYİ VE TİCARET A.Ş.	DP	ASELS TI	Turkey
Ashtead Group	DP	AHT LN	United Kingdom

Company name	Response status	Ticker	Country HQ
Assa Abloy	AQ	ASSAB SS	Sweden
Atlas Copco	NR	ATCOA SS	Sweden
BAE Systems	DP	BA/ LN	United Kingdom
Barloworld	AQ	BAW SJ	South Africa
Bidvest Group Ltd	AQ	BVT SJ	South Africa
Boeing Company	NR	BA US	USA
Bouygues	DP	EN FP	France
Brenntag AG	DP	BNR GR	Germany
Bunzl plc	DP	BNZL LN	United Kingdom
Caterpillar Inc.	NR	CAT US	USA
Cheil Industries Inc.	NR	028260 KS	South Korea
CIMIC Group Limited	AQ (NP)	CIM AU	Australia
CITIC Pacific	NR	267 HK	Hong Kong
CJ	NR	001040 KS	South Korea
CNH Industrial NV	AQ (L)	CNHI US	United Kingdom
Cobham	DP	COB LN	United Kingdom
Cummins Inc.	AQ (L)	CMI US	USA
Daewoo E&C	NR	047040 KS	South Korea
Dai Nippon Printing Co., Ltd.	AQ	7912 JP	Japan
Daikin Industries, Ltd.	AQ	6367 JP	Japan
Danaher Corporation	NR	DHR US	USA
Deere & Company	AQ	DE US	USA
Doosan Heavy Industries & Construction	NR	034020 KS	South Korea
Dover Corporation	NR	DOV US	USA
Eaton Corporation	DP	ETN US	USA
Emerson Electric Co.	AQ	EMR US	USA
ENKA İNŞAAT VE SANAYİ A.Ş.	NR	ENKAI TI	Turkey
Fanuc Corporation	NR	6954 JP	Japan
Fastenal Company	NR	FAST US	USA
FERROVIAL	DP	FER SM	Spain
Finmeccanica	DP	FNC IM	Italy
Flowserve Corporation	NR	FLS US	USA
Fluor Corporation	AQ	FLR US	USA
GEA Group AG	DP	G1A GR	Germany
Geberit AG	DP	GEBN VX	Switzerland
General Dynamics Corporation	NR	GD US	USA
General Electric Company	AQ (L)	GE US	USA
GS Engineering & Construction	NR	006360 KS	South Korea
Hino Motors, Ltd.	NR	7205 JP	Japan
Hitachi Construction Machinery Co., Ltd.	NR	6305 JP	Japan
Honeywell International Inc.	DP	HON US	USA
Hosken Consolidated Investments	AQ (L)	HCI SJ	South Africa
Hutchison Whampoa	NR	13 HK	Hong Kong
Hyundai E&C	AQ	000720 KS	South Korea
IHI Corporation	DP	7013 JP	Japan
Illinois Tool Works, Inc.	AQ (NP)	ITW US	USA
IMI plc	NR	IMI LN	United Kingdom
Ingersoll-Rand Co. Ltd.	AQ (L)	IR US	Ireland
ITOCHU Corporation	AQ (NP)	8001 JP	Japan
Jacobs Engineering Group Inc.	NR	JEC US	USA
Jaiprakash Associates	NR	JPA IN	India
Jardine Matheson	NR	JM SP	Hong Kong
JGC Corporation	NR	1963 JP	Japan
Joy Global Inc	NR	JOY US	USA
JTEKT Corporation	DP	6473 JP	Japan
Kajima Corporation	AQ	1812 JP	Japan
KAP Industrial Holdings Ltd	DP	KAP SJ	South Africa
Kawasaki Heavy Industries, Ltd.	AQ (NP)	7012 JP	Japan
KCC	NR	002380 KS	South Korea
KOÇ HOLDİNG A.Ş.	NR	KCHOL TI	Turkey
Komatsu Ltd.	AQ	6301 JP	Japan
Kone Oyj	NR	KNEBV FH	Finland
Kubota Corporation	AQ	6326 JP	Japan
L-3 Communications Holdings, Inc.	DP	LLL US	USA
Larsen & Toubro	NR	LT IN	India
LEGRAND	DP	LR FP	France
LIXIL Group Corporation	NR	5938 JP	Japan
Lockheed Martin Corporation	AQ	LMT US	USA
Makita Corporation	NR	6586 JP	Japan
MAN SE	AQ (SA)	MAN GR	Germany
Marubeni Corporation	AQ (NP)	8002 JP	Japan

Company name	Response status	Ticker	Country HQ
Masco Corporation	NR	MAS US	USA
Meggitt	AQ	MGGT LN	United Kingdom
Melrose PLC	DP	MRO LN	United Kingdom
Metso	NR	MEO1V FH	Finland
Minebea Co., Ltd.	NR	6479 JP	Japan
Mitsubishi Corporation	AQ (NP)	8058 JP	Japan
Mitsubishi Electric Corporation	AQ	6503 JP	Japan
Mitsubishi Heavy Industries, Ltd.	AQ	7011 JP	Japan
Mitsui & Co., Ltd.	AQ (NP)	8031 JP	Japan
NGK Insulators, Ltd.	AQ (NP)	5333 JP	Japan
Nidec Corporation	NR	6594 JP	Japan
Northrop Grumman Corp	NR	NOC US	USA
NSK Ltd.	AQ (L)	6471 JP	Japan
Obayashi Corporation	NR	1802 JP	Japan
OCI N.V.	NR	OCI NA	Netherlands
Osram Licht Ag	NR	OSR GR	Germany
PACCAR Inc	NR	PCAR US	USA
Pall Corporation	AQ (L)	PLL US	USA
Parker-Hannifin Corporation	AQ (L)	PH US	USA
Pentair, Inc.	NR	PNR US	United Kingdom
Precision Castparts Corp.	NR	PCP US	USA
Quanta Services Inc	NR	PWR US	USA
Raytheon Company	AQ	RTN US	USA
Republic Services, Inc.	NR	RSG US	USA
Reunert	AQ (L)	RLO SJ	South Africa
Rexel	NR	RXL FP	France
Rockwell Automation	AQ	ROK US	USA
Rockwell Collins, Inc.	AQ	COL US	USA
Rolls-Royce	DP	RR/ LN	United Kingdom
Roper Industries Inc	NR	ROP US	USA
Royal Boskalis Westminster	DP	BOKA NA	Netherlands
Royal Philips	AQ	PHIA NA	Netherlands
Safran	DP	SAF FP	France
Saint-Gobain	AQ	SGO FP	France
Samsung C&T	NR	000830 KS	South Korea
Samsung Engineering	NR	028050 KS	South Korea
Samsung Heavy Industries Co Ltd	NR	010140 KS	South Korea
Sandvik AB	AQ (L)	SAND SS	Sweden
Schindler Holding AG	DP	SCHP VX	Switzerland
Schneider Electric	DP	SU FP	France
Shimizu Corporation	NR	1803 JP	Japan
Siemens AG	DP	SIE GR	Germany
Skanska AB	NR	SKAB SS	Sweden
SKF	DP	SKFB SS	Sweden
SMC Corporation	NR	6273 JP	Japan
Smiths Group	DP	SMIN LN	United Kingdom
Snap-On Inc	DP	SNA US	USA
Stanley Black & Decker, Inc.	AQ	SWK US	USA
Stericycle Inc.	NR	SRCL US	USA
Sulzer AG	DP	SUN SW	Switzerland
Sumitomo Corporation	DP	8053 JP	Japan
T.ŞİŞE VE CAM FABRİKALARI A.Ş.	DP	SISE TI	Turkey
Taisei Corporation	AQ	1801 JP	Japan
Textron Inc.	AQ (L)	TXT US	USA
Thales	DP	HO FP	France
Toppan Printing Co., Ltd.	AQ	7911 JP	Japan
Toshiba Corporation	AQ	6502 JP	Japan
Toto Ltd.	AQ	5332 JP	Japan
Toyota Tsusho Corporation	NR	8015 JT	Japan
TRAKYA CAM SANAYİİ A.Ş.	NR	TRKCM TI	Turkey
Travis Perkins	AQ (L)	TPK LN	United Kingdom
TÜRK TRAKTÖR VE ZİRAAT MAKİNELERİ A.Ş.	NR	TTRAK TI	Turkey
UNITED RENTALS	NR	URI US	USA
United Technologies Corporation	AQ (NP) (L)	UTX US	USA
Vallourec	NR	VK FP	France
Vestas Wind Systems A/S	AQ (NP)	VWS DC	Denmark
Vinci	AQ (L)	DG FP	France
Volvo	NR	VOLVB SS	Sweden
W.W. Grainger, Inc.	AQ (NP) (L)	GWW US	USA
Wärtsilä Corporation	NR	WRT1V FH	Finland



