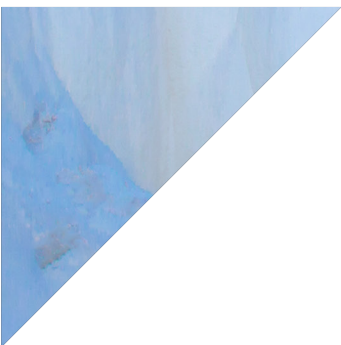


CDP Turkey Water Program Report

2016





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

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

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

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

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

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

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

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

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

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

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

Paul Simpson
CEO, CDP

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

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

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

Ali Fuat Erbil

CEO, Garanti Bank



Although water was not directly addressed in the Paris Agreement, we all know that it is one of the most crucial aspects of climate change issues. It needs even further consideration in a country that is extremely prone to droughts and water scarcity such as Turkey. As water becomes scarce, it gets extremely challenging to sustain the quality of life and development. Therefore all members of the business world need to put their ultimate efforts to take necessary actions in their entire value chain as well as their own water consumption. Companies should take into consideration the water consumption

of products during their entire life cycle when developing business strategies and setting targets. In line with our responsible and sustainable banking strategies we support CDP Water Program aiming to mainstream the integrated water management concept in Turkey and enable our corporate customers to acknowledge their water-related risks. We are delighted to see an increase in the number of respondents this year and we believe this is an indicator that this trend will pick up even faster in the upcoming years.

Paul Lee

Head of Corporate Governance
Aberdeen Asset Management



Water matters. It is the very stuff of life. And yet, too often, we take it for granted. We waste the precious resource and do not recognise its value in pricing mechanisms or in the efforts we make to minimise pollution.

It is in recognition of the importance of water, particularly in countries like Turkey that face areas of stressed water supply, that Aberdeen Asset Management supports CDP Water. We recognise that for some sectors and some companies water is a highly material factor in relation to their ongoing viability and prosperity as businesses. And we recognise the complexity that surrounds that materiality - where the extent of water supply issues can depend on the very localised geography of individual company operations and the water basins within which they sit. This complexity requires close analysis and detailed disclosure.

We firmly encourage all the companies in which we invest client money to consider their material risks, including water-related risks. Where these issues affect their future opportunities we expect full and thoughtful disclosure about how those risks will be addressed, managed and mitigated. This disclosure allows us to factor these risks in as part of our investment decision-making, and also provides us with a basis for the active dialogue with companies that we regard as a natural aspect of our part-ownership on behalf of our clients.

We firmly welcome this CDP Water report as a further milestone to transparency and effective management of these issues by Turkish companies.



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

To read the the CDP Global Water Report please go to: <https://www.cdp.net/en/research/global-reports/global-water-report-2016>

Company stats at a glance

Current State

16% of responding companies experienced detrimental water-related business impacts in the reporting year

53% of responding companies evaluated how water risks could impact business growth over the next year or more

Reported experienced impacts

- ▼ Higher operating costs reduction in revenue
- ▼ Supply chain
- ▼ Plant/production disruption leading to reduced output

Risk Assessment

26% of responding companies are exposed to risks in both direct operations and supply chain

5% of responding companies conduct a company-wide risk assessment that covers both direct operations and supply chains.

- ▼ Only 21% assess risks at river basin scale
- ▼ 53% include risks related with future regulatory changes at the country/local level
- ▼ 58% include local communities into their water risk assessments

Exposure to Risk

53% of responding companies report exposure to risk

- ▼ 21% anticipate risks to materialize in <1 year
- ▼ 32% anticipate risks to materialize within 1 - 6 years
- ▼ 21% anticipate risks to materialize in >6 years

Exposed Risks Reported

- 1) Higher operating costs water supply disruption
- 2) Supply chain disruption
- 3) Constraint to grow brand damage
- 4) Closure of operations
- 5) Plant/production disruption leading to reduced output

Supply Chain

- ▼ 16% require suppliers to report water risks

Opportunities

- ▼ 74% of responding companies report opportunities; and
- ▼ 63% of responding companies report strategies to realize them

Top opportunities reported (see number of companies in brackets)

- 1) Cost savings (10)
- 2) Increased brand value (10)
- 3) Improved water efficiency (8)
- 4) Climate change adaptation (7)
- 5) Competitive advantage (6)
- 6) Carbon management (5)
- 7) Regulatory changes (3)

Targets & Goals

47% of responding companies with targets and goals in place

- ▼ 16% of responding companies reporting targets with quantitative actions to manage water resources
- ▼ 21% of responding companies reporting qualitative goals leading towards improved water stewardship

Setting the stage

The United Nations (UN) General Assembly 2030 Development Agenda, adopted on 25th September 2015, includes 17 Sustainable Development Goals (SDGs) and seeks to build on the Millennium Development Goals (MDGs). The final Resolution notes that 'climate change is one of the greatest challenges of our time and its adverse impacts undermine the ability of all countries to achieve sustainable development...The survival of many societies, and of the biological support systems of the planet, is at risk.'

