

CDP Climate Change and Water Report 2020

Written on behalf of over 515 institutional investors with US\$106 trillion in assets

Turkey Edition

CEO FOREWORD



When it comes to climate change, water security and deforestation, we have now entered a global emergency and the decade of action, our last chance to make rapid and deep cuts to global emissions and to protect biodiversity to avoid the full force of these other global crises.

As 2021 unfolds, we reflect on the challenging and extraordinary times of the last year. As the world worked to collectively respond to the COVID-19 pandemic, we reeled from the tragic human impact of the crisis and its impact on our health, financial and social systems. Sadly, we are still grappling with these crises, but the rollout of the vaccine provides great hope for later this year.

When it comes to climate change, water security and deforestation, we have now entered a global emergency and the decade of action, our last chance to make rapid and deep cuts to global emissions and to protect biodiversity to avoid the full force of these other global crises.

Despite the pandemic, we are bolstered by the environmental leadership from companies, investors, governments, cities, and regions worldwide. With so much at stake and the clock running down, 2020 saw record disclosures through CDP's platform, with over 10,000 entities now disclosing their data on climate change, water security and deforestation issues.

More than 9,600 companies, worth over 50% of global market capitalization now disclose through CDP and corporate disclosures are up 70% compared to five years ago when the Paris agreement was formed. This is in addition to the cities, states and regions that disclosed to us last year.

At CDP, we are led by the latest climate science. As it evolves, so must we, ensuring that the right information is embedded into the capital markets and placed into the hands of policymakers and decision-makers worldwide. CDP's systems enable this, and it is particularly critical as capital flows seek to transition towards the Net Zero, sustainable economy.

One thing is certain, we cannot afford to go back to 'normal' from an environmental perspective. Propping up the old system, with impending

climate change hazards increasing, will lock us into a pathway of even greater risk. Instead, we must reinvent and renew our economy into one with greater resilience and more inclusivity.

Disclosure, transparency, data and science will be crucial to building a more resilient society. As we've learned from this current pandemic and from climate change, the best time for action is long before the problem becomes severe. Measuring and managing environmental risks through disclosure helps companies, cities, states and regions to build resiliency and plan for the future.

We must build back better from the COVID-19 pandemic. Our economies, societies and livelihoods depend on it.

The time for action is now.

Paul Simpson
CEO, CDP

SPONSOR FOREWORD



Disclosing to CDP is one of the most efficient ways to communicate a powerful message to stakeholders that an organization is serious about tackling the environmental challenges material to their business. I predict that climate change is only the first of a series of sustainability or ESG issues that will come to be perceived as financial risks or, indeed, opportunities.

2020 has begun with an unprecedented shock, calling the business world's attention to the fragility and interdependence of the planet and human life. COVID-19 is the crisis of the year, addressing climate change is the crisis of the decade. It is time for a reset and action. It is the decade of ambition.

COVID-19 has caused sharp reductions in economic activity and associated fossil fuel consumption around the world in 2020. As a result, many nations are reporting significant reductions in greenhouse gas emissions for the year 2020, edging them a bit closer to meeting the initial emissions targets to which they committed under the Paris Agreement on climate change. Even though global emissions fell in 2020, they were still around the same levels as in 2012, and the drop is insignificant in comparison with the total amount of CO2 emitted over the past centuries. Therefore, the need for the business leadership to drive policy ambition and accelerate the transition to a zero-carbon economy is still on the front burner.

Consumers, business partners, and other entities are calling out for transparency around ESG performance with an accelerating demand day by day against those challenging times. Disclosing to CDP is one of the most efficient ways to communicate a powerful message to stakeholders that an organization is serious about tackling the environmental challenges material to their business. I predict that climate change is only the first of a series of sustainability or ESG issues that will come to be perceived as financial risks or, indeed, opportunities. 94 percent of CDP Climate Change responding companies in Turkey stated that inherent climate-related risks with the potential to have a substantive financial or strategic impact on the business this year. It is understood that the growth of sustainable finance (the integration of environmental, social, and governance criteria into investment decisions) across all asset classes will show increasing importance that investors attribute to climate change.

The 17 Sustainable Development Goals and 169 targets of the 2030 Agenda for Sustainable Development, direct world leaders for common action and endeavor across such a broad and universal policy agenda. These goals result from

a process that has been more inclusive than ever, with governments involving business, civil society, and citizens from the outset we are all in agreement on where the world needs to go. Fulfilling these ambitions will take an unprecedented effort by all sectors and businesses have to play a very important role in the process.

Globally, 313 companies named on CDP's prestigious 'A List' this year for environmental transparency and action, a 45% increase compared to 2019 is a promising indicator of green business future. I believe that by focusing on all the ways we can drive change, we can make an outsized impact on climate change. We, and other organizations who are serious about an environmentally sustainable future, need to pull all levers of influence we have. COVID-19 has proven that collective action is critical to solving urgent, global challenges. Therefore, I would like to offer my sincere thanks to all respondent companies and stakeholders who support CDP Turkey and transparent reporting development in Turkey. In rebuilding the green economy after COVID-19, I urge you to scale up your engagement with CDP and deepen your own dedication to ambition and action.

Recep Baştuğ
CEO, Garanti BBVA

PARTNER FOREWORD



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This year's record level of climate and water related disclosures by Turkish companies through the CDP platform suggests that Turkey's leading companies are following the developments closely. Reporting through CDP allows gaps in measurements and disclosure to be more easily identified, by both investors and companies, and can help policy makers to develop effective policies.

In our last year's CDP report, I expressed my concerns that while the world was facing the threat of a global recession, the pandemic might shift global attention away from addressing climate change. This has not been the case. On the contrary, thanks to the changes in climate policies of the US and the enthusiastic uptake of the EU's New Green Deal by key member countries, post-pandemic economic strategies are anchored in green recovery that aim to decarbonize the economy.

A key element to foster low carbon growth and finance the transition will be to channel funding to economic activities that contribute to the objective of achieving Net Zero by 2050. Data availability is a categorical imperative to set ambitious but realistic targets and track the progress along the way. During the past months, rule makers around the world, one after the other, have announced decisions or intentions to make climate-related disclosures mandatory since scientists have urged emissions to be dropped by 50% by 2030 and reach net zero by 2050 to avoid the most catastrophic impacts of climate change.

On 3rd of March 2021, The Securities and Exchange Commission (SEC) announced that it will aggressively scrutinize the climate change disclosures of listed firms. It is expected to introduce rules forcing firms to reveal how climate change or efforts to fight it may affect their business. The task force is also poised to examine whether investment advisors' and private fund managers' environmental, social and governance related disclosures match their respective processes and practices, and their proxy voting policies and votes align with their disclosed strategies. In short, they will be forced to walk the walk.

On 8th of March this year, the IFRS (International Financial Reporting Standards) Foundation Trustees also updated their strategic direction to strengthen financial corporate reporting, by taking account of the financial opportunities and risks of sustainability impacts on enterprise value creation. On the same day, European Financial Reporting Advisory Group published a report on the development of EU Sustainability Reporting Standards.

Eliminating emissions from their portfolios is becoming a greater focus for investors as regulators push them to move from talk to action and use their influence and resources to hold companies to account. On the 29th of March the world's largest asset managers, Blackrock and Vanguard have joined The Net Zero Asset Managers initiative that consists of investors collectively managing \$22.8 trillion of assets, committing to cut the net greenhouse-gas emissions of their portfolios to zero by 2050. Most of them are also investor signatories of CDP.

All these indicate the beginning of a new disclosure and reporting era that will integrate financial and non-financial disclosure and reporting. A key departure from the previous era is that the general acceptance of 'double materiality', meaning that businesses should report on financially material topics that not only influence enterprise value but also on topics material to the economy, environment, and people. With the objective of making climate change disclosure more comparable the so-called "big five" international standard setters: CDP, CDSB, GRI, IIRC and SASB, have committed to making their frameworks and standards interoperable, and developing a joint vision of how these elements could complement financial reporting based on the recommendations of Task Force on Climate-Related Financial Disclosures (TCFD) set up by Financial Stability Board.

This year, 9600 of world's largest companies have disclosed climate-related information through CDP. This number includes more than 60% of S&P 500 companies, representing more than 50% of the world's market cap. This year's record level of climate and water related disclosures by Turkish companies through the CDP platform suggests that Turkey's leading companies are following the developments closely. Reporting through CDP allows gaps in measurements and disclosure to be more easily identified, by both investors and companies, and can help policy makers to develop effective policies. Turkey's CDP Climate Change and Water leaders that have shown state of the art performance over the past eleven years are a source of great inspiration for the late comers and for companies in their supply chain.

Melsa Ararat, PhD
Director & Principal Researcher, Sabanci University Corporate Governance Forum

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RESPONDING COMPANY LIST

CLIMATE CHANGE / TURKEY 2020

Official Investor Sample

AFYON ÇİMENTO SANAYİ T.A.Ş.
AKBANK T.A.Ş.
AKSA AKRİLİK KİMYA SANAYİİ A.Ş.
ALBARAKA TÜRK KATILIM BANKASI A.Ş.
ANADOLU CAM SANAYİİ A.Ş.
ANADOLU EFES BİRACILIK VE MALT SANAYİİ A.Ş.
ARÇELİK A.Ş.
ASELSAN ELEKTRONİK SANAYİ VE TİCARET A.Ş.
COCA-COLA İÇECEK A.Ş.
ENERJİSA ENERJİ A.Ş.
ENKA İNŞAAT VE SANAYİ A.Ş.
FORD OTOMOTİV SANAYİ A.Ş.
GENTAŞ GENEL METAL SANAYİ VE TİCARET A.Ş.
KARDEMİR KARABÜK DEMİR ÇELİK SANAYİ VE TİCARET A.Ş.
KORDSA TEKNİK TEKSTİL A.Ş.
MAVİ GİYİM SANAYİ VE TİCARET A.Ş.
MİGROS TİCARET A.Ş.
NETAŞ TELEKOMÜNİKASYON A.Ş.
PEGASUS HAVA TAŞIMACILIĞI A.Ş.
POLİSAN HOLDİNG A.Ş.
SABANCI HOLDİNG A.Ş.
SODA SANAYİ A.Ş.
ŞEKERBANK T.A.Ş.
T.GARANTİ BANKASI A.Ş.
T.İŞ BANKASI A.Ş.
T.SINAI KALKINMA BANKASI A.Ş.
T.ŞİŞE VE CAM FABRİKALARI A.Ş.
TEKFEN HOLDİNG A.Ş.
TOFAŞ TÜRK OTOMOBİL FABRİKASI A.Ş.
TRAKYA CAM SANAYİİ A.Ş.
TURKCELL İLETİŞİM HİZMETLERİ A.Ş.
TÜRK TELEKOMÜNİKASYON A.Ş.
TÜRKİYE HALK BANKASI A.Ş.
TÜRKİYE VAKIFLAR BANKASI T.A.O.
ÜLKER BİSKÜVİ SANAYİ A.Ş.
VESTEL ELEKTRONİK SANAYİ VE TİCARET A.Ş.
YAPI VE KREDİ BANKASI A.Ş.
ZORLU ENERJİ ELEKTRİK ÜRETİM A.Ş.

Other Responding Companies

ABDİ İBRAHİM İLAÇ SANAYİ VE TİCARET A.Ş.
AKÇANSA ÇİMENTO SANAYİ VE TİCARET A.Ş.
AKENERJİ ELEKTRİK ÜRETİM A.Ş.
AYDEM YENİLENEBİLİR ENERJİ A.Ş.
BRİSA BRIDGESTONE SABANCI LASTİK SAN. VE TİC. A.Ş.
CARREFOURSA CARREFOUR SABANCI TİCARET MERKEZİ A.Ş.
ÇİMSA ÇİMENTO SANAYİ VE TİCARET A.Ş.
DURAN DOĞAN BASIM VE AMBALAJ A.Ş.
EKOTEN SANAYİ VE TEKSTİL A.Ş.
ETİ SODA A.Ş.
GAZDAŞ GAZİANTEP DOĞAL DAĞITIM A.Ş.
GENEL ENERGY PLC
İHLAS EV ALETLERİ İMALAT SANAYİ VE TİCARET A.Ş.
KAYSERİ ULAŞIM A.Ş.
OSMANGAZİ ELEKTRİK DAĞITIM A.Ş.
PINAR ENTEGRE ET VE UN SANAYİİ A.Ş.
PINAR SÜT MAMULLERİ SANAYİİ A.Ş.
SUN TEKSTİL SANAYİ VE TİCARET A.Ş.
TÜRKİYE KALKINMA VE YATIRIM BANKASI A.Ş.
VESTEL BEYAZ EŞYA SANAYİ VE TİCARET A.Ş.
YÜNİSA YÜNLÜ SANAYİ VE TİCARET A.Ş.
ZORLU DOĞAL ELEKTRİK ÜRETİMİ A.Ş.

RESPONDING COMPANY LIST

WATER SECURITY / TURKEY 2020

Official Investor Sample

AFYON ÇİMENTO SANAYİ T.A.Ş.
AKÇANSA ÇİMENTO SANAYİ VE TİCARET A.Ş.
AKENERJİ ELEKTRİK ÜRETİM A.Ş.
AKSA AKRİLİK KİMYA SANAYİİ A.Ş.
ARÇELİK A.Ş.
BRİSA BRIDGESTONE SABANCI LASTİK SAN. VE TİC. A.Ş.
CARREFOURSA CARREFOUR SABANCI TİCARET MERKEZİ A.Ş.
COCA-COLA İÇECEK A.Ş.
ÇİMSA ÇİMENTO SANAYİ VE TİCARET A.Ş.
ENERJİSA ENERJİ A.Ş.
ENKA İNŞAAT VE SANAYİ A.Ş.
FORD OTOMOTİV SANAYİ A.Ş.
KORDSA TEKNİK TEKSTİL A.Ş.
MİGROS TİCARET A.Ş.
POLİSAN HOLDİNG A.Ş.
TEKFEN HOLDİNG A.Ş.
TOFAŞ TÜRK OTOMOBİL FABRİKASI A.Ş.
ÜLKER BİSKÜVİ SANAYİ A.Ş.
VESTEL BEYAZ EŞYA SANAYİ VE TİCARET A.Ş.
VESTEL ELEKTRONİK SANAYİ VE TİCARET A.Ş.
ZORLU ENERJİ ELEKTRİK ÜRETİM A.Ş.