Company name	Response status	Ticker	Country HQ
Waste Management, Inc.	AQ	WM US	USA
Weir Group	DP	WEIR LN	United Kingdom
Wolseley plc	DP	WOS LN	United Kingdom
Xylem Inc	AQ	XYL US	USA
YAZICILAR HOLDING A.Ş.	NR	YAZIC TI	Turkey
Zardoya Otis	DP	ZOT SM	Spain
Zodiac	DP	ZC FP	France
<b>Information Technology</b>			
Alcatel - Lucent	DP	ALU FP	France
Altera Corp.	AQ	ALTR US	USA
Amphenol Corporation	DP	APH US	USA
Analog Devices, Inc.	AQ (NP) (L)	ADI US	USA
Apple Inc.	NR	AAPL US	USA
Applied Materials Inc.	AQ	AMAT US	USA
ARM Holdings	AQ (L)	ARM LN	United Kingdom
ASML Holding	DP	ASML NA	Netherlands
Avago Technologies	NR	AVGO US	Singapore
Broadcom Corporation	AQ	BRCM US	USA
Brother Industries, Ltd.	AQ	6448 JP	Japan
Canon Inc.	AQ	7751 JP	Japan
Cisco Systems, Inc.	AQ	CSCO US	USA
Corning Incorporated	DP	GLW US	USA
Datatec	DP	DTC SJ	South Africa
EMC Corporation	AQ	EMC US	USA
Ericsson	DP	ERICB SS	Sweden
F5 Networks, Inc.	NR	FFIV US	USA
First Solar Inc	NR	FSLR US	USA
FLIR Systems	NR	FLIR US	USA
Fujifilm Holdings Corporation	AQ (NP)	4901 JP	Japan
Fujitsu Ltd.	AQ	6702 JP	Japan
Harris Corporation	NR	HRS US	USA
Hewlett-Packard	AQ (L)	HPQ US	USA
Hexagon AB	NR	HEXAB SS	Sweden
Hirose Electric Co., Ltd.	NR	6806 JP	Japan
Hitachi, Ltd.	AQ	6501 JP	Japan
Hon Hai Precision Industry	AQ (NP)	2317 TT	Taiwan
Hoya Corporation	AQ (NP)	7741 JP	Japan
Infineon	AQ (NP) (L)	IFX GR	Germany
Intel Corporation	AQ (L)	INTC US	USA
Juniper Networks, Inc.	AQ (L)	JNPR US	USA
Keyence Corporation	NR	6861 JP	Japan
KLA-Tencor Corporation	AQ (NP) (L)	KLAC US	USA
Konica Minolta, Inc.	AQ	4902 JP	Japan
Kyocera Corporation	AQ (NP)	6971 JP	Japan
Lam Research Corp.	NR	LRCX US	USA
LG Display	AQ (NP) (L)	034220 KS	South Korea
LG Innotek	NR	011070 KS	South Korea
Linear Technology Corp.	AQ (NP) (L)	LLTC US	USA
MediaTek	AQ (L)	2454 TT	Taiwan
Microchip Technology	NR	MCHP US	USA
Micron Technology, Inc.	AQ (L)	MU US	USA
Motorola Solutions	AQ	MSI US	USA
Murata Mfg. Co.	AQ (NP)	6981 JP	Japan
NEC Corporation	AQ (NP)	6701 JP	Japan
NetApp Inc.	AQ	NTAP US	USA
Nokia Group	AQ (NP) (L)	NOK1V FH	Finland
NVIDIA Corporation	AQ (NP)	NVDA US	USA
OMRON Corporation	AQ	6645 JP	Japan
QUALCOMM Inc.	AQ	QCOM US	USA
Renesas Electronics Corporation	AQ	6723 JT	Japan
Ricoh Co., Ltd.	NR	7752 JP	Japan
Rohm Co., Ltd.	AQ (NP)	6963 JP	Japan
Samsung Electro-Mechanics Co., Ltd.	AQ (L)	009150 KS	South Korea
Samsung Electronics	AQ (NP)	005930 KS	South Korea
Samsung SDI	NR	006400 KS	South Korea
SanDisk Corporation	NR	SNDK US	USA
Seagate Technology LLC	AQ (L)	STX US	Ireland
Seiko Epson Corporation	NR	6724 JP	Japan
SK Hynix	AQ (L)	000660 KS	South Korea
STMicroelectronics NV	AQ (L)	STM IM	Switzerland