Climate change influences Earth's ecosystem primarily through water. Rising water temperatures lower levels of dissolved oxygen in water, hence placing stress on species that rely on oxygen; extreme weather events cause more pollution to be carried to lakes and the oceans with severe consequences such as blooms of harmful algae and bacteria. Rising demand for water due to a combination of population growth and economic development, as well as increasingly polluted water sources by humans, make the situation drastically worse. While the effects of climate change on groundwater are not fully understood, water stress at the surface is also likely to lead to its overuse. 'Ensuring availability and sustainable management of water and sanitation for all' is thus explicitly stated as the sixth SDGs in the 2030 Development Agenda. The Paris Agreement and SDGs are thus intrinsically connected and mutually reinforcing.

Climate change is already having a significant effect on water cycle, altering the amount, distribution, timing, and quality of available water. Communities, private businesses, industries and ecosystems are affected; their survival and functions depend either directly or indirectly, on water. Projections suggest that almost half of the world's population will be suffering from severe water scarcity by 2030 unless radical new policies are introduced. Water is already a scarce resource; just 3% of water on the Earth is freshwater and this amount is constant whereas only about 1% of it is accessible for human use.

The UN-Water's work program identifies monitoring and reporting on water as one of the three focus areas that requires comprehensive joint efforts to achieve water-related development goals. The availability of coherent and reliable information on key water trends and management issues is reiterated as a key objective. Without the data required to underpin and inform decision making, investments in water management cannot be optimized for humanitarian, ecological and economic gains.

Now in its seventh year, CDP's water program acts on behalf of 643 institutional investors, representing US\$67 trillion in assets. These investors use CDP water data to engage with portfolio companies, inform investment decisions and catalyze change. CDP's analysis of company disclosures reveal that nearly a quarter of GHG emission reduction activities

rely on a dependable supply of water. Better water management led furthermore to improved energy efficiency and lower emissions in half of those companies that disclosed their water management policies through CDP in 2016.

Turkey

Scientists and experts agree that Turkey is among the most vulnerable countries that will face severe water shortages by 2025. Turkey's southeast neighbors that share the same river basin with Turkey are already at high risk.

WWF's Turkey's Water Risks Report (2014) lists key water management faced by Turkey; at the top of this list is the poor management of infrastructure projects (e.g. dams and hydropower plants) and the ad hoc transfer of water between basins with disregard to basin level interdependencies, in response to shortages. The second issue is rapidly increasing water pollution; the report notes that only 296 Turkish local governments, out of 3225, have water treatments facilities. Large scale infrastructure projects and investments put further stress on Turkish water resources, as they do in all developing countries; low standards and weak enforcement further exacerbates this problem. Last but not the least, global climate change has adverse effects on the Mediterranean basin that includes Turkey, with a 25% decrease in rainfall during the past 25 years. WWF's report includes an analysis of public water management in Turkey and provides recommendations to improve the current situation.

None of the grand challenges can be addressed by governments alone. The role of business in delivering water security is critical and the business case for disclosure on the issue is unequivocal. With that in mind we initiated CDP Water program in Turkey in 2014 to shed light on water risks and management by private businesses. The first CDP Water Turkey report was launched in 2015 and presented an analysis of water disclosure by 15 pioneering companies. The response rate for the first year was much higher than we had anticipated; we attributed this to a heightened awareness of water risks amongst CDP respondents, through the process of responding to our climate change questionnaires over the years. Indeed, since we started the Turkish CDP Climate Change Program in 2010, water security has been highlighted by reporting companies as one of the most serious and immediate risks associated with climate change in Turkey. This year, we report the analysis of water disclosure by 19 companies, with 27% increase compared to 2015. These 19 companies together with respondents from around the world make up the 607 companies that constitute almost half of the companies in sectors that are exposed to water risks in MSCI All Countries World Index and contribute to a 38% increase in reporting companies on a global basis.

Water Disclosure

This year's global report and the underlying data analysis provide insights into the linkages between water, energy and private sector efforts to reduce carbon emissions. Water availability is also important for climate mitigation: data from CDP's climate change program shows that 24% of GHG reduction activities depend upon the availability of good quality water. As the CDP Global Water report notes; "many of the most serious impacts of climate change will be experienced through water scarcity or flooding from extreme weather events or sea-level rise. Further, a stable supply of water is vital for many of the technologies that will help to dramatically reduce emissions. Water stewardship is an imperative not only for its own sake, but also to enable an effective response to climate change."

CDP has been a catalyst for global disclosure over the past 15 years and will continue to drive the future of meaningful disclosure to help companies

and investors better understand environmental risk and accelerate the transition to a more sustainable economy. The CDP Water Program will help bring the foresight shown by pioneering companies in Turkey, including high impact sectors such as food, cement, textile and automotive, to the attention of lagging companies, their stakeholders, regulators and concerned citizens. We expect that the CDP Water Program will provide a credible platform for a dialog between companies, the government and the municipalities in Turkey, about the means and ways of instituting effective water stewardship in business conduct in going forward.

The Sabancı University Corporate Governance Forum will continue to facilitate and encourage transparency of business impact around key issues that societies face.