Other Responding Companies

ABDİ İBRAHİM İLAÇ SANAYİ VE TİCARET A.Ş.
ALBARAKA TÜRK KATILIM BANKASI A.Ş.
AYDEM YENİLENEBİLİR ENERJİ A.Ş.
DURAN DOĞAN BASIM VE AMBALAJ A.Ş.
ETİ SODA A.Ş.
İHLAS EV ALETLERİ İMALAT SANAYİ VE TİCARET A.Ş.
PINAR ENTEGRE ET VE UN SANAYİİ A.Ş.
PINAR SÜT MAMULLERİ SANAYİİ A.Ş.
SABANCI HOLDİNG A.Ş.
ŞEKERBANK T.A.Ş.
T.GARANTİ BANKASI A.Ş.
TÜRKİYE HALK BANKASI A.Ş.
YAPI VE KREDİ BANKASI A.Ş.
YÜNİSA YÜNLÜ SANAYİ VE TİCARET A.Ş.
ZORLU DOĞAL ELEKTRİK ÜRETİMİ A.Ş.

SNAPSHOT

CLIMATE CHANGE / TURKEY 2020



Response Summary & Current State

60 Total number of responding companies

38 Number of responding companies within BIST-100

36 Number of A and B Band respondents



Climate Change Management

89% Reporting engagement with the value chain on climate-related issues

46% Organization has developed a low-carbon transition plan to support the long-term business strategy

41% Use an internal price on carbon



Governance & Strategy

98% Board-level oversight of climate-related issues within the organization

89% Provide monetary incentives for the management of climate-related issues

72% Use climate-related scenario analysis to inform organization's business strategy



Risks

385 Total number of risks identified as relevant

59% Carbon pricing mechanisms are one of the risk drivers that have a financial or strategic impact

37.3 billion Dollars Potential financial impact of the risks identified



Targets & Performance

80% Have an emissions target that was active in the reporting year

43% Provide products and/or services that enable a third party to avoid GHG emissions

33% Have no Science Based Target yet but anticipate setting one in the next 2 years



Opportunities

180 Total number of opportunities identified as relevant

46% Shift in consumer preferences is one of the risk drivers that have a financial or strategic impact

12.8 billion Dollars Potential financial impact of the opportunities identified

SNAPSHOT

WATER SECURITY / TURKEY 2020



Response Summary & Current State

34 | Total number of responding companies

91% | Across all operations (sites/facilities/operations), more than half of the water aspects are regularly measured and monitored

76% | Engage with the value chain on water-related issues



Business Impacts & Procedures

91% | Undertook a water-related risk assessment

91% | Regulators are the most considered stakeholders in organization's water-related risk assessments

26% | Organization has experienced detrimental water-related impacts



Governance & Strategy

97% | Reported board-level oversight of water-related issues within the organization

79% | Respondents that have a water policy

74% | Water-related issues are integrated into financial planning of the organization



Risks

50% | More than half of company-wide facilities are exposed to water risks

47% | Anticipate risks to materialize within 1 - 6 years

29% | Flooding is the primary risk driver in direct operations that have a substantive financial or strategic impact



Targets & Performance

82% | Company-wide targets and goals are in place

82% | Respondents that provide quantitative metric for water targets

50% | Reduced environmental impacts reported as the most common primary motivation behind water targets



Opportunities

71% | Efficiency is one of the opportunities that could have a substantive financial or strategic impact

59% | Anticipate opportunities to materialize within 1 - 6 years

41% | Cost savings are primary water-related opportunities

KEY FINDINGS

CLIMATE CHANGE / TURKEY 2020

- ▼ Within Turkey operation, the number of companies responding to CDP's Climate Change Program has reached 60 in 2020 that represents a significant increase from 2019, even amidst the Covid-19 crisis. This confirms the CDP's view that environmental reporting should continue despite the pandemic.
- ▼ Management and leadership levels (A & B scores) require demonstration of good or leading environmental performance as well as transparency. In 2020, the number of A and B band scored companies in Turkey is 36 in total. That number is steadily increasing year by year. In Turkey, **Garanti BBVA** made the Global CDP Climate A list and **Tekfen Holding** achieved a 'double A' score for Global Climate and Water, being one of the 63 companies in the World. 8 companies (5 in 2019) achieved a score of 'A-' across Climate Change are recognized as pioneers of business in Turkey for environmental reporting.
- ▼ CDP's annual **Supplier Engagement Rating (SER)** provides a rating for how effectively companies are engaging their suppliers on climate change since 2018. By engaging their suppliers on climate change, companies are playing a crucial role in the transition towards the net-zero sustainable economy. We have 3 companies in Turkey achieved a score of A: **Arçelik**, **Brisa** and **Garanti BBVA**. A further 11 companies from various sectors also receive 'A-'.
- ▼ **C-suite positions** are identified as being particularly pertinent as they escalate environmental issues from being kept in a CSR/ESG department toward broader integration in organization-wide practices. While almost all companies (98%) disclose that they have board-level oversight on climate-related issues, not enough is held by critical C-suite directors (56%).
- ▼ Within responding companies, offering **incentives** to senior leadership to ensure environmental goals are achieved is more of an established practice with climate change (93%), while it remains nascent for water security (59%).
- ▼ Responding companies in Turkey have started to act, but to be aligned with the scientific consensus that provides the basis of the Paris Agreement, efforts will need to ramp up significantly. While it was encouraging to find key environmental metrics are broadly being disclosed, companies are needed to have the right targets in place to decrease their impact. The number of companies implementing **forward-looking mechanisms to plan for the low-carbon transition** is still low in Turkey:
 - **Science-based targets (SBTs)** further demonstrate corporate leadership and ensure resiliency, climate change preparedness and the ability and intention to stay ahead of ever-changing regulatory and business environments. A very small number of companies in Turkey setting targets aligned with science (9%) and only 33% anticipate setting one in the next two years.
 - Since the practice of setting **emissions reduction targets** has become standard business practice and is an expectation from capital market stakeholders, the proportion of companies setting targets to reduce their GHG emissions is 80% in Turkey. However, renewable energy consumption (19%) or production (9%) targets remains extremely low.
 - 41% of companies report the use of an **internal carbon price**, compared to 27% last year allowing them to be ready for future costs imposed by either emissions trading schemes or carbon taxes, with a further one fifth expecting to do so within the next two years. This growth is largely driven by the parallel development of regulations that directly or indirectly price carbon and the increasing pressure from shareholders and customers. More than a quarter (28%) of responding companies see the use of an internal carbon pricing system as a way to change internal behavior in the company. A further 19% use it to drive energy efficiency and 17% to drive low carbon investment.
 - Although all companies (100%) in Turkey stated that they have integrated climate change into their business strategy, the amount of companies conducting **climate change scenario analysis** to understand strategic implications of climate-related risks and opportunities (72%) suggests that there is still a room for improvement.
- ▼ 46% of responding companies in Turkey have developed a **low-carbon transition** plan to support the long-term business strategy to respond to climate-related risks and capitalize on opportunities. This remarkable increase from last year (16% in 2019) proves that companies in Turkey are stepping up to respond to climate-related risks and find opportunities in the transition towards a sustainable, low-carbon economy.
- ▼ **Risk assessment** is a vital process that helps companies understand their vulnerabilities and drive appropriate action where it's needed most. While most companies identify inherent climate-related risks with the potential to have a substantive financial or strategic impact on the business (94%), many others (67%) provided at least one figure for the potential financial impact of the risk.
- ▼ The most commonly reported **risk type** with the potential to have a substantive financial or strategic impact on the business is related to emerging regulation (65%). This is attributable to the recent national and international developments on carbon markets, carbon tax and climate law. Acute (59%) and chronic (46%) physical risks are following which is attributable to the recent temperature changes and extreme weather conditions, which affect almost all sectors in Turkey. By far the most commonly reported **risk driver** with the potential to have a substantive financial or strategic impact on the business is **carbon pricing mechanisms** (59%) in 2020. Given the growth of carbon pricing regulation globally, this is unsurprising.

▼ COVID-19 has demonstrated that future climate shocks present a threat. Companies must go beyond disclosure to monitor and fully engage their value chains to address critical physical climate and environmental risks. However, **value chain engagement** is relatively shallow for the responding companies. While 89% of companies engage in some way with their value chain on climate change, just 30% provide details of organization's climate-related supplier engagement strategy with more than half of their suppliers.

▼ While there are promising signs of companies identifying and capitalizing on **opportunities** (89%), there is a critical shortage of reported opportunities aimed at increasing resilience in the face of a changing environment (9%).

▼ 87% of companies in Turkey report active **emissions reduction initiatives** in the reporting year. More than half of companies (54%) reported that the initiatives are related to energy efficiency in production processes. Unsurprisingly, energy efficiency in buildings (48%) comes after with a huge potential to save carbon emissions. Half of the reporting companies (50%) believe that their active emission reduction initiatives will payback in less than a year.

KEY FINDINGS

WATER SECURITY / TURKEY 2020

▼ More companies (13% increase compared to previous year) than ever are disclosing on water issues and seeing the benefits of their disclosure. Triple the number of companies are showing leadership on water issues (9 in 2020, 3 in 2019). **Tekfen Holding** achieved a 'double A' score for Global Climate and Water Programs.

▼ Responding to risks and seizing opportunities requires awareness, monitoring, transparency and disclosure. However, many companies in Turkey seem to be unaware of their exposure to water risks. Although 91% undertake a **water-related risk assessment**, only 26% reported that they have experienced any **detrimental water-related impacts**.

▼ The economic imperative to turn the world's water crisis around is stronger than ever. The combined financial risk reported in 2020 topped out at US\$733 million in Turkey. This figure may be an underestimate, however, as 44% of respondents failed to provide financial values of the risks they face.

▼ Most companies try to reduce their water consumption through recycling and reusing. But despite these efforts the **demand for water** in industrial activities is still not decreasing as it is needed. While 29% of responding companies have measured that, their water consumption is lower than the previous year, 32% report an increase. In terms of water withdrawals, 44% of responding companies report a decrease, while 29% measured an increase compared to previous year.

The most common explanation that companies provide for increased withdrawals is an increase in production.

▼ 53 percent of responding companies reported that more than half of total withdrawals sourced from **water stressed areas** which is much higher compare to the previous year (39%). Most of the water withdrawal is sourced from third party sources (71%) and most of the water is discharged to third party destinations (76%) which shows water crosses the company boundary, at either the corporate level or facility level.

▼ Water related **regulatory frameworks** is the most considered contextual issues in the company's water-related risk assessments. 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. 71% of companies in Turkey conduct risk assessment with a consideration of river basin management authorities and a further 88% with local communities. Regulators are the most considered stakeholders (91%) that are considered in the company's water-related risk assessments.

▼ Water-exposed companies should conduct **risk assessments** that are company-wide and comprehensive, including their direct operations and their supply chains. However, only 35% of disclosing companies meet this higher standard.

▼ Physical risks are the **most reported types of risks** in the direct operations (77%) and in the value chain (38%). In direct operations, physical risks were reported mostly as a result of increased operating costs (29%) and reduction or disruption in production capacity (15%). Increased operating costs are also the **most reported potential impact** (38%) of identified risks in the direct operations; in the value chain, the most reported risk drivers are drought (15%) and increased water scarcity (9%).

▼ While 82% companies have some type of **water-related target or goal** in place, 56% of them stated that more than half of targets are achieved. Reduced environmental impacts (50%) is the primary motivation behind targets and the primary motivation behind the goals is water stewardship (32%).

▼ The COVID-19 pandemic has revealed how fragile and complex supply chains can be and companies that assess risk and engage their **value chains** are finding strategic value in doing so. However, value chain engagement is relatively shallow for the responding companies in Turkey. While 76% of companies engage in some way with their value chain on water, just 24% request from more than half of suppliers to report on their water use, risks and/or management information.

▼ Looking at the longer term 85% of respondents in Turkey are integrating water-related issues into organization's **long-term strategic business plan**. A further 44% integrated those issues into strategic business plan for more than 10 years. While 74% of companies have considered water-related issues in their financial planning, 82% have considered it in their long-term business objectives.

COMPANY RESPONSE SUMMARY

CLIMATE CHANGE / TURKEY 2020

CARBON PRICING

Carbon pricing has emerged as a key policy mechanism to drive greenhouse gas emissions reductions and mitigate the dangerous impacts of climate change. As the number of jurisdictions with carbon pricing policies has doubled over the last decade, this module examines details on the operations or activities regulated by carbon pricing systems, carbon credits, and internal prices on carbon.

- 41% use an internal price on carbon

GOVERNANCE

This module aims to capture the governance structure of the company with regard to climate change and provides data users with an understanding of the organization's approach to climate-related issues at the board and below board-level. The results demonstrate that the responding companies in Turkey have strong governance structures and strategies for climate change.

- 98% have board-level oversight of climate-related issues within the organization
- 93% provide incentives for the management of climate-related issues
- 92% have climate risk management procedures in place

EMISSIONS

A meaningful and consistent comparison of emissions over time is an essential step in understanding and reducing negative environmental impacts. This module allows companies to provide a base year and base year emissions and provide details of the standard, protocol, or methodology used to collect activity data and calculate Scope 1 and Scope 2 emissions.