Company name	Response status	Ticker	Country HQ
Taiwan Semiconductor Manufacturing	AQ	2330 TT	Taiwan
TDK Corporation	AQ	6762 JP	Japan
TE Connectivity	AQ (L)	TEL US	Switzerland
Texas Instruments Incorporated	AQ	TXN US	USA
Tokyo Electron Ltd.	NR	8035 JP	Japan
Western Digital Corp	AQ	WDC US	USA
Xilinx Inc	AQ	XLNX US	USA
<b>Materials</b>			
Acacia Mining	DP	ACA LN	United Kingdom
Adelaide Brighton	NR	ABC AU	Australia
AECI Ltd Ord	AQ (L)	AFE SJ	South Africa
African Rainbow Minerals	DP	ARI SJ	South Africa
AFYON ÇİMENTO SANAYİ T.A.Ş.	NR	AFYON TI	Turkey
Agnico-Eagle Mines Limited	AQ	AEM CN	Canada
Air Liquide	AQ (NP) (L)	AI FP	France
Air Products & Chemicals, Inc.	AQ (NP)	APD US	USA
Airgas	NR	ARG US	USA
AkzoNobel	AQ (L)	AKZA NA	Netherlands
Alacer Gold	NR	AQG AU	USA
Alamos Gold Inc.	NR	AGI CN	Canada
Alcoa Inc.	AQ (NP)	AA US	USA
ALKİM ALKALİ KİMYA A.Ş.	NR	ALKİM TI	Turkey
Allegheny Technologies Incorporated	NR	ATI US	USA
Alosa Company Ltd	NR	ALRS RX	Russia
Altri SGPS SA	NR	ALTR PL	Portugal
Alumina	AQ (L)	AWC AU	Australia
Arcor	AQ	AMC AU	Australia
ANADOLU CAM SANAYİ A.Ş.	NR	ANACM TI	Turkey
Anglo American	AQ (L)	AAL LN	United Kingdom
Anglo American Platinum	AQ (L)	AMS SJ	South Africa
AngloGold Ashanti	AQ (L)	ANG SJ	South Africa
Antofagasta	AQ (L)	ANTO LN	United Kingdom
Arcelor Mittal	AQ (L)	MT NA	Luxembourg
Arcelor Mittal South Africa Ltd	AQ (SA)	ACL SJ	South Africa
ARKEMA	DP	AKE FP	France
Asahi Kasei Corporation	DP	3407 JP	Japan
Asian Bamboo AG	DP	5AB GR	Germany
Assore Ltd	DP	ASR SJ	South Africa
Aurubis AG	DP	NDA GR	Germany
Avery Dennison Corporation	AQ	AVY US	USA
BAGFAŞ BANDIRMA GÜBRE FABRİKALARI A.Ş.	NR	BAGFS TI	Turkey
Ball Corporation	AQ (NP)	BLL US	USA
BASF SE	AQ	BAS GR	Germany
Beadell Resources	AQ (NP) (L)	BDR AU	Australia
BHP Billiton	AQ	BHP AU	United Kingdom
Bhushan Steel	NR	BHUS IN	India
BillrudKorsnäs	NR	BILL SS	Sweden
BlueScope Steel	DP	BSL AU	Australia
Boliden Group	NR	BOL SS	Sweden
Boral	DP	BLD AU	Australia
BORUSAN MANNESMANN BORU SANAYİ VE TİCARET A.Ş.	NR	BRSAN TI	Turkey
Centamin plc	NR	CEY LN	United Kingdom
CF Industries Holdings, Inc.	NR	CF US	USA
ÇİMSA ÇİMENTO SANAYİ VE TİCARET A.Ş.	AQ (NP)	CİMSA TI	Turkey
Coeur d'Alene Mines Corporation	NR	CDE US	USA
CRH Plc	AQ	CRH ID	Ireland
Croda International	AQ	CRDA LN	United Kingdom
Daicel Corporation	AQ (NP)	4202 JP	Japan
Domtar Corporation	NR	UFS US	Canada
DuluxGroup	NR	DLX AU	Australia
E.I. du Pont de Nemours and Company	AQ	DD US	USA
Eastman Chemical Company	AQ (NP) (L)	EMN US	USA
Ecolab Inc.	AQ	ECL US	USA
Eldorado Gold Corporation	AQ	ELD CN	Canada
Empresas CMPC	AQ (L)	CMPC CI	Chile
Ems-Chemie Holding AG	NR	EMSN SW	Switzerland
EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.	DP	EREGL TI	Turkey

Company name	Response status	Ticker	Country HQ
EUROPAC Papeles Y Cartones de Europa SA	DP	PAC SM	Spain
Evolution Mining	NR	EVN AU	Australia
First Majestic Silver Corp	NR	FR CN	Canada
First Quantum Minerals Limited	AQ (NP)	FM CN	Canada
Fletcher Building	NR	FBU NZ	New Zealand
FMC Corp	NR	FMC US	USA
Fortescue Metals Group	AQ	FMG AU	Australia
Freeport-McMoRan Inc.	AQ	FCX US	USA
Fresnillo plc	AQ (L)	FRES LN	Mexico
FUCHS PETROLUB AG	DP	FPE GR	Germany
Givaudan SA	AQ (NP) (L)	GIVN VX	Switzerland
Glencore plc	AQ (NP)	GLEN LN	Switzerland
Gold Fields Limited	AQ	GFI SJ	South Africa
Goldcorp Inc.	AQ	G CN	Canada
GÖLTAŞ GÖLLER BÖLGESİ ÇİMENTO SAN. VE TİC.A.Ş.	NR	GOLTS TI	Turkey
Grupa Azoty S.A.	NR	ATT PW	Poland
GÜBRE FABRİKALARI T.A.Ş.	NR	GUBRF TI	Turkey
Hanwha Chemical Corp	NR	009830 KS	South Korea
Harmony Gold Mining Co Ltd	AQ	HAR SJ	South Africa
HeidelbergCement AG	NR	HEI GR	Germany
Hindustan Copper	NR	HCP IN	India
Hitachi Metals, Ltd.	AQ (NP)	5486 JP	Japan
Holcim Ltd	DP	HOLN VX	Switzerland
Holmen	AQ	HOLMB SS	Sweden
Hyosung Corporation	NR	004800 KS	South Korea
Hyundai Steel Co	AQ (L)	004020 KS	South Korea
IAMGOLD Corporation	AQ	IMG CN	Canada
Iberpapel Gestión	NR	IBG SM	Spain
Iluka Resources	DP	ILU AU	Australia
Imerys	DP	NK FP	France
Impala Platinum Holdings	AQ (L)	IMP SJ	South Africa
Incitec Pivot	AQ	IPL AU	Australia
International Flavors & Fragrances Inc.	AQ (NP)	IFF US	USA
International Paper Company	DP	IP US	USA
İZMİR DEMİR ÇELİK SANAYİ A.Ş.	NR	İZMDC TI	Turkey
James Hardie Industries	AQ (NP)	JHX AU	Netherlands
JFE Holdings, Inc.	NR	5411 JP	Japan
Johnson Matthey	AQ	JMAT LN	United Kingdom
JSR Corporation	NR	4185 JP	Japan
K + S AG	AQ (L)	SDF GR	Germany
Kansai Paint Co., Ltd.	AQ (NP)	4613 JP	Japan
KARDEMİR KARABÜK DEMİR ÇELİK SANAYİ VE TİCARET A.Ş.	DP	KRDMD TI	Turkey
KARTONSAN KARTON SANAYİ VE TİCARET A.Ş.	DP	KARTN TI	Turkey
KAZ Minerals	DP	KAZ LN	United Kingdom
KGHM Polska Miedz S.A.	NR	KGH PW	Poland
Kingsgate Consolidated	NR	KCN AU	Australia
Kinross Gold Corporation	AQ (L)	K CN	Canada
Kobe Steel., Ltd.	AQ (NP)	5406 JP	Japan
Koninklijke DSM	AQ (L)	DSM NA	Netherlands
KONYA ÇİMENTO SANAYİ A.Ş.	NR	KONYA TI	Turkey
Korea Zinc Co Ltd	NR	010130 KS	South Korea
Koza Altın İşletmeleri A.Ş.	NR	KOZAL TI	Turkey
KOZA ANADOLU METAL MADENCİLİK İŞLETMELERİ A.Ş.	NR	KOZAA TI	Turkey
Kumba Iron Ore	AQ	KIO SJ	South Africa
Kuraray Co., Ltd.	NR	3405 JP	Japan
Lafarge S.A.	AQ (L)	LG FP	France
LANXESS AG	NR	LXS GR	Germany
Lee & Man Paper Manufacturing	NR	2314 HK	Hong Kong
LG Chem Ltd	AQ (L)	051910 KS	South Korea
Linde AG	AQ (NP) (L)	LIN GR	Germany
Lonmin	AQ	LMI LN	United Kingdom
Lotte Chemical Corp	AQ (L)	011170 KS	South Korea
Lynas Corporation	AQ (NP)	LYC AU	Australia
LyondellBasell Industries CI A	DP	DLY GR	USA
Martin Marietta Materials, Inc.	NR	MLM US	USA
MeadWestvaco Corp.	AQ (NP)	MWV US	USA