Water program respondents in 2016

CDP Turkey Water Sample

AKÇANSA ÇİMENTO SANAYİ VE TİCARET A.Ş.

BRİSA BRIDGESTONE SABANCI LASTİK SAN. VE TİC. A.Ş.

ÇİMSA ÇİMENTO SANAYİİ VE TİCARET A.Ş.

COCA-COLA İÇECEK A.Ş.

DOĞAN ŞİRKETLER GRUBU HOLDİNG A.Ş.

FORD OTOMOTİV SANAYİ A.Ş.

KORDSA GLOBAL ENDÜSTRİYEL İPLİK VE KORD BEZİ SANAYİ VE TİCARET A.Ş.

TAV HAVA LİMANLARI HOLDİNG A.Ş.

TOFAŞ TÜRK OTOMOBİL FABRİKASI A.Ş.

TÜMOSAN MOTOR VE TRAKTÖR SANAYİ A.Ş.

VESTEL BEYAZ EŞYA SANAYİ VE TİCARET A.Ş.

VESTEL ELEKTRONİK SANAYİ VE TİCARET A.Ş.

Self-Selected Companies

AKENERJİ ELEKTRİK ÜRETİM A.Ş.

İHLAS EV ALETLERİ İMALAT SANAYİ VE TİCARET A.Ş.

PINAR SÜT MAMULLERİ SANAYİİ A.Ş.

ŞEKERBANK T.A.Ş.

T.GARANTİ BANKASI A.Ş.

TÜRKİYE HALK BANKASI A.Ş.

YÜNSA YÜNLÜ SANAYİ VE TİCARET A.Ş.



About this report

Each year CDP asks companies to systematically report data relating to their water use, water-related risks and opportunities and their governance of water. By contextualizing and sharing this information with investors, companies, policy makers and other stakeholders, CDP catalyzes action by companies to secure freshwater resources for all.

Now in its second year, the CDP Water Program in Turkey acts on behalf of 643 institutional investors, representing US\$67 trillion in assets. These investors use CDP Water data to engage with portfolio companies, inform investment decisions and catalyze change.

On behalf of investor signatories, this year we asked 50 Turkish companies to provide data about their efforts to manage and govern freshwater resources. We selected these companies from BIST-100 index companies based on economic and environmental indicators (largest listed companies with high water impact sub-industry).

In total 19 companies responded to CDP Water Program in Turkey up from 15 (27% increase) last year. Out of 19 respondents, 7 were self selected (SSCs) and 12 were included in the Turkey sample that received an official invitation. Therefore, the response rate to CDP Water Disclosure is 24%

This report presents summary findings from our analyses of company disclosures in response to the CDP Water 2016 information request. It is aimed at companies facing water risks and opportunities, and investors seeking to better understand how water issues might impact their portfolios.

This year's findings demonstrate integrating water into climate policy is key to achieving sustainable economic growth.

State of play

Integrating water issues into climate policy and adopting an integrated approach to water and climate change issues by private sector are crucial components of corporate water security. The World Bank's recent report finds that water security deteriorated by climate change could cost some of world's regions up to 6% of GDP by 2050¹. Moreover, better water resource management and better policies could improve the economic growth of some regions by up to 6%.

In many parts of the world, climate change threatens the availability of sufficient freshwater resources, and will lead to increases in extreme weather conditions. Therefore adapting to the effects of climate change on water systems is vital.

The Paris agreement to cut carbon emissions creates pressure to improve water management. Data from CDP's Global Climate Change Report shows that 26% of GHG reduction activities depend on the availability of good quality water. Moreover, more than half of disclosing companies report that more efficient use of water has led to lower GHG emissions. These analyses prove that water stewardship is an imperative not only for its own sake, but also to enable an effective response to climate change.

The need for sufficient and high quality information on water is greater than ever. Being aware of this need, CDP Water Program aims to encourage corporate progress towards a water secure future for all through measurement and transparency. To that end, we track corporate action across five key areas explained below.

¹ World Bank 2016, "high and Dry: Climate Change, Water and the Economy"

Company responses overview

Key Indicators



Transparency:

Do companies respond to CDP's request for information?



Measuring and monitoring:

Do companies measure and monitor all water aspects²?



Risk assessment and management:

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



Targets and goals:

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



Engagement and response:

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



Transparency

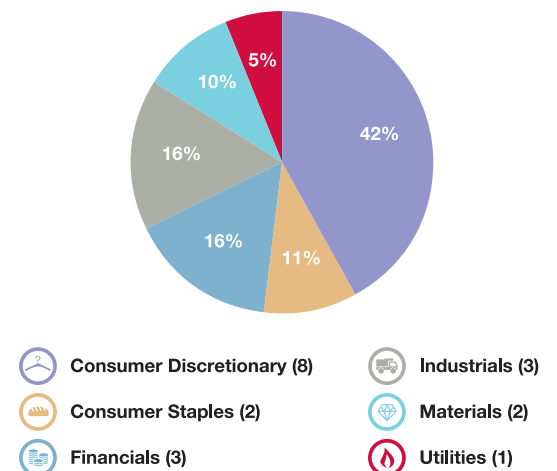
24% of invited companies in Turkey provided information to investors; in total, 19 companies responded up from 15 (27% increase) last year.