- 93% reported Scope 1 & 2 emissions
- 65% reported a decrease in Scope 1 & 2 emissions
- 25% reported an increase in Scope 1 & 2 emissions

TARGETS

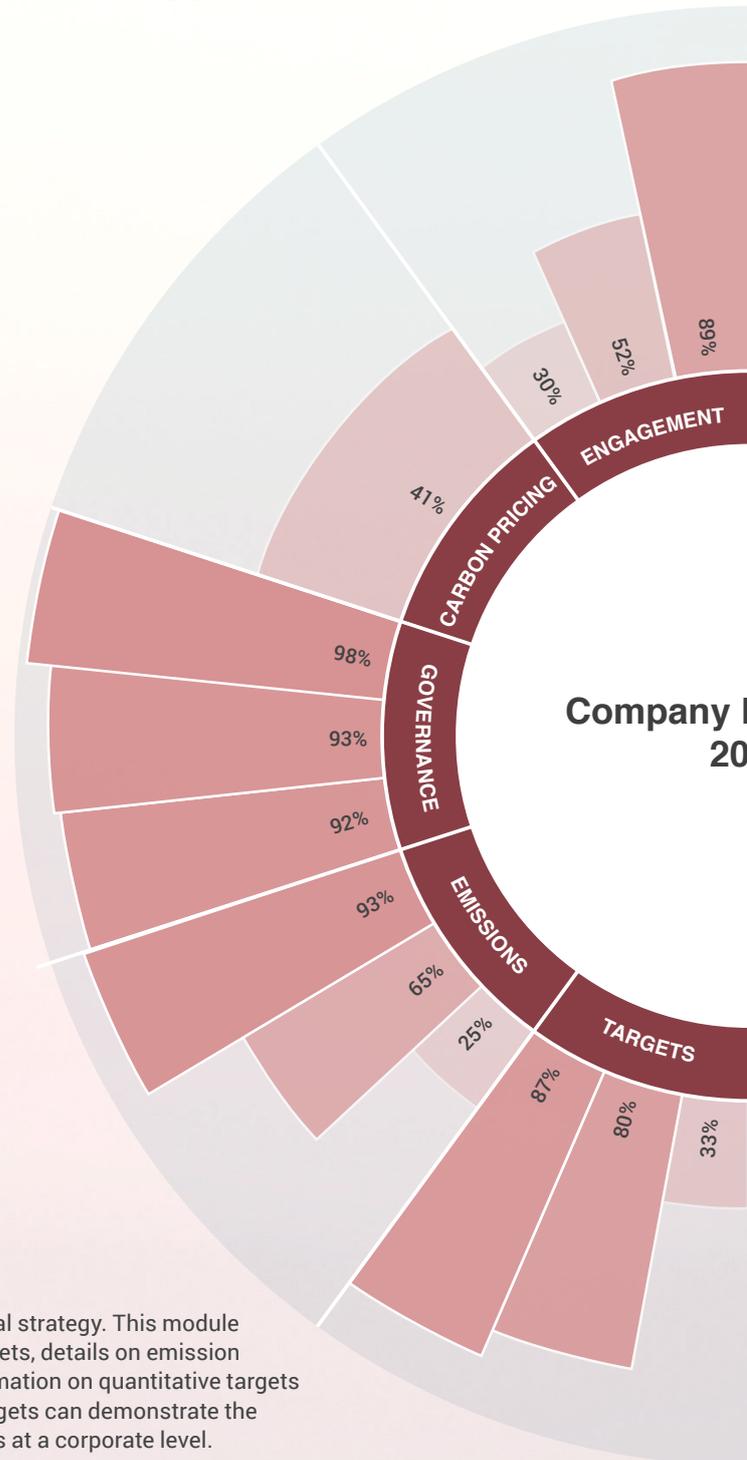
Target setting provides direction and structure to environmental strategy. This module focuses on emission targets as well as the climate-related targets, details on emission reduction initiatives, and low-carbon products. Providing information on quantitative targets and qualitative goals, and the progress made against these targets can demonstrate the organization's commitment to managing climate-related issues at a corporate level.

- 87% have emission reduction initiatives that were active within the reporting year
- 80% have an emission target that was active in the reporting year
- 33% reported anticipation of setting science-based targets in the next 2 years

ENGAGEMENT

In order to reach a net-zero future, companies must engage with their value chain on climate-related issues. This module examines how organizations are working with their suppliers, customers and other stakeholders and provide data users with insight into the different types of activities in which organizations engage to influence public policy on climate-related issues.

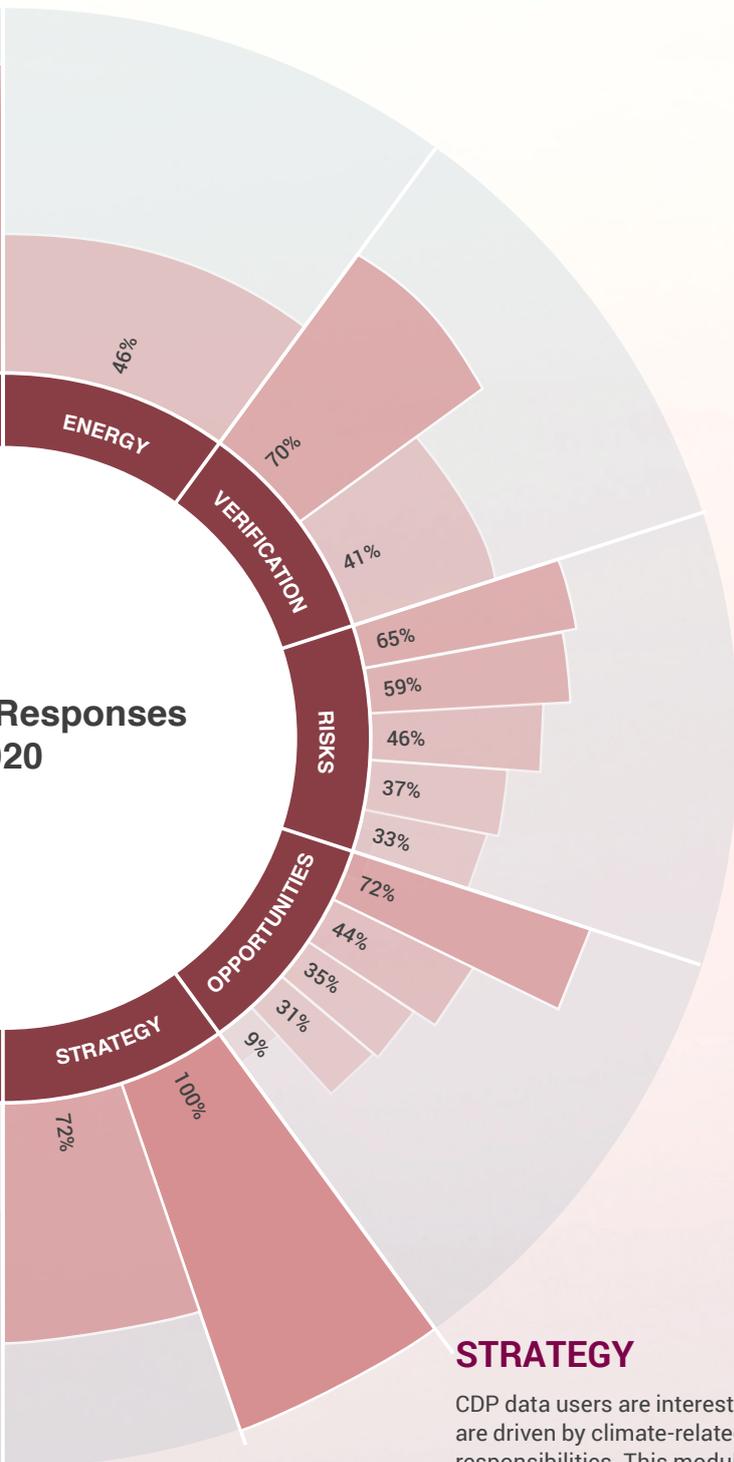
- 89% reported engagement with the value chain in climate-related issues
- 52% published voluntary sustainability report
- 30% reported engagement with more than 50% of suppliers



ENERGY

Energy-related activities represent the most significant GHG emission sources. Accurate accounting of emissions depends on a comprehensive account of energy. This module provides transparency on the consumption and generation of energy by organizations.

- 46% have energy consumption totals from renewable sources (excluding feedstocks) in MWh. > 0



Responses
20

STRATEGY

CDP data users are interested in companies' forward-looking strategies and financial decisions that are driven by climate-related future market opportunities, public policy objectives, and corporate responsibilities. This module allows organizations to disclose whether they integrate climate-related issues into their business strategy, have a transition planning, or use scenario analysis to inform business strategy.

- 100% integrated climate-related issues into business strategy
- 72% use climate-related scenario analysis to inform organization's business strategy

VERIFICATION

Verification and assurance are good practices in environmental reporting as they ensure the quality of data and processes disclosed. This module requests details on the verification status that applies to organizations' reported Scope 1, 2 and 3 emissions, as well as on the verification of other climate-related information reported in the CDP disclosure.

Third-party verification or assurance process in place;

- Scope 1&2: 70%
- Scope 3: 41%

RISKS

This module helps companies to evaluate exposure to climate-related risks and opportunities over a range of time horizons, which is crucial to set a strategy for the low-carbon transition recognized in the Paris Agreement and UN SDGs. Responding companies appear particularly mindful of the reputational and regulatory risks posed by climate change.

- 94% identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on the business.

Most commonly reported risk types with the potential to have a substantive financial or strategic impact on the business:

- Emerging regulation: 65%
- Acute physical: 59%
- Chronic physical: 46%
- Market: 37%
- Reputation: 33%

OPPORTUNITIES

Besides the challenges that companies face, climate change also presents opportunities. Among the companies that responded to the opportunities module in 2020, products & services, and resource efficiency are the most reported opportunity types considered in the organization's climate-related risk assessments.

- 89% identified any inherent climate-related opportunities with the potential to have a substantive financial or strategic impact on the business.

Most commonly reported opportunity types with the potential to have a substantive financial or strategic impact on your business:

- Products and services: 72%
- Resource efficiency: 44%
- Energy source: 35%
- Markets: 31%
- Resilience: 9%

INTRODUCTION

TURKEY 2020

▼ Net-zero transformation after Covid-19 crisis

Within Turkey operation, the number of companies responding to CDP's Climate Change Program has reached 60 in 2020 and 36 companies responded to the CDP's Water Security Program that represents a significant increase from 2019, even amidst the Covid-19 crisis. In fact, this confirms the CDP's view that environmental reporting should continue despite the pandemic. Obviously, The Covid-19 crisis has fundamentally changed the world. This global crisis has illustrated how vulnerable the global economy is but the emergence of this threat does not reduce the need to respond to the ongoing climate emergency, which remains the most significant long-term threat to economic and social stability.

We believe that sustainability goals remain important, and as CDP, we will continue to support companies and cities in our mutual goal of addressing the global challenges of climate change, deforestation and water security. The current global health crisis shows resiliency in supply chains and business models is more essential than ever. Companies with a core sustainability focus are better positioned to withstand the impacts of systemic shocks, including the inevitable impacts of climate change.

We also believe that we need to pay attention the economic recovery steps that will follow the Covid-19 crisis and we should urge investors, governments, and policy makers to comply with the Paris Agreement goals. Our recovery efforts should lead us to a more sustainable economic system because this is the only way to be resilient to future shocks. Policy makers, businesses, and society leaders should work collectively for the post-covid economic recovery with ambitious climate actions.

In that regard, we believe the guidance of science is more important than ever. Global carbon emissions need to reach net-zero by 2050 at the latest, to limit global warming to 1.5°C as indicated in the Paris Agreement. Setting GHG emissions reduction targets in line with climate science is necessary to meet the goals of the Paris Agreement and to limit global warming. For that reason, CDP is supporting companies to set their targets based on science as one of the founding partners of the Science-Based Targets Initiative (SBTi). We have 18 companies in Turkey committed to set a science-based target in two years' time as of 2023. Two of them already submitted their target and get approval from SBTi. Since climate change presents material risks to investments and companies, investors also urge companies to set Science-Based Targets, so they can decarbonize their portfolios and mitigate climate-related risks to which they may be exposed. CDP is asking for corporate data on behalf of hundreds of investors and we can observe that the tide is rapidly turning against companies not taking note of investor demands.

CDP has launched the biggest ever Non-Disclosure Campaign in 2020 with more than 100 global investors despite the pandemic. With this campaign, investors can actively target companies that have received the CDP disclosure request but have not provided a response. The objective of the campaign is to drive further corporate transparency around climate change. Many companies from Turkey received those investor letters. In the near future, these companies are likely to be exposed to further pressure from investors and even they are at risk of being excluded from investor portfolios. They need to act now.

To find a better and faster solution to recover from the Covid-19 crisis, CDP is also working with the We Mean Business

Coalition. In 2020, the coalition sent a letter to G20 Finance Ministers and Central Bank Governors, and hundreds of major global companies called on governments to invest in climate action and resilience by tackling climate and Covid-19 together. They believe clear and consistent government policies that drive the full decarbonisation of the economic system are critical to accelerate progress towards the zero-carbon economies of the future.

The European Commission published 'The European Green Deal' which aims to make the European economy sustainable by turning environmental problems such as climate change into advantages. It is actually a new growth strategy and obviously, Turkey is going to be affected by this policy, especially by the carbon border adjustment mechanism. The EU is set to make 'greening the economy' an essential part of its efforts to recover from the impacts of the Covid-19 crisis. These policies will set an example to the policy makers, companies and even for cities in Turkey.

It is all about just and inclusive economic recovery with ambitious climate action and our ultimate goal should be establishing zero-carbon economies. Implementing a net-zero transformation will be challenging for businesses after the Covid-19 crisis but they will be well placed to respond to the demands from the various stakeholders including investors and consumers.

What should be next steps of companies in Turkey to achieve net-zero carbon target especially after the Covid-19 crisis?

- **Commit to net-zero:** It is a milestone in transitioning your business operations and to be accountable to all of your stakeholders to deliver required change.
- **Assess your climate risks:** Undertaking climate scenario analysis allows you to understand the full range of possible risks and implement management methods that are specific to each scenario.
- **Set ambitious 'Science-based Targets':** So you will be able to map out a route to achieving them which will help your company to look at different investment and innovation opportunities and assess the impacts of meeting the targets you've set.
- **Decarbonize your operations:** By investing and switching to a sustainable green energy source, you will reduce your carbon footprint, meet carbon reduction targets and also cut your operational costs.
- **Keep reporting your environmental impacts:** Measuring and managing environmental risks through disclosure helps your company to build resiliency and plan for the future.
- **Collaborate, engage and communicate:** Achieving net zero requires a collaborative effort through your value chain and within your own business.

COMPANY RESPONSE OVERVIEW

CLIMATE CHANGE / TURKEY 2020

60
disclosing companies
in total

98%
have board-level
oversight of climate-
related issues

The Corporate Governance Committee that directly reports to the Board of Directors shapes Akbank's solution strategies for the climate change. Chairman of Akbank is also a member of Corporate Governance Committee. Investor Relations and Sustainability Department ensures coordination and management of the issue within the Bank. Other departments and sustainability team are responsible for collecting data and applying the decisions taken by the Corporate Governance Committee.