Company name	Response status	Ticker	Country HQ
Medusa Mining	NR	MML AU	Australia
Metsä Board	AQ (L)	METSB FH	Finland
Miquel Y Costas	AQ (NP) (L)	MCM SM	Spain
Mitsubishi Chemical Holdings Corporation	AQ (NP)	4188 JP	Japan
Mitsubishi Materials Corporation	DP	5711 JP	Japan
MMC Norilsk Nickel OSJC	NR	GMKN RX	Russia
Mondi Limited	AQ (SA)	MND SJ	South Africa
Mondi PLC	AQ	MNDI LN	United Kingdom
Monsanto Company	DP	MON US	USA
Nampak Ltd	DP	NPK SJ	South Africa
New Gold Inc.	NR	NGD CN	Canada
Newcrest Mining	AQ (L)	NCM AU	Australia
Newmont Mining Corporation	AQ	NEM US	USA
Nine Dragons Paper Holdings	NR	2689 HK	Hong Kong
Nippon Paint Co., Ltd.	NR	4612 JP	Japan
Nippon Paper Industries Co Ltd	AQ (NP)	3863 JT	Japan
Nippon Steel & Sumitomo Metal Corporation	AQ (NP)	5401 JP	Japan
Nitto Denko Corporation	AQ (NP)	6988 JP	Japan
Norsk Hydro	AQ	NHY NO	Norway
Northam Platinum Ltd	AQ (L)	NHM SJ	South Africa
Novozymes A/S	AQ (NP)	NZYMB DC	Denmark
Nucor Corporation	NR	NUE US	USA
Oji Holdings Corporation	AQ (NP)	3861 JP	Japan
OMNIA HOLDINGS LTD	DP	OMN SJ	South Africa
Orica	DP	ORI AU	Australia
Orora	AQ (NP) (L)	ORA AU	Australia
Owens-Illinois	AQ	OI US	USA
PARK ELEKTRİK ÜRETİM MADENCİLİK SANAYİ VE TİCARET A.Ş.	NR	PRKME TI	Turkey
PETKİM PETROKİMYA HOLDİNG A.Ş.	DP	PETKM TI	Turkey
Petropavlovsk Plc	NR	POG LN	United Kingdom
Polyus Gold	NR	PGIL LN	Russia
POSCO	NR	005490 KS	South Korea
Potash Corporation of Saskatchewan Inc.	AQ (NP) (L)	POT CN	Canada
PPC Ltd	DP	PPC SJ	South Africa
PPG Industries, Inc.	AQ	PPG US	USA
Praxair, Inc.	AQ (NP)	PX US	USA
Ramellius Resources	NR	RMS AU	Australia
Randgold Resources	NR	RRS LN	United Kingdom
Resolute Mining	NR	RSG AU	Australia
Rexam	AQ	REX LN	United Kingdom
Rio Tinto	AQ (L)	RIO LN	United Kingdom
Sandfire Resources NL	AQ	SFR AU	Australia
Sappi	DP	SAP SJ	South Africa
Saracen Mineral Holdings	NR	SAR AU	Australia
SASA POLYESTER SANAYİ A.Ş.	NR	SASA TI	Turkey
Sealed Air Corp.	DP	SEE US	USA
Semapa - Sociedade de Investimento e Gestao SGPS SA	NR	SEM PL	Portugal
SeverStal PAO	NR	SVST LI	Russia
Sherwin-Williams Company	AQ	SHW US	USA
Shin-Etsu Chemical Co., Ltd.	AQ (NP) (L)	4063 JP	Japan
Sibanye Gold Ltd	NR	SGL SJ	South Africa
Sigma-Aldrich Corporation	AQ (L)	SIAL US	USA
Sika Services AG	DP	SIK VX	Switzerland
Silver Lake Resources	NR	SLR AU	Australia
Silver Wheaton Corp.	NR	SLW CN	Canada
Sims Metal Management	AQ	SGM AU	Australia
SK Chemicals	NR	006120 KS	South Korea
SODA SANAYİ A.Ş.	NR	SODA TI	Turkey
Solvay S.A.	AQ	SOLB BB	Belgium
Southern Copper Corporation	NR	SCCO PE	Peru
Stora Enso Oyj	AQ (NP)	STERV FH	Finland
Sumitomo Chemical Co., Ltd.	DP	4005 JP	Japan
Sumitomo Metal Mining Co., Ltd.	AQ	5713 JP	Japan
Symrise AG	AQ (L)	SY1 GR	Germany
Syngenta AG	AQ	SYNN VX	Switzerland
Synthos S.A.	NR	SNS PW	Poland