Disclosing through CDP helps companies understand the environmental challenges they face, as well as helping them to successfully respond to investor and regulatory requirements as they emerge.

In 2016, CDP invited 50 of the largest listed companies in Turkey operating in sectors exposed to water risk, namely Consumer Discretionary, Consumer Staples, Energy, Health Care, Industrials, Information Technology, Materials and Utilities. We asked them to complete the questionnaire included in the 2016 water information request. In total 19 companies did so, 7 of which were self selected (SSCs) and 12 were included in the original Turkey sample. Therefore, the response rate is 24%. Companies may reject the invitation to disclose for a variety of reasons such as absence of robust water policies in place, absence of water related data, and, most importantly, absence of a national water strategy to take as reference. On the other hand, although the regulations at the national level are not yet pressurizing or encouraging companies to address

water risks, the new climate regime emerging after Paris requires companies to be sufficiently transparent on environmental and water related risks and opportunities relevant for their businesses.

Figure 1: Response rate by sector (see number of companies in brackets)



² Water aspects refer to water withdrawals, discharges, quality, consumption, and WASH (Water, Sanitation and Hygiene).

Why sufficient amount of good quality water is needed?

Çimsa, as some other CDP responding companies, believes in the benefit of using more recycled water: "If we use more recycled water, we will be reducing our water consumption and dependency on water. Therefore it is important for us, because we would like to decrease our Water Footprint. In the future we believe usage of recycled water both in direct and indirect use will be more important. In Eskisehir Plant, we started to reuse our treated domestic waste in our process for cooling in 2015. In the same way, we have prepared projects for Kayseri Plant to reuse treated domestic waste in our process for cooling in 2016. We aim to apply this method for all of our plants to decrease our usage fresh water (blue water) from groundwater. On the other hand; the artificial lake in our Eskisehir plant is on the , migration route of birds and they use drinking water from it during immigration."



Measuring & Monitoring

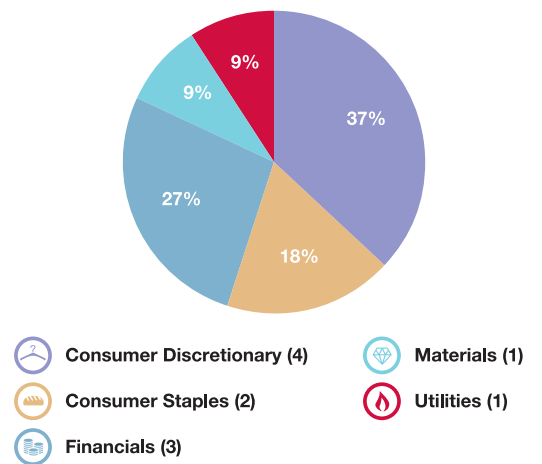
58% of responding companies are measuring and monitoring more than 50% of all water aspects.

Measuring and monitoring water usage, discharge and consumption are vital first steps in enabling companies to understand the risks they face, and the opportunities available to improve water security and stewardship throughout their operations and supply chains.

More than half (58%) of companies via CDP measure and monitor more than 50% of all aspects of water use and discharge, however, only 16% of responding companies in Turkey requires its key suppliers to report water use, risk and management.

As per accounting of water use, 78% of respondents gave account of their water withdrawals and water discharges via CDP.

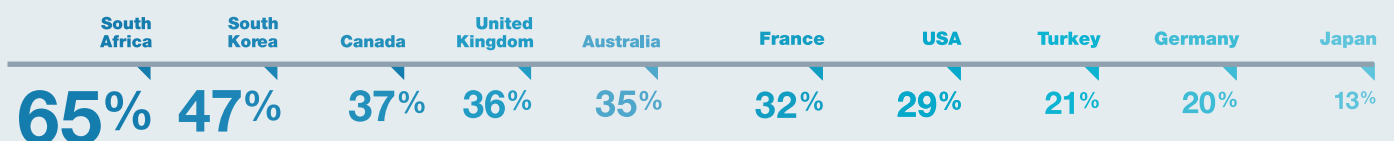
Figure 2. Companies that regularly measure and monitor more than 50% of all aspects of water use and discharge (see number of companies in brackets)



How companies measure and monitor water usage?

Tofaş: 100% of water discharges from industrial operations and from domestic use are monitored and treated separately. In 2015, 494 000 m3 of industrial wastewater, generated from production units, and 266 000 m3 of domestic wastewater were treated in accordance with the Water Pollution Control Legislation.

Figure 3: % of companies reporting impacts due to water by country





The growing imperative to assess and manage risk

US\$1.7 billion of water related financial impacts reported in Turkey.

In 2016, companies in Turkey reporting to CDP reported water-related financial impacts of more than US\$1.7 billion. The impacts resulted from increased energy or water consumption costs due to water stress, interruptions to production, or the need for increased investment to ensure water availability or comply with regulations.