Aydem Yenilenebilir Enerji has a performance management system clearly defines the KPIs for each employee and department where promotions and bonuses are decided through the related evaluations. These KPIs also cover sustainability issues including climate-related issues. In addition, they have an employee engagement practice called New Idea Hotline project to identify innovative and proactive solutions towards climate change. Each selected project for implementation is rewarded by the company.

CDP is acting on behalf of **515** investors with **US\$106 trillion** in assets and through CDP's global platform, approximately **9600** companies voluntarily disclose their environmental information including GHG emissions, climate change strategies, climate risks and low-carbon opportunities in 2020.

CDP requested the largest 100 companies from Borsa Istanbul 100 Index (BIST-100) and companies with high environmental impact in Turkey to disclose their environmental information in 2020. **In total, 60 companies responded to CDP Climate Change Program in Turkey** up from 54 (11% increase) in 2019. Out of 60 companies, 38 are from the official sample (BIST-100) and 22 are outside of the official sample including companies reporting voluntarily as self-selected companies (SSCs) or companies that are listed in CDP's global environmental samples. The following analysis in this report includes 54 companies in total, excluding the companies responded as See Another (SA) which means that the company is a subsidiary of a parent company which responds to CDP.

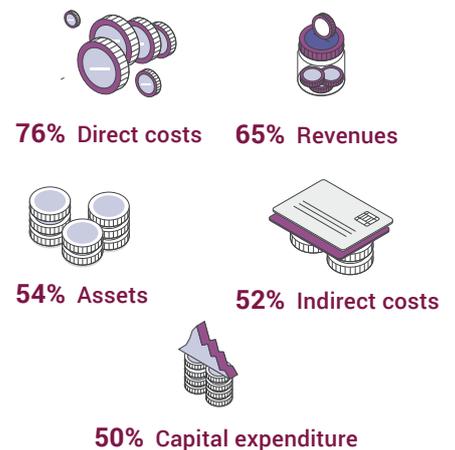
▼ Showing leadership on climate change: Governance & Business Strategy

Governance and business strategy in climate-related issues are crucial for business growth in a carbon-constrained future. Transitioning to a low-carbon economy means better climate management. To deliver real change, companies need a strategic response to the climate crisis. The response must be led from the boardroom and driven throughout the organization.

Responding companies in Turkey have strong governance structures and strategies for climate change. This is reflected in percentages associated with questions on senior-level responsibility associated with climate change, integration of climate change into business strategy, and having a climate risk management procedure in place. Almost all respondents (98%) stated that they have **board-level oversight of climate-related issues** within the organization; more than half (56%) of the companies have **CEO oversight**.

Top management teams have integrated climate-related concerns in performance evaluation of key personnel. 93% of responding companies provide **incentives for the management of climate-related issues**, including the attainment of targets. A further 89% have **monetary incentives**.

87 percent of companies stated that **climate-related risks and opportunities influenced their organization's strategy and/or financial planning**. The list below shows where those risks and opportunities have influenced the financial planning of companies:



87%
have stated that climate-
related risks and
opportunities influenced
their organization's
strategy and/or financial
planning

72%
deploying climate-related
scenario analysis for
business strategy

Internal Carbon Price Examples

OFFSET

Ford Otosan will apply an internal price on carbon before the establishment of the national carbon pricing mechanism. Ford Otosan considers voluntary market average price as part of an internal goal to offset the Scope 2 emissions. It will source approximately 864,000 GJ of energy - annual electricity consumption at its plants - from internationally certified renewable energy sources.

SHADOW PRICE

Garanti BBVA applies its own shadow carbon price in evaluating the economics of all greenfield/brownfield fossil fuel based and renewable energy investments in its project finance activities. If the host country already implements an ETS/tax, then Garanti BBVA uses actual price for carbon. If not, it uses fixed price per tCO_{2e} emitted. The price is determined taking into consideration the market dynamics and is reviewed and updated regularly.

46%

have developed a low-carbon transition plan to support the long-term business strategy

Turkcell faces a group of interrelated challenges in transitioning itself to the low carbon economy while managing risks and opportunities. The strategy for the transition is based on four main aspects: Mitigation, Adaptation, New Business Models, Climate Centered Corporate Engagement and Stakeholder Participation. Turkcell aims at developing resilience by applying certain measures defined within four main areas as defined above.

Given the importance of forward-looking assessments of climate-related risks and opportunities, **scenario analysis** is an important and useful tool for an organization to use, both for understanding strategic implications of climate-related risks and opportunities, and for informing stakeholders of how the organization is positioning itself in recognition of these issues. It is a tool to enhance critical strategic thinking by challenging 'business-as-usual' assumptions, and to explore alternatives based on their relative impact and likelihood of occurrence. In Turkey, 72% of responding companies report that they are implementing current best practices by using a **scenario-based approach** to inform their corporate strategy around climate change that represents a significant increase from the previous year (57% in 2019). 35% of companies use qualitative scenario analysis and 24% use both qualitative and quantitative approaches. A further 22% anticipate that they will introduce this over the next two years.

The transition towards a sustainable, low carbon economy will require an action across every part of the economy. Transition plans define how the business model, growth strategy and capital investments need to develop over time to respond to climate-related risks and capitalize on opportunities. 46% of responding companies in Turkey have developed a **low-carbon transition plan** to support the long-term business strategy. This remarkable increase from last year (16% in 2019) proves that companies in Turkey are stepping up to respond to climate-related risks and find opportunities in the transition towards a sustainable, low-carbon economy.

The Task Force on Climate-related Financial Disclosures (TCFD) lists **Internal Carbon Price (ICP)** as a key metric to assess climate-related risks and opportunities in line with its strategy and risk management process. ICP has emerged as a powerful approach to assess and manage carbon-related risks and opportunities that may arise from the transition to a low-carbon economy. For many companies, the most significant consequences of these risks will emerge over time, and their magnitude is uncertain. Assigning a monetary value to the cost of carbon emissions helps

companies monitor and adapt their strategies and financial planning to real-time and potential future shifts in the external market.

In 2020, 41% of companies report already **using an internal carbon pricing system**, allowing them to be ready for future costs imposed by either emissions trading schemes or carbon taxes, with a further 20% expecting to do so within the next two years. In 2019, those figures were 27% and 33%, respectively. This growth is largely driven by the parallel development of regulations that directly or indirectly price carbon and the increasing pressure from shareholders and customers for companies to adequately manage their climate-related risks.

More companies in Turkey are gradually adopting ICP and taking advantage of low-carbon investment opportunities while managing carbon risks. More than a quarter (28%) of responding companies see the use of an internal carbon pricing system as a way to **change internal behaviour** in the company. A further 19% use it to **drive energy efficiency** and 17% to **drive low carbon investment**.

41%

use an internal carbon price

Scenario analysis were made for Turkey and other countries **ENKA** is active for short, medium and long-term strategies. Scenario outcomes have been integrated in risk detection committee procedures, submitted to executive committee and integrated to individual risk assessments for projects. Diversification of business lines, new opportunities and potential investment areas have been identified. Together with other inputs and practical experience, scenario analysis has enabled company strategy to focus on low carbon business opportunities. ENKA has seen the trend and need for reducing energy related emissions and have started to update strategy considering the demand from market and clients.

Percentage of companies that use an **internal price on carbon**



US\$37.3 billion

the amount of potential financial impact of risks

US\$12.8 billion

the amount of potential financial impact of opportunities

Akenerji closely monitors regulatory changes and seeks ways for adaption before any new regulations get into force. Akenerji is evaluating emission reduction possibilities for long term plans. The strategy may involve in (1) implementing higher efficiency gas turbines, (2) phasing out low efficiency/old natural gas power plant, (3) carbon sequestration and storage and/or (4) investing in renewable energy. (5) carbon offsets by Akenerji's renewable power generation.

▼ Building resilience: Risk Assessment & Opportunities

Companies should be able to evaluate their exposure to climate-related risks and opportunities in order to be successful in transition to a low-carbon economy. The potential negative impacts of climate change outweigh the costs of mitigating them. There are also significant opportunities to be realized in the process of transition. Environmental stewardship of companies is directly related to the quality of the process of identifying, assessing and managing its climate-related risks and opportunities.

In Turkey, 94% of responding companies identified **inherent climate-related risks** with the potential to have a substantive financial or strategic impact on the business. The **potential financial impact of risks** identified by companies in Turkey amounts to **US\$37.3 billion** in total and the cost of measures taken by companies to manage those risks amounts to **US\$1 billion**. Total number of risks identified as relevant by responding companies is 385.

Responding companies recognize opportunities as well as risks posed by climate change. 89% of responding companies **identified potential opportunities** that could have a substantive or strategic impact on their business. This number was much lower last year (78%). However, the proportion of companies that have identified opportunities (89%) resulting from climate change is lower than the share of companies that have identified risks (94%). The **potential financial impact of opportunities** identified by companies in Turkey amounts to **US\$12.8 billion** in total. **Total number of opportunities identified** as relevant is 180.

The most commonly reported **risk type** with the potential to have a substantive financial or strategic impact on the business

is related to **emerging regulation** (65%). This is attributable to the recent national and international developments on carbon markets, carbon tax and climate law. Acute (59%) and chronic (46%) physical risks are following which is attributable to the recent temperature changes and extreme weather conditions, which affect almost all sectors in Turkey.

Like previous year, the majority of **opportunity types** with the potential to have a substantive financial or strategic impact on the business are linked to **products and services** (72%) affecting both the customer and the direct operations of the supply chain. Resource efficiencies (44%) and alternative energy sources (35%) are the next most frequently identified money savers.

By far the most commonly reported **risk driver** with the potential to have a substantive financial or strategic impact on the business is **carbon pricing mechanisms** (59%) in 2020. Given the growth of carbon pricing regulation globally, this is unsurprising. The shift in consumer preferences (46%) and development and/or expansion of low emission goods & services (31%) are the most commonly reported climate-related **opportunity drivers**.

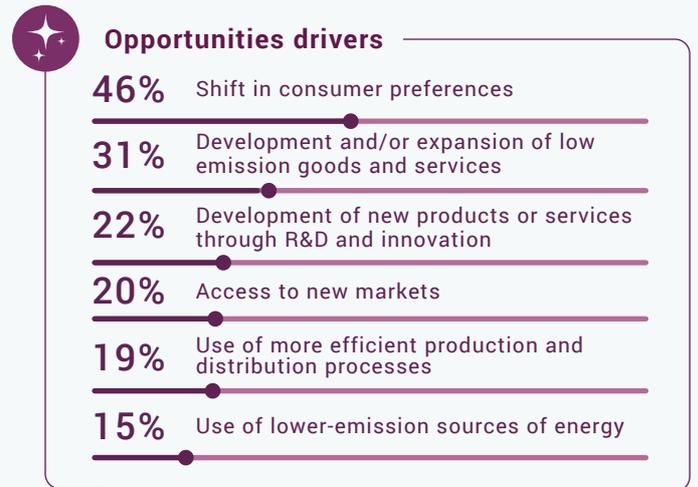
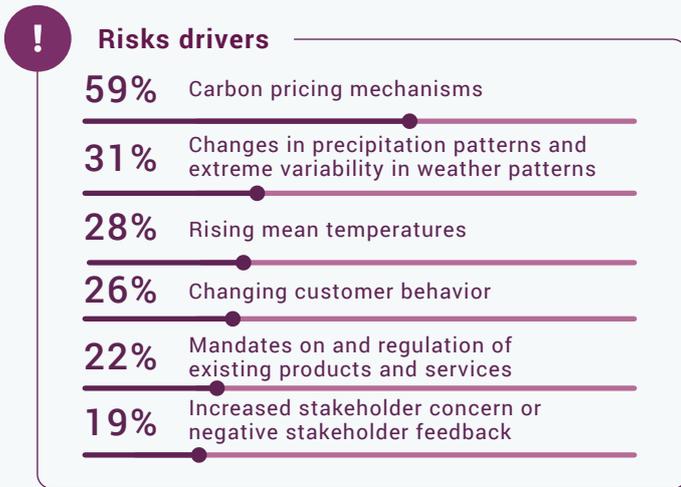
180

total number of opportunities identified

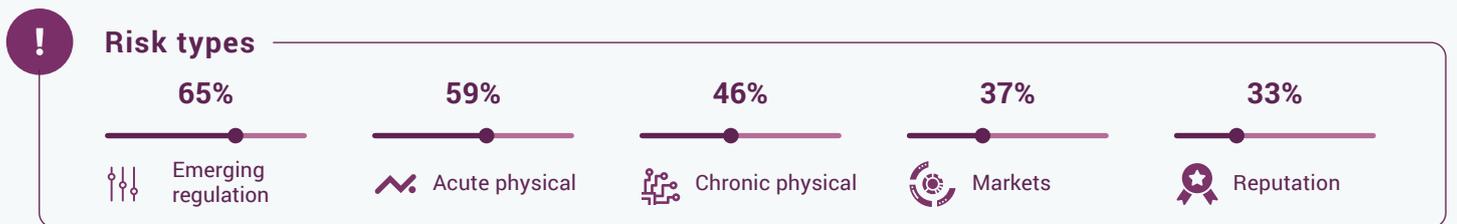
385

total number of risks identified

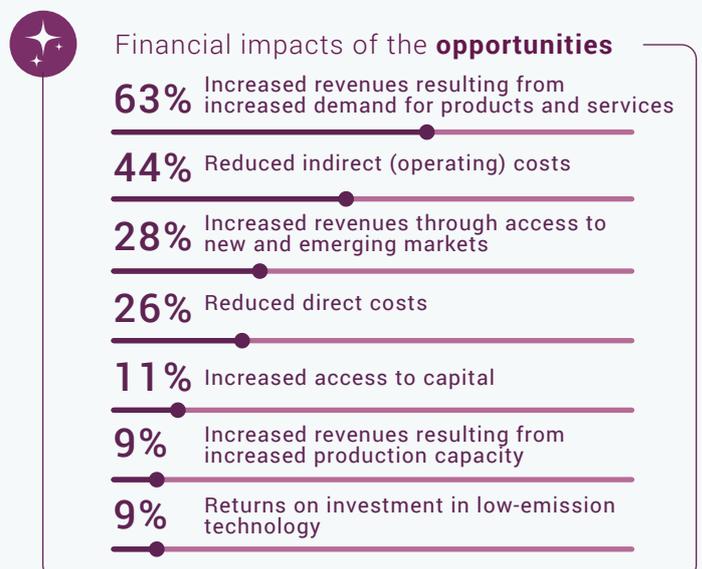
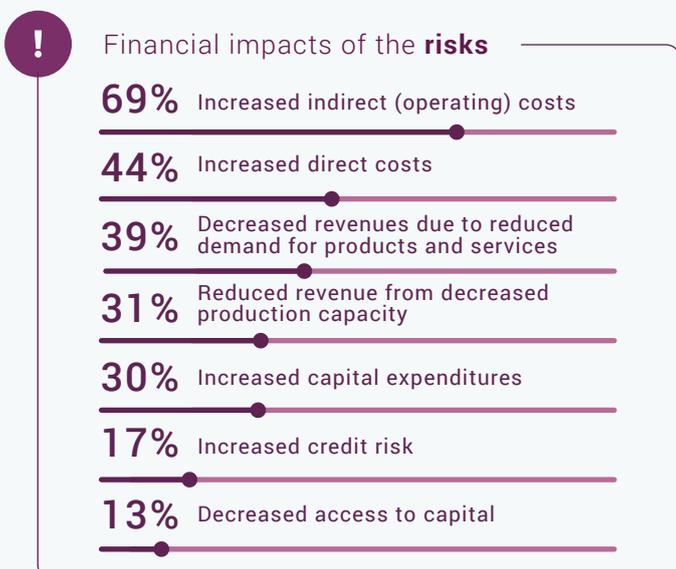
Most commonly reported **risk & opportunity** drivers with the potential to have a substantive financial or strategic impact on the business