Company name	Response status	Ticker	Country HQ
Taiyo Nippon Sanso Corporation	NR	4091 JT	Japan
Teck Resources Limited	AQ (L)	TCK/B CN	Canada
The Dow Chemical Company	AQ (L)	DOW US	USA
The Mosaic Company	AQ (NP)	MOS US	USA
ThyssenKrupp AG	AQ (NP)	TKA GR	Germany
Titan Cement	NR	TITK GA	Greece
Toray Industries, Inc.	DP	3402 JP	Japan
Troy Resources	NR	TRY AU	Australia
Umicore	DP	UMI BB	Belgium
UPM-Kymmene Corporation	AQ	UPM1V FH	Finland
Uralkali PJSC	NR	URKA RM	Russia
Vale	AQ	VALE3 BZ	Brazil
Voestalpine AG	DP	VOE AV	Austria
Vulcan Materials Company	NR	VMC US	USA
Yara International ASA	NR	YAR NO	Norway
<b>Utilities</b>			
Aboitiz Power Corporation	NR	AP PM	Philippines
AGL Energy	NR	AGL AU	Australia
AGL Resources	NR	GAS US	USA
AKENERJİ ELEKTRİK ÜRETİM A.Ş.	AQ	AKENR TI	Turkey
AKSA ENERJİ ÜRETİM A.Ş.	NR	AKSEN TI	Turkey
Ameren Corporation	AQ	AEE US	USA
American Electric Power Company, Inc.	AQ (L)	AEP US	USA
American Water Works	NR	AWK US	USA
APA Group	NR	APA AU	Australia
AusNet Services	NR	AST AU	Australia
AYGAZ A.Ş.	NR	AYGAZ TI	Turkey
Calpine Corporation	NR	CPN US	USA
CenterPoint Energy, Inc.	DP	CNP US	USA
Centrica	AQ (L)	CNA LN	United Kingdom
CEZ	NR	CEZ CP	Czech Republic
Cheung Kong Infrastructure Holdings	NR	1038 HK	Hong Kong
Chubu Electric Power Co., Inc.	DP	9502 JP	Japan
CMS Energy Corporation	AQ (NP) (L)	CMS US	USA
Companhia de Saneamento Basico do Estado de Sao Paulo - SABESP	NR	SBSP3 BZ	Brazil
Consolidated Edison, Inc.	NR	ED US	USA
CPFL Energia SA	AQ (L)	CPFE3 BZ	Brazil
Dominion Resources, Inc.	AQ	D US	USA
Drax Group	NR	DRX LN	United Kingdom
DTE Energy Company	AQ (L)	DTE US	USA
Duet Group	NR	DUE AU	Australia
Duke Energy Corporation	NR	DUK US	USA
E.ON SE	AQ (L)	EOAN GR	Germany
EDF	AQ (L)	EDF FP	France
Edison International	DP	EIX US	USA
EDP - Energias de Portugal S.A.	AQ	EDP PL	Portugal
EDP Renováveis SA	AQ (SA)	EDPR PL	Spain
Electric Power Development Co.,Ltd (J-POWER)	DP	9513 JP	Japan
ENAGAS	AQ	ENG SM	Spain
Endesa	AQ	ELE SM	Spain
ENEA S.A.	NR	ENA PW	Poland
Enel Green Power SpA	AQ (SA)	EGPW IM	Italy
ENEL SpA	AQ (L)	ENEL IM	Italy
ENERGA SA	NR	ENG PW	Poland
Enerjis SA	NR	ENERSIS CI	Chile
ENGIE	AQ	GSZ FP	France
Entergy Corporation	AQ (L)	ETR US	USA
Eversource Energy	NR	ES US	USA
Exelon Corporation	AQ	EXC US	USA
FirstEnergy Corporation	NR	FE US	USA
Fortum Oyj	DP	FUM1V FH	Finland
Gas Natural SDG SA	AQ	GAS SM	Spain
Great Plains Energy, Inc.	NR	GXP US	USA
Guangdong Investment Ltd.	NR	270 HK	Hong Kong
Hong Kong & China Gas Company Limited	NR	3 HK	Hong Kong
Iberdrola SA	AQ	IBE SM	Spain
Integrus Energy Group, Inc.	DP	TEG US	USA
Korea District Heating Corp.	AQ (NP)	071320 KS	South Korea

Company name	Response status	Ticker	Country HQ
Korea East-West Power	NR	KEWSPO KS	South Korea
Korea Electric Power Corp	NR	015760 KS	South Korea
Korea Midland Power	NR	UNLS	Korea
Korea Southern Power	NR	UNLS	Korea
Korea Western Power	NR	UNLS	Korea
K-water	NR	NOT FOUND	Korea
Kyushu Electric Power Co Inc	DP	9508 JP	Japan
National Grid	AQ (L)	NG/ LN	United Kingdom
NextEra Energy, Inc.	NR	NEE US	USA
NiSource Inc.	AQ (L)	NI US	USA
NRG Energy Inc	AQ	NRG US	USA
Osaka Gas Co., Ltd.	NR	9532 JP	Japan
Pennon Group	DP	PNN LN	United Kingdom
Pepco Holdings, Inc.	DP	POM US	USA
PG&E Corporation	NR	PCG US	USA
Pinnacle West Capital Corporation	DP	PNW US	USA
Polska Grupa Energetyczna (PGE) SA	NR	PGE PW	Poland
Posco Energy	NR		Korea
PPL Corporation	NR	PPL US	USA
Public Power Corporation SA	NR	PPC GA	Greece
Public Service Enterprise Group Inc.	DP	PEG US	USA
R.E.E.	AQ (NP) (L)	REE SM	Spain
RusHydro JSC	AQ (L)	HYDR RM	Russia
RWE AG	DP	RWE GR	Germany
SCANA Corporation	NR	SCG US	USA
Sempra Energy	AQ	SRE US	USA
Severn Trent	DP	SVT LN	United Kingdom
SK E&S	NR		Korea
Snam S.P.A	AQ (NP)	SRG IM	Italy
Spark Infrastructure Group	DP	SKI AU	Australia
SSE	NR	SSE LN	United Kingdom
Suez Environnement	DP	SEV FP	France
TAURON Polska Energia S.A.	NR	TPE PW	Poland
TECO Energy, Inc.	DP	TE US	USA
Terna	AQ (NP) (L)	TRN IM	Italy
The AES Corporation	AQ (NP) (L)	AES US	USA
The Chugoku Electric Power Company	NR	9504 JP	Japan
The Kansai Electric Power Co., Inc.	DP	9503 JP	Japan
The Southern Company	DP	SO US	USA
The Tokyo Electric Power Company, Inc (TEPCO)	DP	9501 JP	Japan
Tohoku Electric Power Co., Inc.	NR	9506 JP	Japan
Tokyo Gas Co., Ltd.	NR	9531 JP	Japan
Tractebel Energia SA	AQ (SA)	TBLE3 BZ	Brazil
United Utilities	DP	UU/ LN	United Kingdom
VEOLIA	AQ	VIE FP	France
Wisconsin Energy Corporation	NR	WEC US	USA
Xcel Energy Inc.	NR	XEL US	USA
ZORLU ENERJİ ELEKTRİK ÜRETİM A.Ş.	NR	ZOREN TI	Turkey



# Other responding companies

Company name	Response status	Ticker	Country HQ
<b>Consumer Discretionary</b>			
BorgWarner Morse TEC Japan K.K.	AQ		Japan
BYD	AQ (NP)	1211 HK	China
Caesars Entertainment	AQ (NP)	HET US	USA
Faurecia	AQ (NP)	EO FP	France
Gestamp	AQ	495294Z SM	Spain
Grupo Televisa S.A.	AQ	TLEVICPO MM	Mexico
Herdmans South Africa (Pty) Ltd	AQ	NOT FOUND	South Africa
İHLAS EV ALETLERİ İMALAT SANAYİ VE TİCARET A.Ş.	AQ (NP)	IHEVA TI	Turkey
Mahindra & Mahindra	AQ	MM IN	India
Masood Textile Mills	AQ		USA
Motherson Sumi Systems	AQ (NP)	MSS IN	India
Pearson	AQ	PERSON LN	United Kingdom
PrimeAsia Leather Company	AQ (NP)	NOT FOUND	USA
RELX Group	AQ	REL LN	United Kingdom
Sheraton Textiles	AQ (NP)		South Africa
Toyota Boshoku Corporation	AQ (NP)	3116 JT	Japan
Valeo Sa	AQ	FR FP	France
Yokohama Rubber Company, Limited	AQ	5101 JP	Japan
YÜNSA YÜNLÜ SANAYİ VE TİCARET A.Ş.	AQ (NP)	YUNSA TI	Turkey
<b>Consumer Staples</b>			
CROPP Coop./Organic Valley	AQ (NP)	0248281D US	USA
Distell Group Ltd	AQ	DST SJ	South Africa
Femsa - Fomento Economico Mexicano	AQ (NP)	FEMSAUBD MM	Mexico
Fresherized Foods	AQ (NP)		USA
JBS S/A	AQ	JBSS3 BZ	Brazil
Marfrig Global Foods S/A	AQ	MRFG3 BZ	Brazil
Mars	AQ	4614Z US	USA
Nordzucker	AQ (NP)	3112Z GR	Germany
Olam International	AQ	OLAM SP	Singapore
PINAR SÜT MAMULLERİ SANAYİ A.Ş.	AQ (NP)	PNSUT TI	Turkey
Sofidel S.p.A.	AQ		Italy
WhiteWave Foods	AQ	WWAV US	USA
YAMATO-ESULON CO., LTD.	AQ (NP)		Japan
<b>Energy</b>			
Cenovus Energy Inc.	AQ	CVE CN	Canada
Crescent Point Energy Corporation	AQ	CPG CN	Canada
Encana Corporation	AQ	ECA CN	Canada
Enerplus Corporation	AQ	ERF CN	Canada
Showa Shell Sekiyu K. K.	AQ (NP)	5002 JT	Japan
<b>Financials</b>			
Banco Santander	AQ	SAN SM	Spain
Bank of America	AQ	BAC US	USA
Mahindra Lifespace Developers Limited	AQ	MLIFE IN	India
Sanlam	AQ	SLM SJ	South Africa
ŞEKERBANK T.A.Ş.	AQ	SKBNK TI	Turkey
T.GARANTİ BANKASI A.Ş.	AQ	GARAN TI	Turkey
Unum Group	AQ	UNM US	USA
<b>Health Care</b>			
CICOR TECHNOLOGIES	AQ	CICN SW	Indonesia
PerkinElmer, Inc.	AQ	PKI US	USA
Thermo Fisher Scientific Inc.	AQ	TMO US	USA
ZCL Chemicals	AQ		India
<b>Industrials</b>			
Allied Electronics Corporation Ltd (Altron)	AQ	AEL SJ	South Africa
Aveng Ltd	AQ (NP)	AEG SJ	South Africa
Deutsche Post AG	AQ (NP)	DPW GR	Germany
Furukawa Electric Co., Ltd.	AQ (NP)	5801 JP	Japan