26% of companies are exposed to water related risks in both direct operations and supply chain. Furthermore, financial risk that companies face from water issues is becoming more obvious. Only 16% of companies disclosed detrimental impacts related to water over the reporting period. The most frequently cited impacts were:

▼ **Higher operating costs** such as that faced by

Şekerbank: “8 of our branches located in 7 different river basins had been negatively affected from flood in 2015. Additionally, we purchase drinking water (water cooler bottles) for our facilities as it is not always possible to use water directly provided by the municipality.”

▼ **Reduction in revenue**

▼ **Supply chain disruption** such as that faced by **Pınar Süt:** “Our dairy plants have not experienced significant problems during the reporting period. Decrease in water quality affects companies in our supply chain that is more vulnerable to climate change impacts. Porsuk basin is highly polluted and this affects the dairy farms in the region. This reduces the efficiency of farms and thus milk supply.”

▼ **Plant/production disruption leading to reduced output**

Akenerji's water risk assessments on regulatory frameworks and tariffs:

1-For Hydroelectric Power Plants (HEPPS); environmental flow is measured by output water monitoring stations hourly and daily, and submitted to the General Directorate of State Hydraulic Works every six months. 2. For HEPPS, according to Protection of Wetlands Regulation Principles Applications, facilities which are located in Stream Protection Band have to own operation permits for two years. Therefore, the permit should be renewed by fully complying with law from the relevant Ministry. 3. Akenerji implements “Only 5% of disclosing companies meet this higher standard.”. 4. Downstream Water Rights Reports are prepared for all HEPPs 5. Erzin NGCCPP has permission to use seawater. Every year Seawater usage fee is paid to Erzin prefecture. 6. Also wastewater analysis is carried out in accordance with environmental permit regularly.

A comprehensive risk assessment is essential for companies to develop a clear understanding of physical, regulatory and reputational exposures as well as opportunities available. 63% of responding companies state that water risks are assessed. However, water-exposed companies should conduct risk assessments that are company-wide and comprehensive, including their direct operations and their supply chains. Only 5%

of disclosing companies meet this higher standard.

Assessment at the basin level poses challenges for companies, given that it requires an understanding of the activities and needs of local communities and other local water users. Unfortunately only 21% of companies in Turkey conduct risk assessment which took place at the river basin level.



Targets & Goals

47% of respondents have set both targets and goals to better manage water resources.

There is no universally accepted standard for setting meaningful and measurable corporate water targets unlike for carbon emissions. Since water security for all requires collective action and coordination at the local level, meaningful targets should be linked to where each company's direct operations and supply chains are located.

CDP defines “targets” as quantifiable objectives to manage water resources, and “goals” as qualitative aims leading towards improved water stewardship. In 2016, less than half of responding companies (47%) have set both targets and goals related to water in Turkey. %16 of responding companies reported targets with quantitative actions to manage water resources and %21 set qualitative goals leading towards improved water stewardship.

Coca Cola İçecek

Quantitative target/ Reduction of water use: “Our target is to achieve 29% reduction of water use in all manufacturing plants by 2020. We achieved our goal 100% for the year 2015 and achieved 77% of 2020 goal in 2015.”

Qualitative goal: “In line with its strategy to replenish every drop of water used, the Coca-Cola Company (TCCC) has set a goal for 2020: Safely return to communities and nature an amount of water equal to what it uses in its finished beverages and their production. Coca Cola İçecek supports TCCC Turkey in achieving to replenish an amount of water equivalent to our product volume through locally-relevant water and sanitation projects by establishing work groups, organizing workshops and making feasibility studies to start implementing TCCC’s sustainable sourcing guidelines for sweeteners in all Coca Cola İçecek operations in 2016 together with TCCC Turkey.”

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

Ford Otomotiv: “Within the new project for Yeniköy Paintshop, Ford Otomotiv launched the 3 WET Process, which has few examples worldwide and applied in Turkey for the first time . Through this process Ford have reduced number of paint cabins and ovens to one and totally eliminated binder and abrasives processes. By this way, Ford significantly reduced electricity and natural gas consumption, industrial material and paint consumption, maintenance, cleaning, labour and waste costs. Thanks to the project, the company saved 5% on electricity consumption, 26% on natural gas consumption, 14% on industrial material usage and 17% on paint usage. Reduction in water consumption per product is 0,45m3.”



Engagement & Response

79% of respondents have integrated water use into their business strategy.

63% of responding companies have board oversight and 79% of responding companies have integrated water issues into their business strategy. Meanwhile, there is considerable room for improvement in having publicly available company-wide water policies that include direct operations as well as supplier best practice and acknowledge human right to

water, sanitation and hygiene (WASH). Only 16% of respondents this year had such policies in place, although this is up from “none” last year. Respondents that report public policy engagement for water stewardship are also very few (11%).

Collective action is required to protect watersheds. In this regard, it remains a concern that only 21% of responding companies undertake water risk assessment at the river basin scale.