Most commonly reported **risk & opportunity types** with the potential to have a substantive financial or strategic impact on the business



Primary potential financial impacts of the **risks & opportunities** identified



Where in the value chain does the **risk and opportunity driver** occur?



Tekfen's renewable energy department is seeking opportunities in the oil and gas sector to diversify services to prevent the probable turnover loss likely to be caused by the downsizing of oil and gas projects. The cost of management related to this activity includes the employment of new specialist personnel, memberships, business development activities, and outsourced services for proposal (USD 412,500). Moreover, **Tekfen Construction** is now getting more oil and gas infrastructure improvement projects to enhance the performance of existing oil and gas refineries, contributing to directly optimizing their GHG emissions. The cost of management is approximately US\$375 thousand annually.

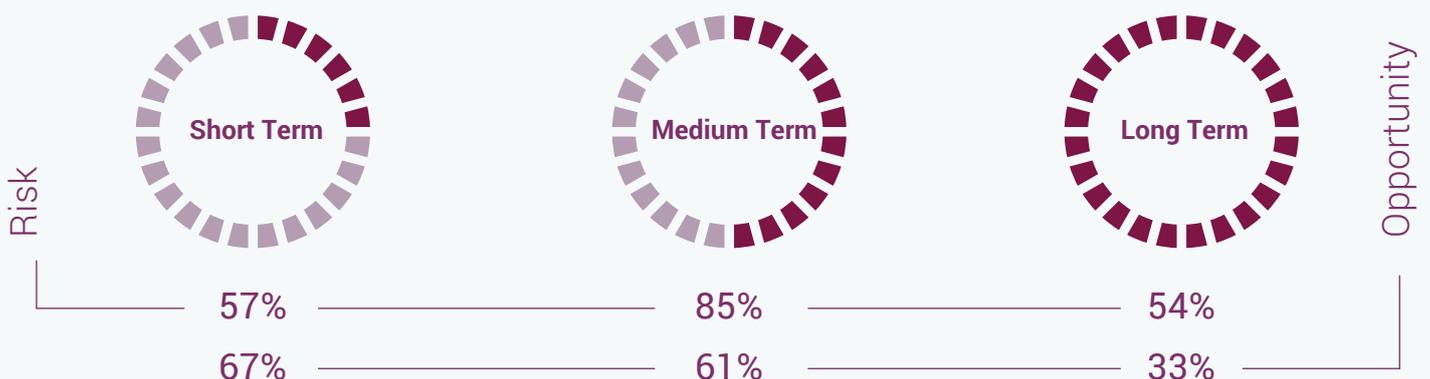
In 2020, companies were also asked to report the **primary potential financial impact figures** of the risks and opportunities they disclosed as a key data point in CDP's scoring methodology. 67% of companies provided at least one figure for the potential financial impact of risks and 65% for the potential financial impact of opportunities. The top identified cause of the **primary potential financial impacts of the risks** is increased indirect/operating costs (69%) that are often linked to GHG emissions pricing. Besides, increased revenues resulting from increased demand for products and services (63%) are the top identified potential **financial impacts of the opportunities**.

The **frequency and time horizon for risk assessment** is also key to business resilience into a business.

CDP asked companies to define the time horizons over which they see risks and opportunities. In the direct operations, identified risks occur mostly in medium term (85%) and opportunities in short term (67%) future. In the value chain, the risk driver and opportunity driver occurs mostly in direct operations (93% and 74% accordingly).

67% provided at least one figure for the potential financial impact of risks

Time horizon of the identified risks and opportunities



Aligning climate action with climate science: Setting a science-based target

A growing number of companies are aligning their emissions reduction goals with the Paris Agreement, by using the best available climate science to set GHG reduction trajectories in line with what would be required to hold global warming well below 2°C above pre-industrial levels, and pursuing efforts to limit it to 1.5°C. There are now more than 1,000 companies are working with the Science Based Targets initiative (SBTi) - a partnership between CDP, UN Global Compact, the World Resources Institute, and WWF - to reduce their emissions in line with climate science. Science-based targets (SBTs) provide a clear framework for best practice target setting by specifying how much and how quickly a company needs to reduce its GHG emissions across scopes. Using the most recent climate science, the science-based target setting methods determine a company's share of the remaining global carbon budget based on company attributes such as their sector and provide a pathway to companies by specifying how much and how quickly they need to reduce their GHG emissions.

Targets and Performance

In Turkey, 80% of responding companies have an **emissions reduction target that was active in the reporting year**. A further 26% undertake both **absolute and intensity reduction targets** and the most commonly reported emissions reduction target type is intensity target (37%) in 2020. One-fifth (20%) of responding companies have no targets in place.

There has been significant improvement in recent years in the number of companies setting targets for emissions reductions, but these targets are in many cases unambitious in their time horizon. About 35% of intensity targets and 19% of absolute targets adopted by companies are short-term i.e. till 2021. Those with a mid-term perspective (2022-2030) have mostly gone for intensity targets (37%) with only 4% of companies setting an intensity target for 2031 and beyond. Most companies do not have a long-term vision to reduce their emissions.

13 percent of companies in Turkey report that they have achieved their current **intensity targets** by completing their targets 100% in the reporting year but the majority of the reported targets are still underway (37%).

Focusing on the **absolute targets**, which are crucial to drive companies' emissions reductions no matter their changes in output or in size, 19% of companies report in detail about absolute targets underway (15 targets in total). 17% have targets expiring between 2020-2025 and only 6% have in place long-term targets beyond 2025 and out towards the middle of the century.

To deliver against their targets, global companies are increasingly turning to clean energy, cutting emissions while

simultaneously increasing their energy productivity, and reducing their energy use. In Turkey, 11% of companies have an **energy consumption or efficiency target**. Targets for replacing existing energy sources with renewable energy should be a part of the company strategy, but now, few companies in Turkey have set these types of targets. 19% of companies have set a **renewable energy consumption target**, while 9% have set a **renewable energy production target**.

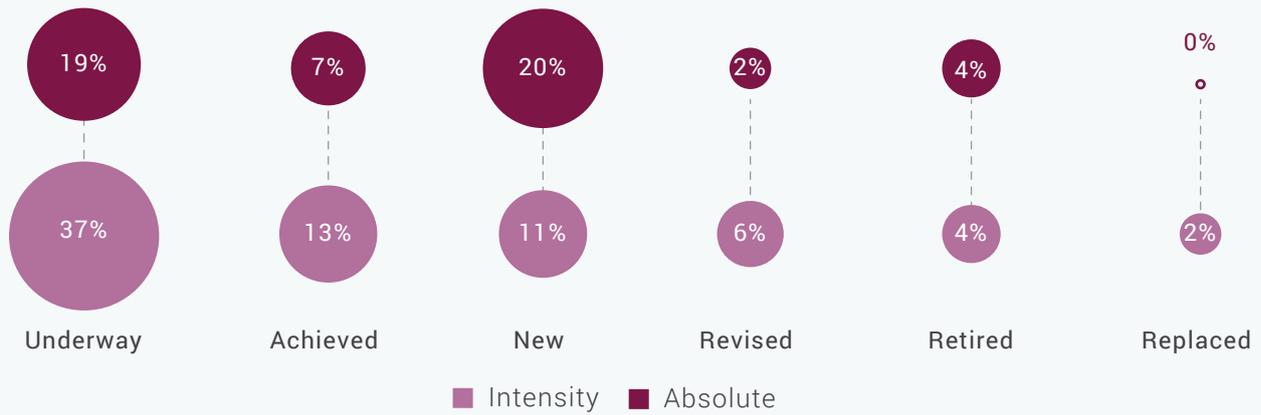
80%
have an emissions target that was active in the reporting year

Arçelik aims to continue having net-zero carbon emissions by eliminating the total eCO2 emissions of its domestic production plants in Turkey until 2040 by implementing new energy efficiency projects (emission reduction projects), using the electricity generated from renewable energy sources and carbon offsets. Arçelik's first target year to meet this goal is 2025 but, Arçelik also aims to continue this target in the long term. Thanks to energy efficiency studies and the supply of electricity produced by renewable energy sources, Arçelik has reduced GHG emissions by 50.49% compared to the base year 2010.

Types of targets based on **time-frame of target year**



Progress made against **emission targets**



33% anticipate setting science-based emission reduction targets in the next two years

In addition to energy efficiency projects like automation and natural cooling systems, **Migros** plans to install PV panels on the top of Torbalı and Adana distribution centers and conduct a study to feasibility of this project accordingly. This system will save 30% of electricity consumption used in these facilities. As a first step for turning electricity consumption to more green way, Migros decided to purchase carbon offsets in size of 38,000 MWh electricity which is equivalent to 6.72% of total electricity consumption.

Number of companies adopting **Science-based targets** is very limited in Turkey. Only 9% of respondents consider that their target is a science-based target, but only one of these targets (the target of **Kayseri Ulaşım**) has been approved as science-based by the Science Based Targets Initiative (SBTi). However, just after the end of 2020 reporting period of CDP, **Arçelik's** target was approved by SBTi which means there are two companies with an approved targets in Turkey now but in this report we will reflect the results of the reporting period.

Company responses on **emissions reduction initiatives** allow CDP data users to understand the organization's commitment to reducing emissions beyond business-as-usual scenario. 87% of companies in Turkey report active emissions reduction initiatives in the reporting year. By improving their energy efficiency, companies aim to reduce their costs. More than half of companies (54%) reported that the initiatives are related to **energy efficiency in production processes**.

Unsurprisingly, energy efficiency in buildings (48%) comes after with a huge potential to save carbon emissions.

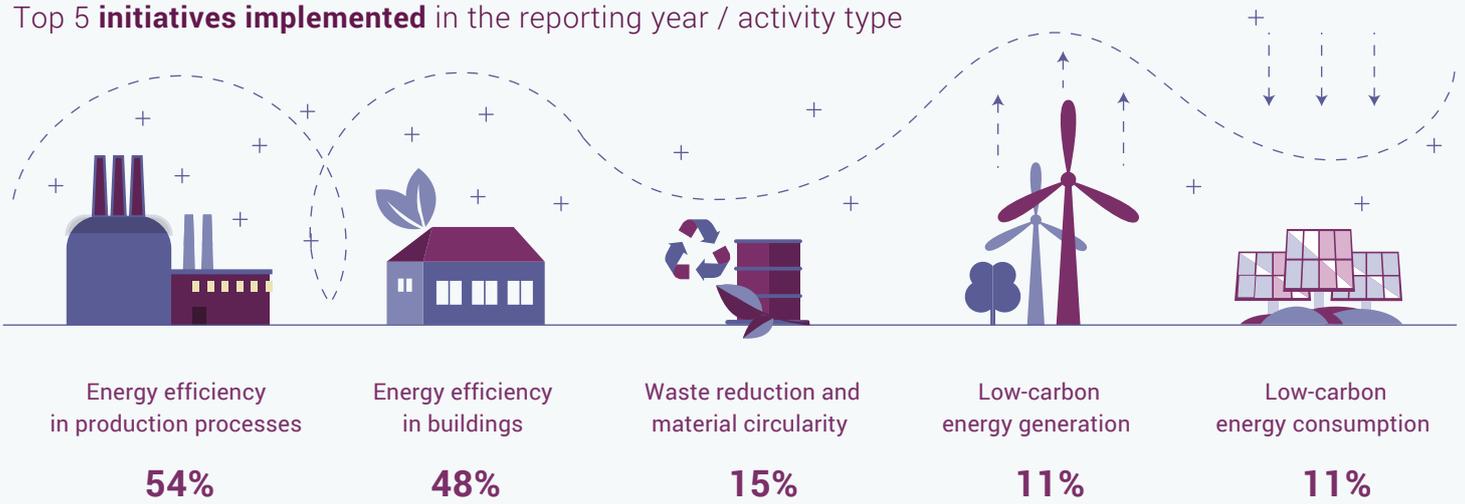
Half of the reporting companies (50%) believe that their **active emission reduction initiatives will payback** in less than a year and for only 10% of companies, the payback period is much longer - ten years and more.

Higher low-carbon investment is also associated with ambitious voluntary emissions reduction targets in companies. 89% of low-carbon investment was made by companies that already have emission reduction targets in place. More than half of the companies in Turkey have a dedicated budget for energy efficiency (52%), low-carbon product R&D (28%) and emission reduction activities (19%). Compliance with regulatory requirements (35%) and engagement of employees (31%) are other primary methods that companies use to drive investments in emission reduction activities.