Company name	Response status	Ticker	Country HQ
GS Yuasa Corporation	AQ (NP)	6674 JP	Japan
İHLAS HOLDİNG A.Ş.	AQ	İHLAS TI	Turkey
Layne Christensen Company	AQ	LAYN US	USA
Nabtesco Corporation	AQ (NP)	6268 JP	Japan
Nankai Electric Railway Co., Ltd.	AQ	9044 JP	Japan
Nippon Sheet Glass Company, Ltd	AQ (NP)	5202 JT	Japan
Nisshinbo Holdings Inc.	AQ (NP)	3105 JP	Japan
NTN Corporation	AQ	6472 JP	Japan
Obrascon Huarte Lain (OHL)	AQ	OHL SM	Spain
Owens Corning	AQ	OC US	USA
Reynders Label Printing	AQ		Belgium
Rotork PLC	AQ	ROR LN	United Kingdom
Secom Co., Ltd.	AQ	9735 JP	Japan
SL Industries	AQ		Canada
SMEC	AQ		Australia
TAV HAVALİMANLARI HOLDİNG A.Ş.	AQ	TAVHL TI	Turkey
Transnet	AQ	UNLS	South Africa
Union Pacific Corporation	AQ	UNP US	USA
UPS	AQ	UPS US	USA
<b>Information Technology</b>			
Advanced Micro Devices, Inc	AQ	AMD US	USA
Akamai Technologies Inc	AQ	AKAM US	USA
Alps Electric Co., Ltd.	AQ (NP)	6770 JP	Japan
AU Optronics	AQ (NP)	2409 TT	Taiwan
Bel Fuse Inc.	AQ	BELFA US	USA
CA Technologies	AQ (NP)	CA US	USA
Dell Inc.	AQ	DELL US	USA
Fidelity National Information Services	AQ	FIS US	USA
Fiserv, Inc.	AQ (NP)	FISV US	USA
GOLD CIRCUIT ELECTRONICS LTD	AQ (NP)	2368 TT	Taiwan
Ibiden Co., Ltd.	AQ	4062 JP	Japan
Integrated Device Technology, Inc.	AQ	IDTI US	USA
International Business Machines (IBM)	AQ	IBM US	USA
International Rectifier	AQ (NP)	IRF US	USA
JDS Uniphase Corp.	AQ	JDSU US	USA
Lexmark International, Inc.	AQ	LXK US	USA
Marvell Technology Group, Ltd.	AQ	MRVL US	USA
MATC Technology	AQ (NP)		Malaysia
Microsoft Corporation	AQ	MSFT US	USA
Molex Incorporated	AQ		USA
Nordic Semiconductor ASA	AQ (NP)	NOD NO	Norway
Quanta Computer	AQ	2382 TT	Taiwan
Symantec Corporation	AQ	SYMC US	USA
Taiyo Yuden Co., Ltd.	AQ	6976 JP	Japan
Xerox Corporation	AQ	XRX US	USA
Yahoo! Inc.	AQ	YHOO US	USA
Tech Mahindra	AQ	TECHM IN	India
<b>Materials</b>			
AKÇANSA ÇİMENTO SANAYİ VE TİCARET A.Ş.	AQ	AKCNS TI	Turkey
Ambuja Cements	AQ (NP)	ACEM IN	India
Aquarius Platinum	AQ	AQP AU	Bermuda
Arrium	AQ	ARI AU	Australia
Barrick Gold Corporation	AQ	ABX CN	Canada
Bemis Company	AQ	BMS US	USA
Birla Carbon	AQ		USA
Braskem S/A	AQ	BRKM3 BZ	Brazil
Catalyst Paper Corporation	AQ	CYT CN	Canada
China Steel	AQ	2002 TT	Taiwan
Cia. Siderurgica Nacional - CSN	AQ (NP)	CSNA3 BZ	Brazil
Clariant AG	AQ	CLN VX	Switzerland
DS Smith Plc	AQ	SMDS LN	United Kingdom
Duratex S/A	AQ	DTEX3 BZ	Brazil
FIRMENICH SA	AQ	4282549Z SM	Switzerland
Hitachi Chemical Company, Ltd.	AQ (NP)	4217 JP	Japan
HudBay Minerals Inc.	AQ	HBM CN	Canada
Israel Chemicals	AQ	ICL IT	Israel
Klabin S/A	AQ	KLBN4 BZ	Brazil
PanAust	AQ	PNA AU	Australia
PTT Global Chemical	AQ	PTTGC TB	Thailand

<b>Company name</b>	<b>Response status</b>	<b>Ticker</b>	<b>Country HQ</b>
Resolute Forest Products Inc.	AQ	RFP US	Canada
Royal Bafokeng Platinum Ltd	AQ	RBP SJ	South Africa
Scaw South Africa (pty) Ltd	AQ (NP)	0325554D SJ	South Africa
Smurfit Kappa Group PLC	AQ	SKG ID	Ireland
Synthomer plc	AQ	SYNT LN	United Kingdom
Taiheyo Cement Corporation	AQ (NP)	5233 JP	Japan
TANAX, INC.	AQ		Japan
Tata Chemicals	AQ	TTCH IN	India
Tata Steel	AQ	TATA IN	India
<b>Telecommunication Services</b>			
AT&T Inc.	AQ	T US	USA
Sprint Corporation	AQ	S US	USA
<b>Utilities</b>			
ACCIONA S.A.	AQ	ANA SM	Spain
Celsia SA ESP	AQ	CELSIA CB	Colombia
Colbun SA	AQ (NP)	COLBUN CI	Chile
Companhia Energetica Minas Gerais - CEMIG	AQ	CMIG3 BZ	Brazil
HK Electric Investments	AQ	2638 HK	Hong Kong