Case Study: Supply Chain Management

Garanti Bank: “Garanti manages its water related risks in supply chain by asking its suppliers to comply with its ISO14001 certified Environmental Management System (EMS) in supplier contracts. New catering and cleaning services contracts thus became compliant in 2012. In 2013, suppliers operating in sectors with a relatively higher footprint and constituting a substantial component (44%) of the Bank’s total procurement were requested to provide information on how they manage their environmental impact. After reviewing their suppliers’ respective management strategies, the Bank communicated its criteria for suppliers’ environmental performance and compliance methods through a variety of platforms such as one-to-one meetings and teleconferences. As a result of this process, supplier contracts representing 6.4% of total procurement were revised to include specific provisions regarding compliance with Garanti Bank’s EMS by the end of 2014. In order to expand the scope, Garanti will continue to work comprehensively on its supply chain’s environmental management in the following years.”

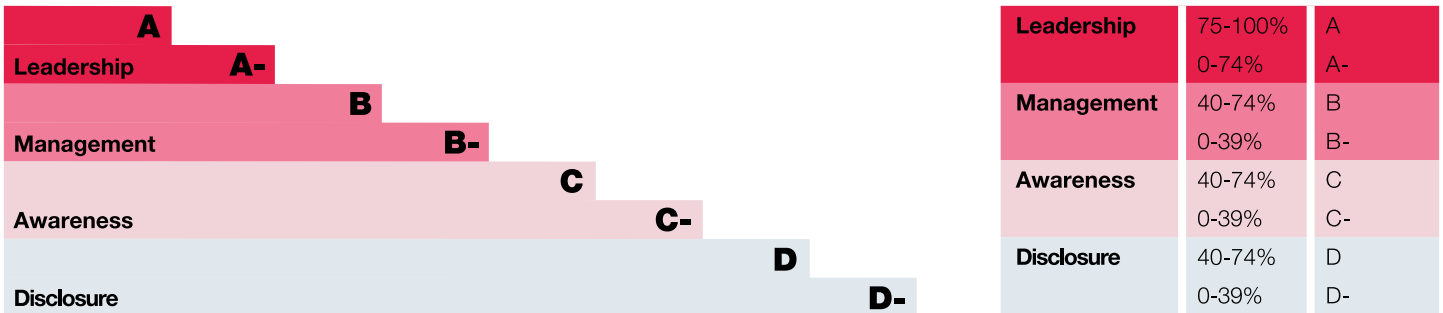
Key findings

- ▼ The overall response rate increased by 27% in 2016 compared to 2015. Non-disclosing companies should take immediate steps towards reporting to CDP's water program to support them start tackling water related challenges.
- ▼ Water risks are rapidly materializing for business in Turkey. Disclosing companies reported US\$1.7 billion in water-related impacts in 2016. More than half of responding companies report exposure to risk, and 21% report they expect to see risks to materialize within a year.
- ▼ The proportion of companies measuring and monitoring more than 50% of all water aspects is fairly high (58%) but more companies should begin collecting data on water.
- ▼ Overall 63% of responding companies assess their risks that is essential for companies to develop a clear understanding of physical, regulatory and reputational exposures as well as opportunities available.
- ▼ Turkish companies' level of engagement with water management and responsiveness to water risks are promising. Overall 79% of respondents have integrated water use into their business strategy. Moreover, almost half of the companies are setting company-wide targets and goals for reducing their impact on water resources.
- ▼ A small proportion (5%) of companies conduct a company-wide risk assessment that covers both direct operations and supply chains. Responding to these risks requires collaborative action and companies should engage with local communities, policy-makers, suppliers, and other stakeholders in their relevant river basin.
- ▼ A leadership towards water stewardship is underway. Although there is no A List Company in Turkey yet, three of the responding companies achieved A- score; Garanti Bank, Pınar Süt and Şekerbank. This is a promising start for companies in Turkey.

CDP Turkey water leaders

CDP TURKEY WATER LEADERS

PINAR SÜT MAMULLERİ SANAYİİ A.Ş.	Consumer Staples	A -
ŞEKERBANK T.A.Ş.	Financials	A -
T.GARANTİ BANKASI A.Ş.	Financials	A -



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

CDP Water Scoring Methodology

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

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

Management points are awarded for items that provide evidence of actions associated with good water management, such as the ability to account for water at the facility level, having company specific targets and goals around water or incorporating best practice elements in water policy. For leadership status, the company must demonstrate it is pursuing best practice, as understood by CDP and informed by other institutions we are working with to advance

water stewardship, including the **Alliance for Water Stewardship**, **Ceres**, the **UN CEO Water Mandate**, **World Resources Institute** and **WWF**.

CDP's water score is an indicator of a company's commitment to transparency around their environmental risks, and the sufficiency of their response to them. These are both essential for the collaborative stewardship of water. CDP's water score is based solely on activities and positions disclosed in their CDP response.

Companies eligible for an A are those which achieved 75% of the points available in the Leadership band and have submitted a public response. However, not all companies requested to respond to CDP do so. Companies who are requested to disclose their data and fail to do so, or fail to provide sufficient information will receive an F, which signifies their failure to provide sufficient information to CDP to be evaluated for this purpose. An F does not indicate a failure in environmental stewardship. Ultimately, the methodology aims to recognize companies that understand that the sustainable management of water is a business imperative and are acting to improve water security for all.