Science Based Target status of companies



Top 5 **initiatives implemented** in the reporting year / activity type



43%
existing products and/
or services enable third
parties to avoid GHG
emissions

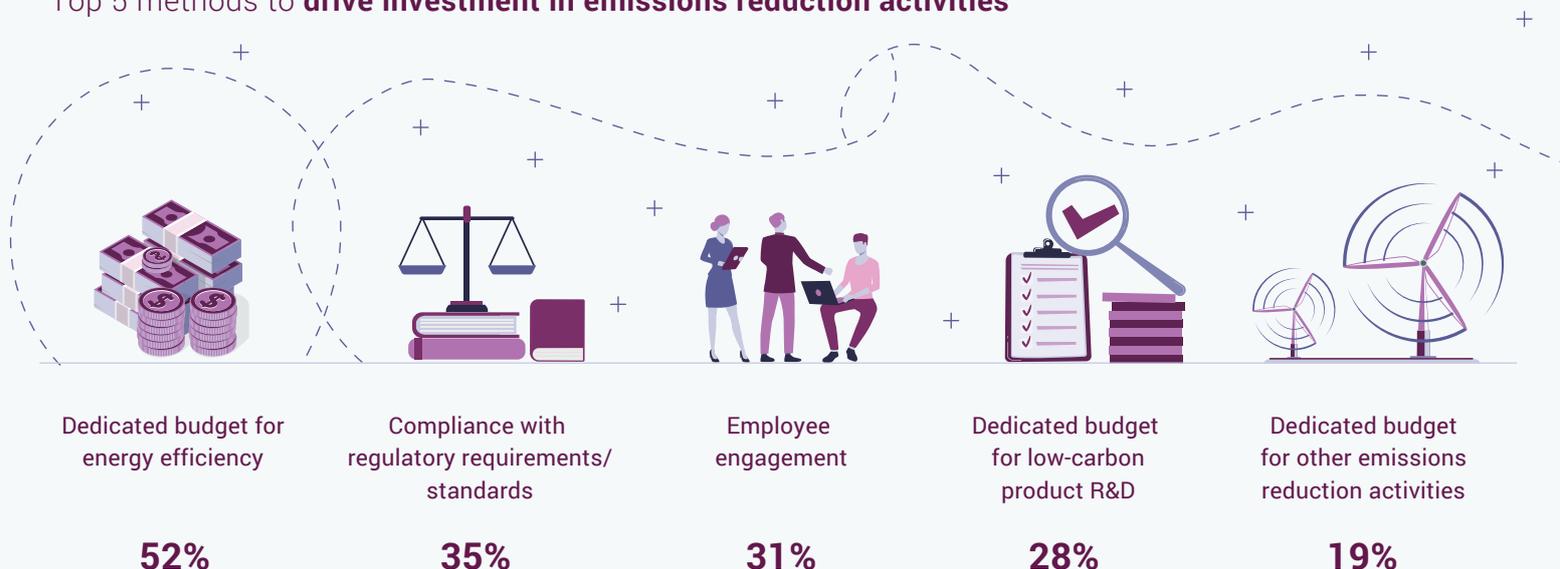
Questions on **low-carbon products** provide valuable information to investors who are seeking to increase their investment in companies providing low-carbon and climate resilient goods and services. 43% of companies report that their existing products and/or services **enable third parties to avoid GHG emissions**. A further 19% are also working to reduce downstream emissions through providing **low carbon products and/or services** that can help their customers reduce emissions.

87%
have active emission
reduction initiatives

Vakıfbank aims to start purchasing green electricity generated from 100% renewable energy resources by Private Purchasing Agreement (PPA). Scope 2 emissions in 2019 were 32,504 tCO₂e and the Bank aims to consume 10% of our electricity consumption from electricity generated by 100% renewable energy resources. It will lead an emission reduction of 3,250 tCO₂e.

ASELSAN aims to be one of the main producers of renewable energy technologies and low carbon products in Turkey in the mid-term. The Electric Vehicle Systems Program Management Department started an R&D project with TEMSA in March 2015 with the aim of producing the first domestic electric buses. As transportation-related GHG emissions account for nearly 14% of Turkey's total emissions, it is aimed to supply necessary electric vehicle systems designed for public transportation for major municipalities of Turkey.

Top 5 methods to **drive investment in emissions reduction activities**



93%
reported scope 1 & 2
emissions

70%
Scope 1 & 2
emissions have been
externally assured
or assurance is
underway

46%
energy consumption
totals from renewable
sources in MWh

Coca Cola İçecek's total direct and indirect energy use, arising from stationary and mobile diesel, LPG combustion, stationary natural gas consumption (heating) and mobile gasoline combustion (company cars) and electricity use in 2018 was 265,186 MWh. Energy consumed for the same items is 268,927.29 MWh in 2019. This increase is in line with the increase in our production volume which is 1.41% as well. In 2018, with the help of 22 Operational Excellence projects conducted in Turkey, US\$88.2 thousand is saved. In other words, Cola Cola İçecek saved 7.3 Million MJ of energy and reduced 577,8 tons of CO2e by means of our efficiency projects conducted in Turkey Operations.

▼ **Tracking progress: Emissions trend & verification**

Measuring and reporting progress is key to ensuring companies are reducing negative environmental impacts and contributing to a sustainable economy. This initial disclosure process is vital to understand exactly where and how they operate today and use this as a baseline to set more informed targets. In total 93% of companies from all sectors reported their **Scope 1 & Scope 2 emissions**. A further 87% also reported their **Scope 3 emissions** up from 84% in 2019.

Where year-on-year comparison has been possible, there has been evidence of demonstrable progress, with a majority (65%) of companies reporting a **reduction in emissions**. Annual reductions of responding companies in Turkey in Scope 1 emissions amount to the equivalent of 4.4 million tonnes of carbon dioxide. Where reductions were achieved, these were supported in 80% of companies by the implementation of proactive emissions reduction activities, such as energy efficiency projects. However, 26% of companies reported that they made **absolute increases in emissions** over the past year. Increased emissions are not necessarily a sign of poor progress on climate change. Of those businesses that did report emissions growth was mostly related to an overall increase in output and changes in measurement methodology.

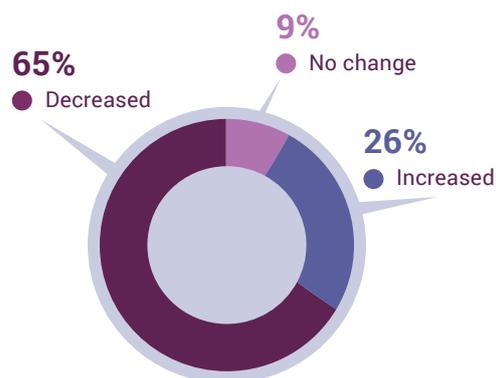
Third-party verification and assurance ensure the quality of data and processes disclosed. A growing number of companies in Turkey recognize the importance of verifying the accuracy of their emissions data. 70% of responding companies in Turkey indicated that their Scope 1 & Scope 2 emissions have been externally assured or assurance is underway. Since Scope 3 emissions are often more difficult to quantify when compared to Scope 1 and Scope 2 emissions, the level of the **third-party verification** is comparatively lower in this area: 41%.

Energy-related activities represent the most significant GHG emission sources. Accurate emissions accounting depends on a comprehensive account of energy. Consumption of fuel and consumption of purchased/acquired electricity are the **top two energy-related activities** that the companies have undertaken in Turkey.

Almost all companies (94%) provide **energy consumption totals** (158 million MWh excluding feedstock) including energy consumption totals from **renewable sources** (46%) - 3.3 million MWh in total. A further 74% provides **fuel consumption totals** by fuel type consumed by the company.

Operational spend on energy is a strong indicator for a company to investigate opportunities to reduce cost while ensuring emission reductions through the adoption of low carbon energy options. In Turkey, only 9% of responding companies have reported that more than half of their total operational spend was on energy (electricity, fuel, etc.).

Gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year



GHG emissions of **Vestel Beyaz** per revenue decreased by 17.81 % in 2019. The main reason for this decrease is energy reduction activities and increase in revenue compared to previous year.

Brisa's ultimate long-term aim as a measure of success is to gradually increase the number of suppliers and reach 100% of our supply chain and have their commitment to the procurement policies on a local level. Via introduction of Bridgestone Global Sustainable Procurement Policy, all strategic suppliers have committed to comply with the Global Policy, which enables the company to identify and manage supply chain-related environmental risks and impact so the necessary measures will be applied to improve supply chain performance as well as resilience with regards to climate-related negative impacts. In addition to global strategic suppliers, Brisa also aims to engage with suppliers that are not covered by the Bridgestone Global Sustainable Procurement Policy. As a result of this engagement, 26.5% our Brisa-specific suppliers with the number of 5,762 have confirmed their compliance with Brisa's Responsible Procurement Policy in 2019.

Engagement with stakeholders

It is imperative for a business to engage and communicate effectively with its stakeholders to be better prepared for climate change. Cross-sectoral and public-private engagement contributes more to climate action, increasing mobilization towards innovation and resources to make progress on a larger scale. Collaborating with the value chain can help ensure incorporation of emission reduction activities throughout the lifecycle of the product, considering both upstream and downstream emissions.

More companies in Turkey are engaging with key stakeholders such as policymakers, suppliers, and customers: 89% (53% in 2019) of companies **engage with their value chain** on climate-related issues but only 30% engage with more than half of their suppliers by number.

Most of the reporting companies (91%) **engage in activities** that either directly or indirectly influence public policy on climate-related issues. Some engage directly with policy-makers, while others do it through trade associations and research organisations. The percentage of companies sitting on the board of any trade associations or provide funding beyond membership is 52%.

87 percent of companies **published information** about organization's response to climate change and GHG emissions performance for this reporting year in places other than CDP response. A further 52% published voluntary **sustainability report**. Companies should be aware that their financial reporting is expected to include environmental information at the same level of CDP responses according to TCFD recommendations.

89%
engage with key stakeholders on climate-related issues

30%
engage with more than half of suppliers to drive emission reductions

52%
published voluntary sustainability report

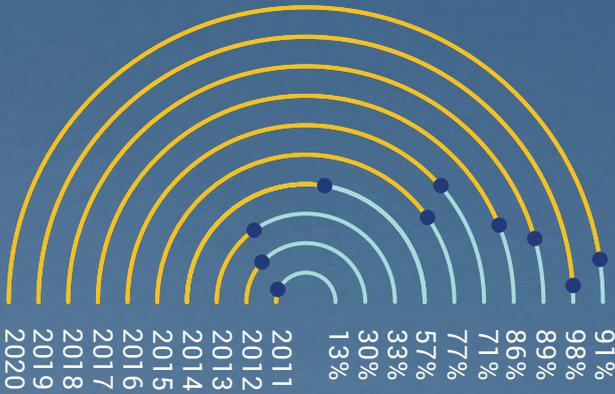
Percentage of companies **reporting engagement with the value chain** on climate-related issues



A GLIMPSE INTO THE LAST 10 YEARS

CLIMATE CHANGE /TURKEY 2020

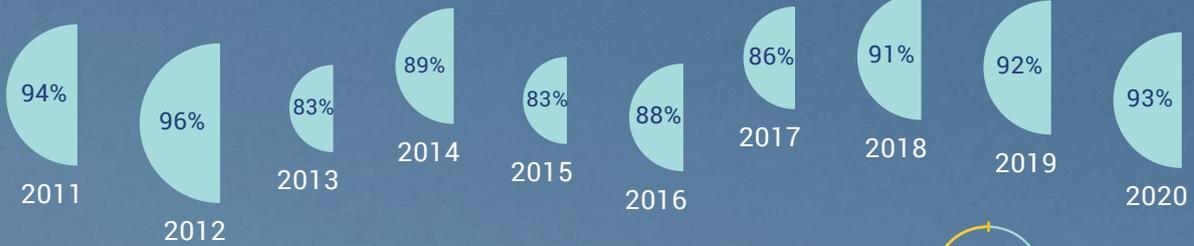
Completeness of submission (75-100%)



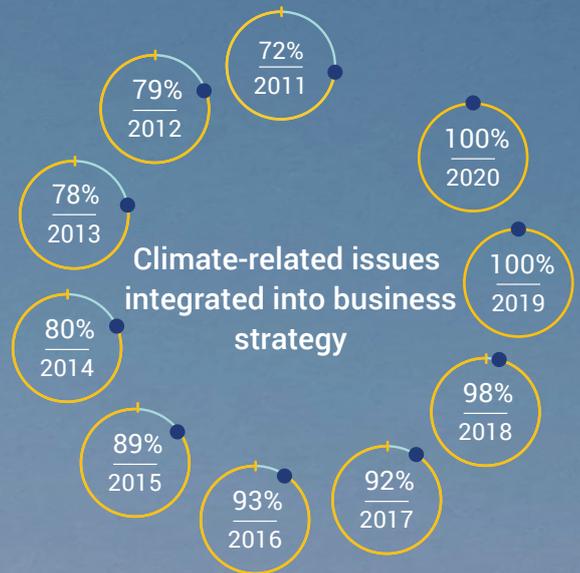
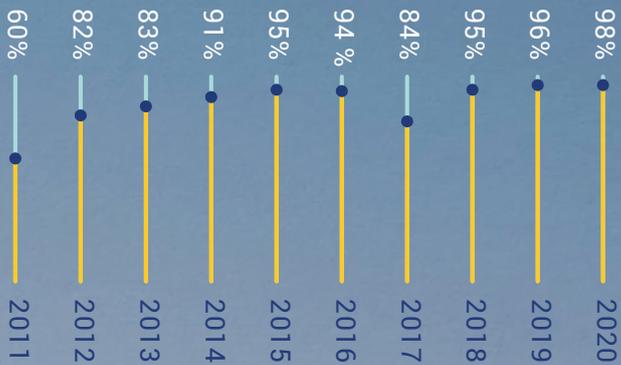
Total Responding Companies