## Appendix IV

### Investor signatories

**617 financial institutions with assets of US\$63 trillion were signatories to CDP's 2014 water questionnaire dated February 1st 2015**

**Key to response status:**  
**2015 Water Member (in Blue + Bold)**

3Sisters Sustainable Management LLC  
AB  
Aberdeen Asset Managers  
**ABRAPP - Associação Brasileira das Entidades Fechadas de Previdência Complementar**  
Achmea NV  
ACTIAM  
Active Earth Investment Management  
Acuity Investment Management  
Addenda Capital Inc.  
Advanced Investment Partners  
AEGON-INDUSTRIAL Fund Management Co., Ltd  
AK Asset Management Inc.  
Alberta Investment Management Corporation (AIMCo)  
Alberta Teachers Retirement Fund Board  
Alcyone Finance  
Align Impact LLC  
AllenbridgeEpic Investment Advisers Limited  
Alliance Trust  
**Allianz Global Investors**  
Allianz Group  
Altira Group  
AmpegaGerling Investment GmbH  
Amundi AM  
Antera Gestão de Recursos S.A.  
APG  
Appleseed Fund  
Apsara Capital LLP  
AQEX LLC  
Arabesque Asset Management  
Arisaig Partners Asia Pte Ltd  
Arjuna Capital  
As You Sow  
ASB Community Trust  
ASM Administradora de Recursos S.A.  
ASN Bank  
Assicurazioni Generali Spa  
ATI Asset Management  
Atlantic Asset Management Pty Ltd  
Australian Ethical Investment  
AustralianSuper  
Avaron Asset Management AS  
**Aviva Investors**  
**Aviva plc**

BAE Systems Pension Funds Investment Management Ltd  
Baillie Gifford & Co.  
BaltCap  
Banca Monte dei Paschi di Siena Group  
Banco Comercial Português S.A.  
Banco da Amazônia S.A.  
Banco do Brasil Previdência  
Banco do Brasil S/A  
Banco Nacional de Desenvolvimento Econômico e Social - BNDES  
Banco Popular Español  
Banco Sabadell, S.A.  
Banco Santander  
Banesp - Fundo Banespa de Seguridade Social  
Banif, SA  
**Bank of America Merrill Lynch**  
Bank Vontobel AG  
Bankhaus Schelhammer & Schattera Kapitalanlagegesellschaft m.b.H.  
Bankinter  
Banque Degroof  
Banque Libano-Française  
Barclays  
Basellandschaftliche Kantonalbank  
BASF Sociedade de Previdência Complementar  
Bâtirente  
Baumann and Partners S.A.  
Bayern LB  
BayernInvest Kapitalanlagegesellschaft mbH  
BBC Pension Trust Ltd.  
BBVA  
BC Investment Management Corporation  
Bedfordshire Pension Fund  
Beetle Capital  
BEFIMMO SA  
Berenberg Bank  
Blom Bank SAL  
Blumenthal Foundation  
BNP Paribas Investment Partners  
**Boston Common Asset Management, LLC**  
**BP Investment Management Limited**  
Breckenridge Capital Advisors  
British Airways Pension Investment Management Limited  
British Coal Staff Superannuation Scheme  
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

**California Public Employees' Retirement System**  
**California State Teachers' Retirement System**  
California State Treasurer  
**Calvert Investment Management, Inc.**  
Canada Pension Plan Investment Board  
Canadian Labour Congress Staff Pension Fund  
CAPESESP  
Capital Innovations, LLC  
**Capricorn Investment Group, LLC**  
CareSuper  
CASER PENSIONES  
Cathay Financial Holding Co. Ltd  
Catherine Donnelly Foundation  
**Catholic Super**  
CBRE  
Cbus  
**CCLA Investment Management Ltd**  
Cedrus Asset Management  
Celeste Funds Management  
Central Finance Board of the Methodist Church  
Ceres  
Change Investment Management  
Christian Brothers Investment Services  
Christian Super  
Christopher Reynolds Foundation  
Church Commissioners for England  
Church of England Pensions Board  
Clean Yield Asset Management  
**ClearBridge Investments**  
Climate Change Capital Group Ltd  
CM-CIC Asset Management  
COMGEST  
CommInsure  
Commonwealth Bank of Australia  
Commonwealth Superannuation Corporation  
Compton Foundation  
Concordia oeco Lebensversicherungs-AG  
Confluence Capital Management LLC  
Connecticut Retirement Plans and Trust Funds  
Conser Invest  
Co-operative Financial Services (CFS)  
Crayna Capital, LLC.  
Credit Agricole  
CTBC Financial Holding Co., Ltd.  
Cultura Bank  
Daesung Capital Management  
Daiwa Securities Group Inc.  
Dalton Nicol Reid  
Dana Investment Advisors de Pury Pictet Turretini & Cie S.A.  
DekaBank Deutsche Girozentrale  
Delta Lloyd Asset Management  
Demeter Partners  
Deutsche Bank AG  
Development Bank of Japan Inc.



Dexia Asset Management
DGB Financial Group
DIP
DLM INVISTA ASSET MANAGEMENT S/A
Domini Social Investments LLC
Dongbu Insurance
DoubleDividend
Doughty Hanson & Co.
Earth Capital Partners LLP
East Capital AB
Ecclesiastical Investment Management Ltd.
Ecofi Investissements - Groupe Credit Cooperatif
Edward W. Hazen Foundation
EEA Group Ltd
EGAMO
Eko
Ekobanken medlemsbank (cooperative bank)
Elan Capital Partners
Element Investment Managers
Elo Mutual Pension Insurance Company
Environment Agency Active Pension fund
Environmental Investment Services Asia Limited
Epworth Investment Management
Equilibrium Capital Group
equinet Bank AG
Erik Penser Fondkommission
Erste Asset Management
Erste Group Bank
Essex Investment Management Company, LLC
ESSSuper
Ethos Foundation
<b>Etica Sgr</b>
Eureka Funds Management
Eurizon Capital SGR
Evangelical Lutheran Church in Canada Pension Plan for Clergy and Lay Workers
Evangelical Lutheran Foundation of Eastern Canada
Evangelisch-Luth. Kirche in Bayern
F&C Investments
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
FirstRand Ltd
Five Oceans Asset Management
Folketrygdfondet
Folksam
Fondation de Luxembourg
Fondo Pegaso
Fondo Pensione Gruppo Intesa Sanpaolo - FAPA
Fonds de Réserve pour les Retraites – FRR
Forma Futura Invest AG
FRANKFURT-TRUST Investment-Gesellschaft mbH
Friends Fiduciary Corporation
Fukoku Capital Management Inc
FUNCEF - Fundação dos Economistas Federais
Fundação AMPLA de Seguridade Social - Brasileiros
Fundação Atlântico de Seguridade Social
Fundação Bannrisul de Seguridade Social
<b>Fundação de Assistência e Previdência Social do BNDES - FAPES</b>
Fundação Itaipu BR - de Previdência e Assistência Social
Fundação Promon de Previdência Social
Fundação Rede Ferroviária de Seguridade Social – Refer
Fundação Vale do Rio Doce de Seguridade Social - VALIA
FUNDIÁGUA - Fundação de Previdência da Companhia de Saneamento e Ambiental do Distrito Federal
Futuregrowth Asset Management
GameChange Capital LLC
Gemway Assets
General Equity Group AG
Generali Deutschland Holding AG
<b>Generation Investment Management</b>
Genus Capital Management
German Equity Trust AG
Global Forestry Capital SARL
Globalance Bank Ltd
GLS Gemeinschaftsbank eG
GOOD GROWTH INSTITUT für globale Vermögensentwicklung mbH
Good Super
Governance for Owners
Government Employees Pension Fund (“GEPF”), Republic of South Africa
GPT Group
Greater Manchester Pension Fund
Green Alpha Advisors
Green Cay Asset Management
Green Century Capital Management
GROUPAMA EMEKLİLİK A.Ş.
GROUPAMA SIGORTA A.Ş.
Groupe Crédit Coopératif
Groupe Investissement Responsable Inc.
GROUPE OFI AM
Grupo Santander Brasil