CDP Turkey response status table

Company	Sector	2016 Response Status	2016 Score	2015 Response Status	Permission Status	Water Withdrawal	Water Discharge	Water Consumption
CDP TURKEY WATER SAMPLE								
AKÇANSA ÇİMENTO SANAYİ VE TİCARET A.Ş.	Materials	AQ	B	X	Public	D	D	D
AKFEN HOLDİNG A.Ş.	Industrials	DP	F	X				
AKSA AKRİLİK KİMYA SANAYİ A.Ş.	Consumer Discretionary	DP	F	AQ				
AKSA ENERJİ ÜRETİM A.Ş.	Utilities	NR	F	NR				
ANADOLU EFES BİRACILIK VE MALT SANAYİ A.Ş.	Consumer Staples	NR	F	NR				
ARÇELİK A.Ş.	Consumer Discretionary	NR	F	DP				
ASELSAN ELEKTRONİK SANAYİ VE TİCARET A.Ş.	Industrials	NR	F	DP				
ASLAN ÇİMENTO A.Ş.	Materials	NR	F	X				
AYGAZ A.Ş.	Utilities	NR	F	NR				
BİM BİRLEŞİK MAĞAZALAR A.Ş.	Consumer Staples	NR	F	DP				
BORUSAN MANNESMANN BORU SANAYİ VE TİCARET A.Ş.	Materials	NR	F	NR				
BRİSA BRIDGESTONE SABANCI LASTİK SAN. VE TİC. A.Ş.	Consumer Discretionary	AQ	B	AQ	Public	D	D	D
CARREFOURSA CARREFOUR SABANCI TİCARET MERKEZİ A.Ş.	Consumer Staples	NR	F	X				
ÇİMSA ÇİMENTO SANAYİ VE TİCARET A.Ş.	Materials	AQ	B-	AQ	Public	D	D	D
COCA-COLA İÇECEK A.Ş.	Consumer Staples	AQ	B	AQ	Public	D	D	D
DOĞAN ŞİRKETLER GRUBU HOLDİNG A.Ş.	Industrials	AQ	D	X	Private			
DOĞUŞ OTOMOTİV SERVİS VE TİCARET A.Ş.	Consumer Discretionary	NR	F	X				
EGE ENDÜSTRİ VE TİCARET A.Ş.	Consumer Discretionary	NR	F	X				
EİS ECZACIBAŞI İLAÇ, SINAI VE FİNANSAL YATIRIMLAR SAN. VE TİC. A.Ş.	Health Care	NR	F	NR				
ENKA İNŞAAT VE SANAYİ A.Ş.	Industrials	NR	F	NR				
EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.	Materials	DP	F	DP				
FORD OTOMOTİV SANAYİ A.Ş.	Consumer Discretionary	AQ	B-	NR	Public	D	D	D
GOODYEAR LASTİKLERİ T.A.Ş.	Consumer Discretionary	NR	F	X				
GÜBRE FABRİKALARI T.A.Ş.	Materials	NR	F	NR				
KARDEMİR KARABÜK DEMİR ÇELİK SANAYİ VE TİCARET A.Ş.	Materials	DP	F	DP				
KARTONSAN KARTON SANAYİ VE TİCARET A.Ş.	Materials	DP	F	DP				
KENT GIDA MADDELERİ SANAYİ VE TİCARET A.Ş.	Consumer Staples	NR	F	X				
KOÇ HOLDİNG A.Ş.	Industrials	NR	F	NR				
KONYA ÇİMENTO SANAYİ A.Ş.	Materials	NR	F	NR				
KORDSA GLOBAL ENDÜSTRİYEL İPLİK VE KORD BEZİ SAN. VE TİC. A.Ş.	Consumer Discretionary	AQ	C	X	Public	D	D	D
KOZA ALTIN İŞLETMELERİ A.Ş.	Materials	NR	F	NR				