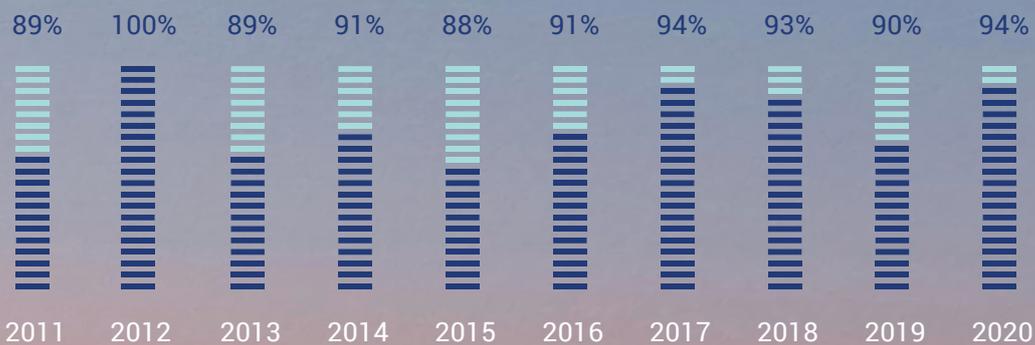
Reported score 1 & 2 emissions



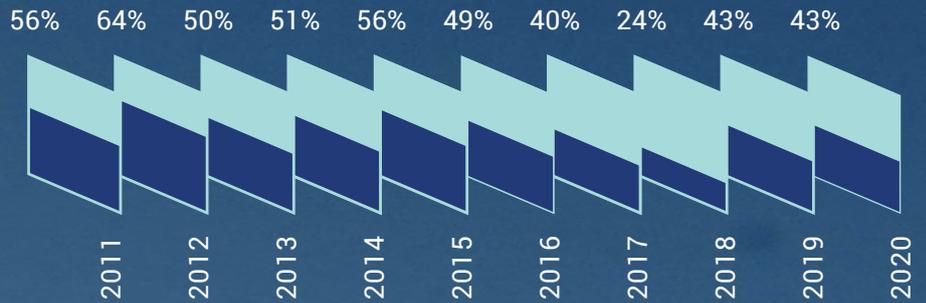
Board-level oversight of climate-related issues



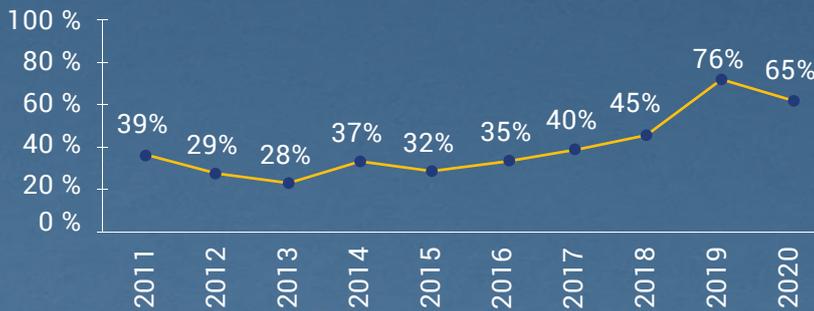
Identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on the business



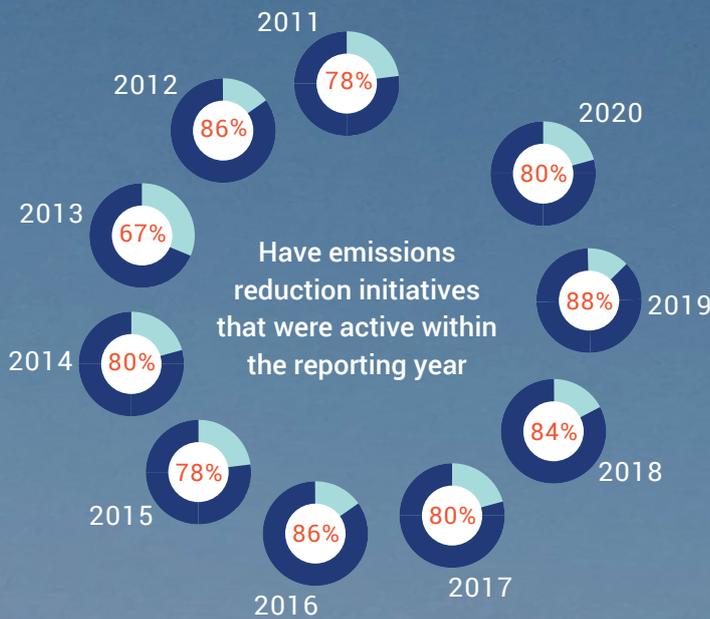
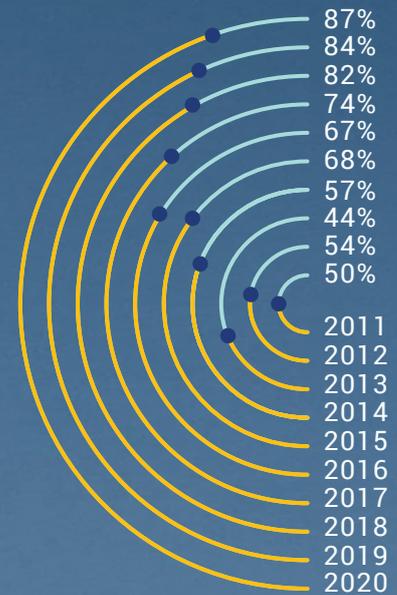
Provide products and/or services that enable a third party to avoid GHG emissions



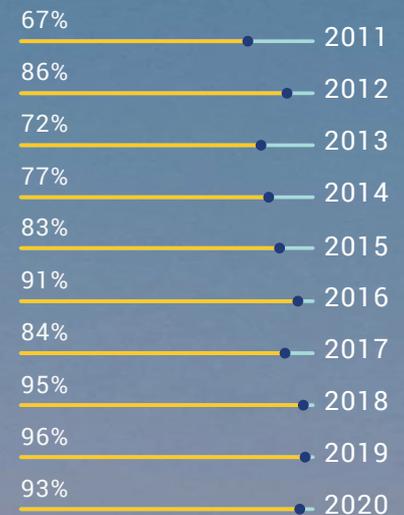
Reported decrease in Scope 1 & 2 emissions from previous year



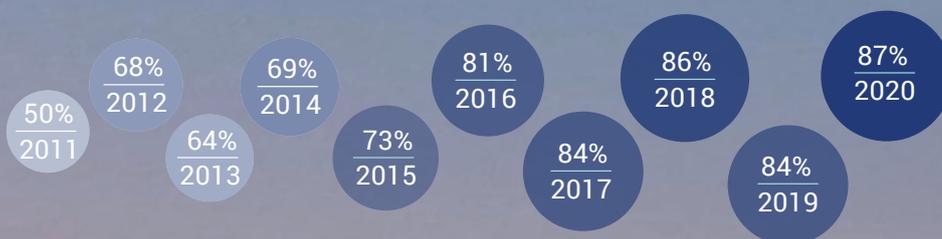
Reported Scope 3 emissions



Provide incentives for the management of climate-related issues



Published information about organization's response to climate change and GHG emissions performance



COMPANY RESPONSE SUMMARY

WATER SECURITY / TURKEY 2020

BUSINESS STRATEGY

This module aims to collect information on how a company is adapting its long-term business model to secure a sustainable future, in terms of both its resilience and securing water for all.

- 85% of the respondents monitored targets and goals at the corporate level
- 56% of the respondents identified any water-related outcomes from the organization's climate-related scenario analysis
- 50% of the respondents identified reduced environmental impacts as primary motivation behind the water related targets
- 18% of the respondents use an internal price on water

GOVERNANCE

This module captures the governance structure and mechanisms of the organization concerning water security. It provides data users with an understanding of the organization's approach to water-related issues at the board-level and below the board-level.

- 97% have a board-level oversight of water-related issues within the organization
- 82% have a company-wide water policy
- 56% reported that CEO is the individual on the board with responsibility for water-related issues

VERIFICATION

CDP data users often ask about the credibility/quality of data disclosed. The information requested in this question could help strengthen confidence in the organization's response to the water security questionnaire. CDP supports the development and use of verification methodologies as it promotes good practice in environmental disclosure.

- 50% of the respondents verified water withdrawals
- 41% of the respondents verified water consumption
- 41% of the respondents verified water discharge
- 18% of the respondents verified water recycled/reuse

OPPORTUNITIES

The structure of the water security questionnaire allows a company to tell investors, customers and other data users about its water stewardship journey. For this reason, CDP invites companies to share any water-related operational or market opportunities being realized that could substantively benefit their business. With this module, data users understand the current state of a company's use of water and how water-related opportunities are identified.

- 88% of the respondents identified water-related opportunities with the potential to have a substantive financial or strategic impact on the business.

Primary water related opportunities currently being realized that could have a substantive financial or strategic impact on the business:

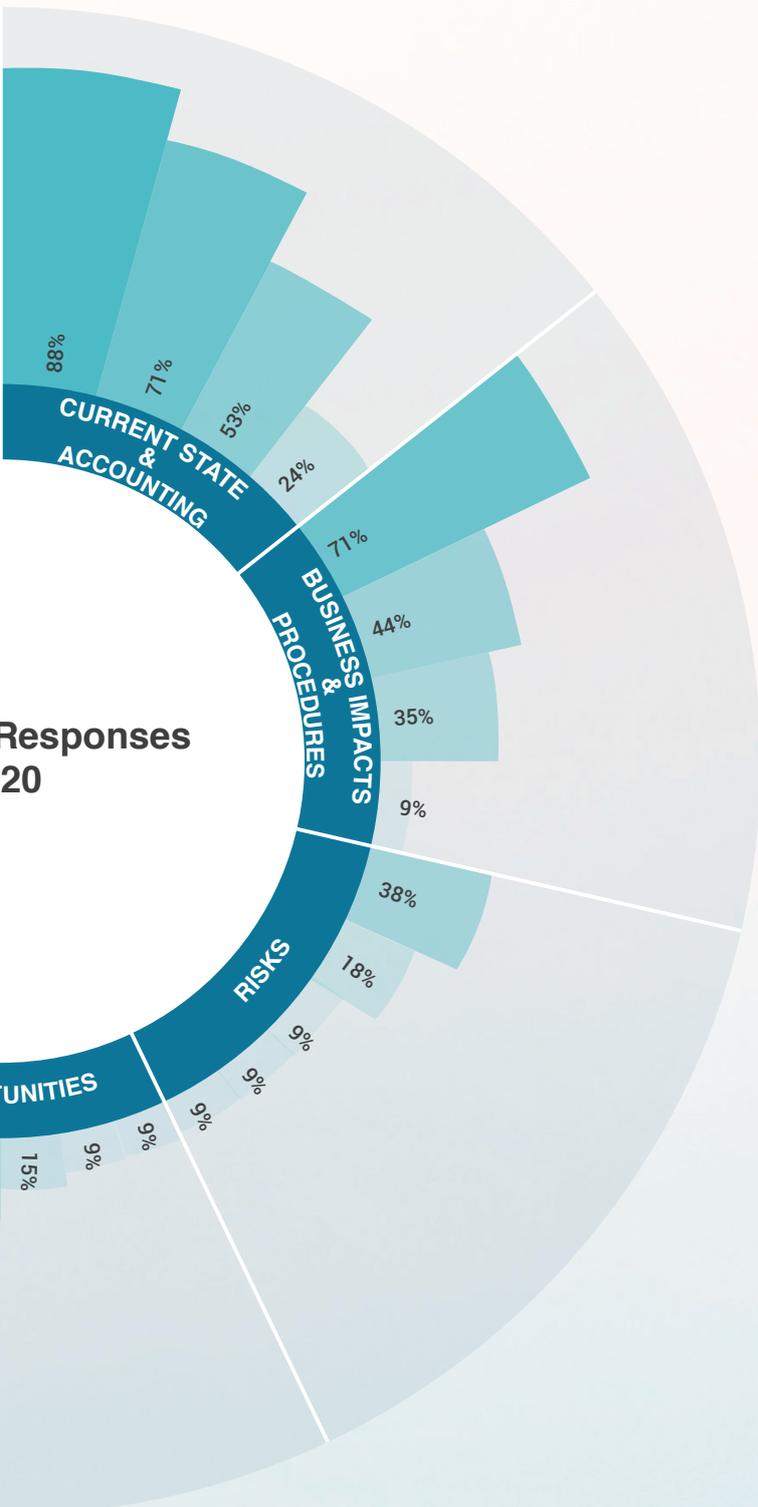
- 41% Cost savings
- 32% Improved water efficiency in operations
- 24% Increased brand value
- 15% Sales of new products/services
- 9% Increased sales of existing products/services
- 9% Stronger competitive advantage



CURRENT STATE & ACCOUNTING

This module allows CDP data users to build a picture of the dependence of the company's direct operations and value chain on the water of a particular quality and to see where in the value chain dependence on water lies the most. The questions allow companies to demonstrate how well they understand their corporate hydrology by providing information on the monitoring of relevant water aspects, and volumetric data on withdrawals.

- 88% regularly measured and monitored all of the water aspects across all operations
- 71% of total water withdrawal sourced by third party sources
- 53% reported that more than half of total withdrawals sourced from water-stressed areas
- 24% of the respondents request from more than half of suppliers to report on their water use, risks and/or management information



BUSINESS IMPACTS & PROCEDURES

This module focuses on water-related impacts on organization and response to them. These are impacts that have occurred in the past reporting year, including those resulting from regulatory violations. Procedures module requests information about the procedures that organizations have in place to manage issues salient to their sector and to understand inherent risk exposure.

- 71% assessed water-related risks for more than 6 years
- 44% assessed water risks as part of the other company-wide risk assessment systems
- 35% have procedures for identifying and assessing water-related risks covered both direct operations and supply chain
- 9% of companies stated that flooding is the most reported impact driver of the water-related detrimental impacts experienced by the company

RISKS

A better understanding of the number, location, and nature of inherent water risks is valuable for disclosing companies, as well as CDP data users. This module allows companies to show that they have a clear awareness of the extent to which they are exposed to inherent water risks in their direct operations and other parts of their value chain.

- 79% of the respondents identified inherent water-related risks with the potential to have a substantive financial or strategic impact on the business.