Handelsbanken
Harbour Asset Management
Harrington Investments, Inc
Hauck & Aufhäuser Asset Management GmbH
Hazel Capital LLP
Healthcare of Ontario Pension Plan (HOOPP)
Helaba Invest Kapitalanlagegesellschaft mbH
<b>Henderson Global Investors</b>
Hermes Fund Managers - BUT Hermes
EOS for Carbon Action
HESTA Super
HIP Investor
Holden & Partners
<b>HSBC Holdings plc</b>
HUMANIS
Hyundai Marine & Fire Insurance Co., Ltd
Hyundai Securities Co., Ltd.
IBK Securities
IDBI Bank Ltd.
Illinois State Board of Investment
Ilmarinen Mutual Pension Insurance Company
Impax Group plc
Industrial Bank of Korea
Industrial Development Corporation
Inflection Point Capital Management
ING Group N.V.
Insight Investment
<b>Instituto Infraero de Seguridade Social - INFRAPREV</b>
Instituto Sebrae De Seguridade Social - SEBRAEPREV
Integre Wealth Management of Raymond James
Interfaith Center on Corporate Responsibility
IntReal KAG
Investec Asset Management
Investing for Good CIC Ltd
Investor Environmental Health Network
Irish Life Investment Managers
Jantz Management LLC
Jessie Smith Noyes Foundation
JMEPS Trustees Limited
JPMorgan Chase & Co.
Jubitz Family Foundation
Jupiter Asset Management
Kagiso Asset Management
Kaiser Ritter Partner Privatbank AG
KB Kookmin Bank
KBC Asset Management
KCPS Private Wealth Management
KDB Asset Management Co. Ltd
Kennedy Associates Real Estate Counsel, LP
Kepler Cheuvreux
KEPLER-FONDS KAG
Keva
KeyCorp

KfW Bankengruppe	Mitsubishi UFJ Financial Group	ÖKOWORLD
Killik & Co LLP	Mitsui Sumitomo Insurance Co.,Ltd	OMERS Administration Corporation
Kiwi Income Property Trust	Mizuho Financial Group, Inc.	Ontario Teachers' Pension Plan
Kleinwort Benson Investors	MN	OP Fund Management Company Ltd
<b>KLP</b>	Momentum Manager of Managers (Pty) Limited	Oppenheim & Co. Limited
Korea Technology Finance Corporation (KOTEC)	Momentum Manager of Managers (Pty) Ltd	Opplysningsvesenets fond (The Norwegian Church Endowment)
KPA Pension	Monega Kapitalanlagegesellschaft mbH	OPTrust
La Banque Postale Asset Management	Mongeral Aegon Seguros e Previdência S/A	Oregon State Treasurer
La Financière Responsable	Montanaro Asset Management Limited	Orion Energy Systems
Laird Norton Family Foundation	<b>Morgan Stanley</b>	Osmosis Investment Management
Lampe Asset Management GmbH	Mountain Cleantech AG	<b>Overlook Investments Limited</b>
LBBW Asset Management	MTAA Superannuation Fund	PAI Partners
Investmentgesellschaft mbH	Natcan Investment Management	Panahpur
LD Lønmodtagernes Dyrtingsfond	<b>National Australia Bank Limited</b>	Park Foundation
Legal and General Investment Management	National Bank of Canada	Parnassus Investments
<b>Legg Mason Global Asset Management</b>	National Grid Electricity Group of the Electricity Supply Pension Scheme	Pax World Funds
LGT Group	National Grid UK Pension Scheme	PCJ Investment Counsel Ltd.
LGT Group Foundation	National Pensions Reserve Fund of Ireland	Pensioenfonds Vervoer
Light Green Advisors, LLC	National Union of Public and General Employees (NUPGE)	Pension Protection Fund
Living Planet Fund Management Company S.A.	Nativus Sustainable Investments	People's Choice Credit Union
Lloyds Banking Group	NATIXIS	Perpetual
Local Authority Pension Fund Forum	Natural Investments LLC	<b>PFA Pension</b>
Local Government Super	Nedbank Limited	PGGM Vermogensbeheer
LocalTapiola Asset Management Ltd	Needmor Fund	Phillips, Hager & North Investment Management
Logos portföy Yönetimi A.Ş.	<b>NEI Investments</b>	PhiTrust Active Investors
<b>London Pensions Fund Authority</b>	Nelson Capital Management, LLC	Pictet Asset Management SA
Lothian Pension Fund	<b>Neuberger Berman</b>	Pinstripe Management GmbH
LUCRF Super	New Alternatives Fund Inc.	Pioneer Investments
Ludgate Investments Ltd	New Amsterdam Partners LLC	Piper Hill Partners, LLC
MainFirst Bank AG	New Forests	PKA
Making Dreams a Reality Financial Planning	New Mexico State Treasurer	Plato Investment Management
MAMA Sustainable Incubation AG	New Resource Bank	Pluris Sustainable Investments SA
MAPFRE	<b>New York State Common Retirement Fund</b>	PNC Financial Services Group, Inc.
Maple-Brown Abbott	Newground Social Investment	Pohjola Asset Management Ltd
Marc J. Lane Investment Management, Inc.	Newton	Portfolio 21
Martin Currie Investment Management	NGS Super	PREVHAB PREVIDÊNCIA
Maryknoll Sisters	NH-CA Asset Management Company	COMPLEMENTAR
Maryland State Treasurer	Nikko Asset Management Co., Ltd.	<b>PREVI Caixa de Previdência dos Funcionários do Banco do Brasil</b>
MATRIX GROUP LTD	Nipponkoa Insurance Company, Ltd	PREVIG Sociedade de Previdência Complementar
McLean Budden	Nomura Holdings, Inc.	Progressive Asset Management, Inc.
Mediobanca	NORD/LB Kapitalanlagegesellschaft AG	Provincial Rheinland Holding
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Mirae Asset Securities Co., Ltd.	Oddo & Cie	Representative Body of the Church in Wales
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<b>see Notes for C.A.and Forests name</b>	Standish Mellon Asset Management	Trillium Asset Management, LLC
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