Company	Sector	2016 Response Status	2016 Score	2015 Response Status	Permission Status	Water Withdrawal	Water Discharge	Water Consumption
CDP TURKEY WATER SAMPLE								
MİGROS TİCARET A.Ş.	Consumer Staples	NR	F	DP				
OTOKAR OTOMOTİV VE SAVUNMA SANAYİ A.Ş.	Industrials	DP	F	X				
PETKİM PETROKİMYA HOLDİNG A.Ş.	Materials	NR	F	DP				
SODA SANAYİ A.Ş.	Materials	DP	F	NR				
T.ŞİŞE VE CAM FABRİKALARI A.Ş.	Industrials	DP	F	DP				
TAV HAVA LİMANLARI HOLDİNG A.Ş.(Env list)	Industrials	AQ	C	AQ	Public	D	D	D
TEKFEN HOLDİNG A.Ş.	Industrials	NR	F	X				
TESCO KİPA	Consumer Staples	NR	F	SA				
TOFAŞ TÜRK OTOMOBİL FABRİKASI A.Ş.	Consumer Discretionary	AQ	B	AQ	Public	D	D	D
TRAKYA CAM SANAYİİ A.Ş.	Industrials	NR	F	NR				
TÜMOSAN MOTOR VE TRAKTÖR SANAYİ A.Ş.	Industrials	AQ	C	X	Public			
TÜPRAŞ-TÜRKİYE PETROL RAFİNERİLERİ A.Ş.	Energy	NR	F	NR				
TÜRK TRAKTÖR VE ZİRAAT MAKİNELERİ A.Ş.	Industrials	NR	F	NR				
TÜRK TUBORG BIRA VE MALT SANAYİİ A.Ş.	Consumer Staples	DP	F	X				
ÜLKER BİSKÜVİ SANAYİ A.Ş.	Consumer Staples	NR	F	NR				
VESTEL BEYAZ EŞYA SANAYİ VE TİCARET A.Ş.	Consumer Discretionary	AQ	D	X	Private			
VESTEL ELEKTRONİK SANAYİ VE TİCARET A.Ş.	Consumer Discretionary	AQ	B-	X	Public	D	D	D
YAZICILAR HOLDİNG A.Ş.	Industrials	NR	F	NR				
ZORLU ENERJİ ELEKTRİK ÜRETİM A.Ş.	Utilities	NR	F	NR				
OTHER RESPONDING COMPANIES								
AKENERJİ ELEKTRİK ÜRETİM A.Ş.	Utilities	AQ	B	AQ	Public	D	D	D
İHLAS EV ALETLERİ İMALAT SANAYİ VE TİCARET A.Ş.	Consumer Discretionary	AQ	C	AQ	Private			
PINAR SÜT MAMULLERİ SANAYİİ A.Ş.	Consumer Staples	AQ	A-	AQ	Private	D	D	D
ŞEKERBANK T.A.Ş.	Financials	AQ	A-	AQ	Public	D	D	D
T.GARANTİ BANKASI A.Ş.	Financials	AQ	A-	AQ	Public	D	D	D
TÜRKİYE HALK BANKASI A.Ş.	Financials	AQ	C	X	Public	D	D	D
YÜNİSA YÜNLÜ SANAYİ VE TİCARET A.Ş.	Consumer Discretionary	AQ	B	AQ	Public	D	D	D

(AQ) Answered questionnaire

(NR) No response

(DP) Declined to Participate

(F) Failure to provide sufficient information to CDP to be evaluated for this purpose

(SA) Company is either a subsidiary or has merged during the reporting process. See company in brackets for further information on company status

(D) Disclosed

(X) Company was not included in the CDP sample in that year

CDP Contacts

Sue Howells
Co-Chief Operating Officer

Daniel Turner
Head of Disclosure

James Hulse
Head of Investor Initiatives

Antigone Theodorou
Director, Global operations

CDP Worldwide
Level 3
71 Queen Victoria Street
London
EC4V 4AY
United Kingdom

Tel: +44 (0)20 3818 3900
www.cdp.net
info@cdp.net

Partner Contacts

Melsa Ararat
Director

Mirhan Köroğlu Göğüş
Projects Manager

Sabancı University
Orhanlı/Tuzla 34956
Istanbul
Turkey
Tel: +90 (0) 2164839682
cdpturkey.sabanciuniv.edu
mirhank@sabanciuniv.edu

Report Writer Contacts

Mirhan Köroğlu Göğüş
CDP Turkey

Melsa Ararat
CDP Turkey

Important Notice

The contents of this report may be used by anyone providing acknowledgement is given to CDP Worldwide (CDP). This does not represent a license to repackaging or resell any of the data reported to CDP or the contributing authors and presented in this report. If you intend to repackaging or resell any of the contents of this report, you need to obtain express permission from CDP before doing so.

Sabancı University and CDP have prepared the data and analysis in this report based on responses to the CDP 2016 information request. No representation or warranty (express or implied) is given by Sabancı University or CDP as to the accuracy or completeness of the information and opinions contained in this report. You should not act upon the information contained in this publication without obtaining specific professional advice. To the extent permitted by law, Sabancı University and CDP do not accept or assume any liability, responsibility or duty of care for any consequences of you or anyone else acting, or refraining to act, in reliance on the information contained in this report or for any decision based on it. All information and views expressed herein by CDP and/or Sabancı University is based on their judgment at the time of this report and are subject to change without notice due to economic, political, industry and firm-specific factors. Guest commentaries where included in this report reflect the views of their respective authors; their inclusion is not an endorsement of them.

Sabancı University and CDP and their affiliated member firms or companies, or their respective shareholders, members, partners, principals, directors, officers and/or employees, may have a position in the securities of the companies discussed herein. The securities of the companies mentioned in this document may not be eligible for sale in some states or countries, nor suitable for all types of investors; their value and the income they produce may fluctuate and/or be adversely affected by exchange rates.

CDP Worldwide and *CDP* refer to CDP Worldwide, a registered charity number 1122330 and a company limited by guarantee, registered in England number 05013650.

© 2016 CDP Worldwide. All rights reserved.*

CDP Partner



**CORPORATE
GOVERNANCE FORUM
OF TURKEY**

Main Sponsor