Potential impacts of identified risks in the direct operations are:

- 38% Increased operating costs
- 18% Reduction or disruption in production capacity
- 9% Brand damage
- 9% Closure of operations
- 9% Increased production costs

COMPANY RESPONSE OVERVIEW

WATER SECURITY / TURKEY 2020

36

disclosing companies
in total

50%

water quality & quantity
is vital for the success of
the business

Water consumption: The amount of water drawn into the boundaries of the organization (or facility) and not discharged back to the environment or a third party over the course of the reporting period. It is the water that the company has permanently removed from the local water cycle by being incorporated into products, crops, etc. It means that this water is no longer available for use by the ecosystem, local community or other businesses.

Water withdrawals: Water that the company has temporarily removed from the local water cycle that is returned as discharge water. It is the sum of all water drawn into the boundaries of the organization or facility from all sources for any use.

Water discharges: Water that leaves a company's facility and can be a potential source of pollution if left untreated. It is the amount of effluents and other water leaving the boundaries of the organization or facility and released to surface water, groundwater or third parties.

Stakeholders are calling for accessible, accurate and comprehensive information that demonstrates responsibility for reducing water-related risks and impacts. CDP's water security questionnaire provides a valuable platform to facilitate this transparency and dissemination of information and tracks key performance indicators such as corporate governance, risk management and value chain engagement in order to provide consistent, quantifiable, and comparable data and insights to investor shareholders and purchasing organisations. These insights are then used to make smarter, more informed investment and purchasing decisions. In 2020, more than 2500 companies disclosed on water through CDP, with this data shared with 515 investors, representing over \$106 trillion in assets and more than 150 purchasing companies.

On behalf of investor signatories, in the sixth year of the CDP Water Program in Turkey, we asked 50 companies to provide data about their efforts to manage and govern water resources. We selected these companies based on economic and environmental indicators (largest listed companies in high water impact industries). In total, **36 companies responded to CDP's water program in Turkey** up from 32 companies (13% increase) in 2019. Out of 36 respondents, 15 were self-selected (SSCs) and 21 were included in the Turkey sample that received an official invitation. Therefore, the response rate of the official sample is 42% (34% in 2019).

This chapter presents summary findings from our analyses of (two of the companies are See Another Company) responding company disclosures in response to the CDP Water Information Request.

▼ Current State and Accounting

Disclosing through CDP allows companies to build trust and credibility by providing information directly to investors and customers, using a market-leading and standardized disclosure system. This process enables companies to demonstrate their involvement in the reporting progress against a comprehensive set of water stewardship indicators. Robust water accounting data is necessary to inform business planning and forecasting as well as risk identification and response.

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. This module allows CDP data users to build a picture of the dependence of company's direct operations and wider value chain on sufficient amounts of water of a particular quality, currently and for future growth, and where in the value chain most dependence on water lies.

Water quality and quantity has a vital importance for **Ford Otomotiv's** direct operations. The direct use of water resources is vital for operations' continuity such as vehicle painting in manufacturing processes, machining of power train components, cooling towers, wash services. As a large purchaser of parts, materials, components, the indirect use of water has an importance for operations and services performed by suppliers in current and future conditions. Pollution or salinization of the water resources may pose some risks in water availability causing increases in the operational costs. For this reason, Ford Otomotiv prefers using water efficiently. Reducing water usage by monitoring water quantity and quality is always in their concern.

The importance (current and future) of **water quality and water quantity** to the success of business



Sufficient amounts of good quality freshwater available for use is "vital" or "important" for the direct operations



Sufficient amounts of good quality freshwater available for use is "vital" or "important" for the indirect operations



Water quality & quantity is important for the success of the business



Water quality & quantity is vital for success of the business



Water quality & quantity is not important for the success of the business at all

44%
water withdrawals is lower than the previous year

52%
more than half of total withdrawals sourced from water stressed areas

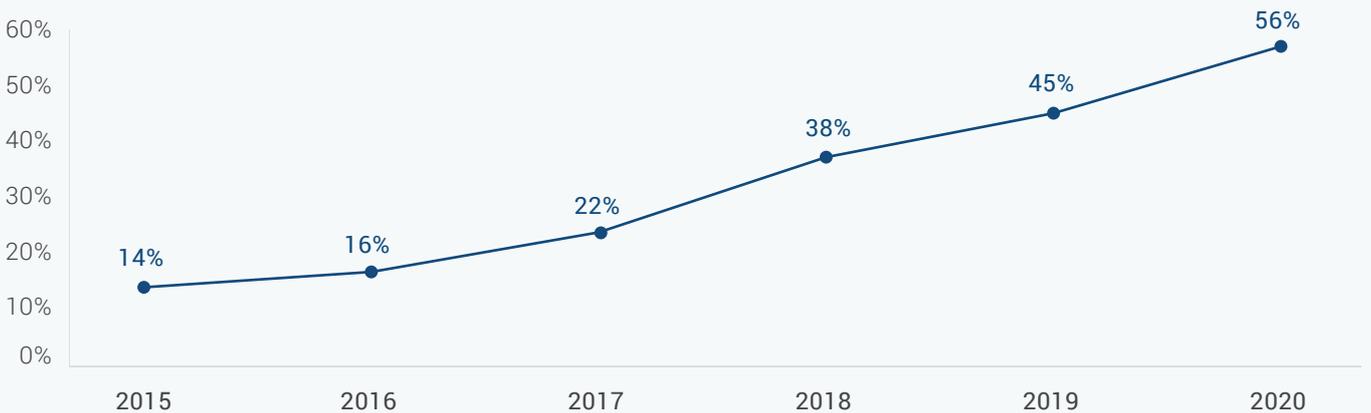
The **availability of sufficient amounts of good quality freshwater** is vital for health, livelihoods, ecosystems and economic production. Therefore, CDP asks companies to rate the importance of water quality and water quantity to the success of their business. The companies disclosing from Turkey report that having sufficient good quality freshwater for their own use is either important (71%) or vital (50%) for their business.

Responding to risks and seizing opportunities requires awareness, monitoring, transparency and disclosure. A significant portion of responding companies (91%) reporting via CDP now **measure and monitor more than half of**

all water aspects across all operations (sites/facilities/operations). A further 88% are regularly measuring and monitoring all water aspects. 56% of responding companies also ask their **key suppliers to report on their water use, risks and/or management** information. 24% are requested that information from more than half of their suppliers.

As per **accounting of water use**, 88% of responding companies in Turkey gave an account of their **water withdrawals** by source via CDP. Total volume of water withdrawn across all operations is 4,223 megaliters. A further 85% also provided total **water discharge** data by destination that is 3,844 megaliters in total.

Percentage of companies require **suppliers to report** on their water use, risks and/or management information



Percentages of companies providing **total water withdrawal data by source and total water discharge data by destination** (2015-2020 comparison)



71%
water withdrawal is sourced from third party sources

Most companies try to reduce their water consumption through recycling and reusing. But the above figures prove that despite these efforts the demand for water in industrial activities is still not decreasing. While 29% of responding companies have measured that, their **water consumption** is lower than the previous year, 32% report an increase. In terms of **water withdrawals**, 44% of responding companies report a decrease, while 29% measured an increase compared to previous year. The most common explanation that companies provide for increased withdrawals is an increase in production. 38% of companies reported that total **water discharge** by destination is lower compare to the previous year.

compare to the previous year (39%). Most of the water withdrawal is sourced from **third party sources** (71%) and most of the water is discharged to **third party destinations** (76%) which shows water crosses the company boundary, at either the corporate level or facility level.

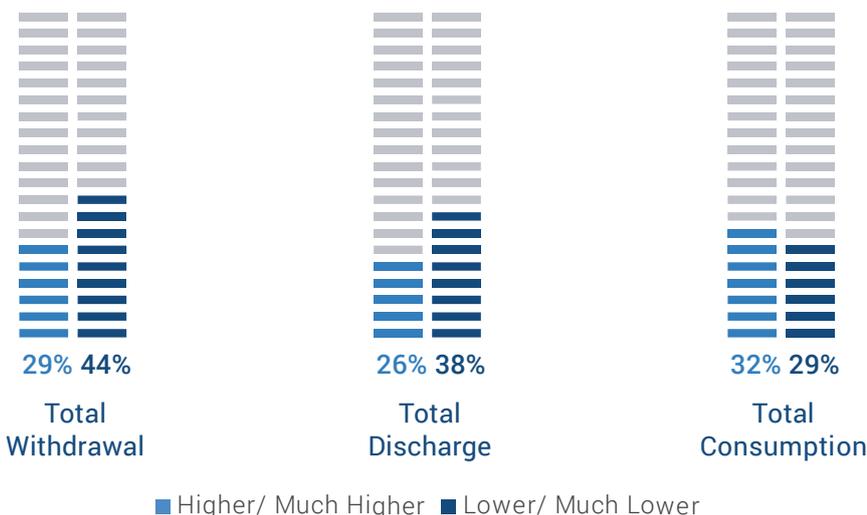
76%
engage with the value chain on water-related issues

The module also asks about **engagement activity** around water in the value chain and a rationale for it. In regions where water sources are highly restricted, organization's water consumption patterns can influence relations with other stakeholders and access to water can be dependent on those relationships. 76% of responding companies engage with the value chain on water-related issues.

53 percent of responding companies reported that more than half of total withdrawals are sourced from **water stressed areas** which is much higher

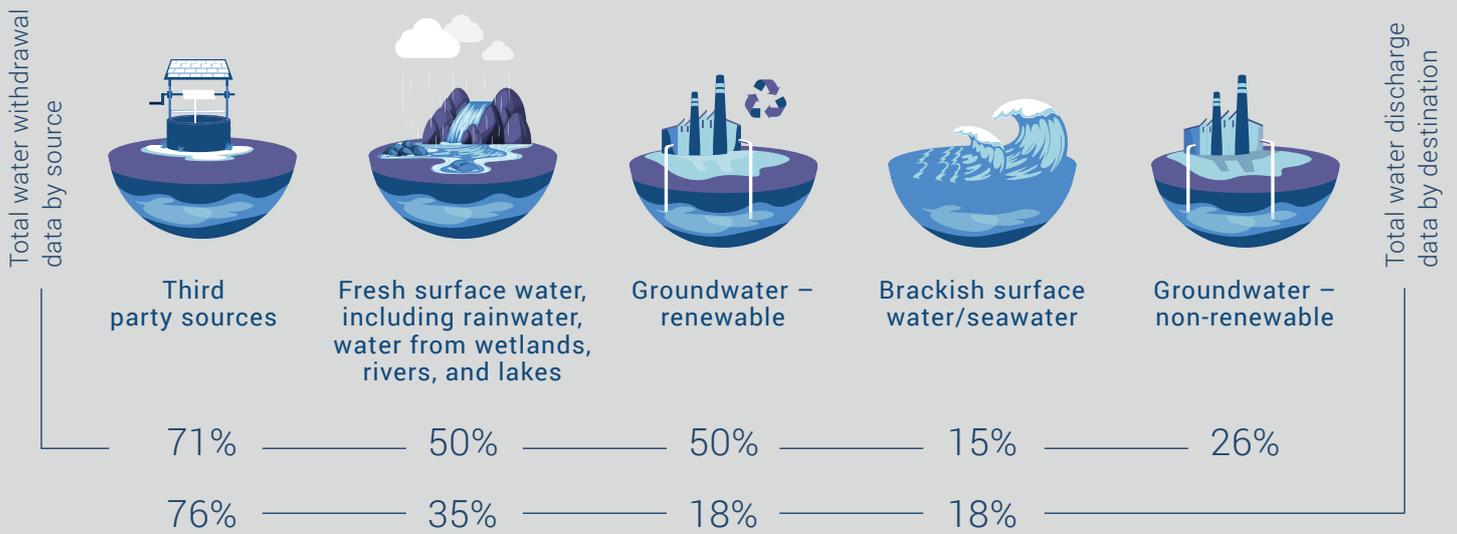
Half of the responding companies in Turkey externally verified their water withdrawals data. Water consumption (41%) and water discharge (41%) are the next most externally verified water accounting data. A further 32% verified other water information besides the water consumption, discharge, withdrawal and recycle/reuse data.

Percentage of companies providing **total volumes of water withdrawn, discharged, and consumed** across all operations compare to the previous reporting year



Coca Cola's water withdrawal from water-stressed areas was 24% last year and this year the ratio increased by only 1% when calculated over the production volumes of plants located in high water-stressed areas, and the ratio turned 25%. Source Vulnerability Assessment Study is conducted by professional and independent third party consultancy firms for each plant. According to CCI's 'Source Water Protection Plan' water-stressed areas are determined with a comprehensive research study and water stress is determined up to date for each plant and the plants are categorized accordingly: Çorlu and İzmir plants are in water stress areas.

The most frequently cited water **withdrawal sources and water discharge destinations**



26% experienced detrimental water related impacts

The total damage of the severe weather events was the damage due to loss of crops. Unfortunately, due to the nature of farming, there are not many measures to implement to be resilient to such acute and severe physical events. However, **Tekfen Holding** makes sure their employees and facilities are well equipped to take immediate action to protect and maintain our business as usual operations. While this response is not directly linked to water security, it is caused by the changing climate/precipitation patterns and is considered as a chain in the water cycle. Tekfen's response to all incidents is to secure operations with minimum or if possible no disruption, which includes maintaining our water security and resilience. As an example of these preventive measures, they have installed hail nets to protect products (stone fruit) against a potential hail covering a 330 decares of our Alanar Fruit orchard. By doing so they minimized the risk of heavy precipitation-related detrimental impact.

Business Impact & Procedures

There are financial risks that companies face from water issues. 26% of companies in Turkey suffering from some sort of water-related issue (**experienced detrimental impacts**) over the reporting period—mostly related to flooding or droughts. Companies should act on their water security because the price of non-action is high. Total financial impact of water-related detrimental impacts experienced by companies in Turkey is US\$26.5 million.

The most frequently cited impact drivers are:

- Flooding: 9%
- Drought: 6%
- Inadequate infrastructure: 6%
- Severe weather events 3%
- Declining water quality: 3%

A comprehensive risk assessment is essential for companies to develop a clear understanding of physical, regulatory, and reputational exposures as well as opportunities available. 91% 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. 35% of disclosing companies meet this higher standard. Other 71% assessed water-related risks for more than six years.

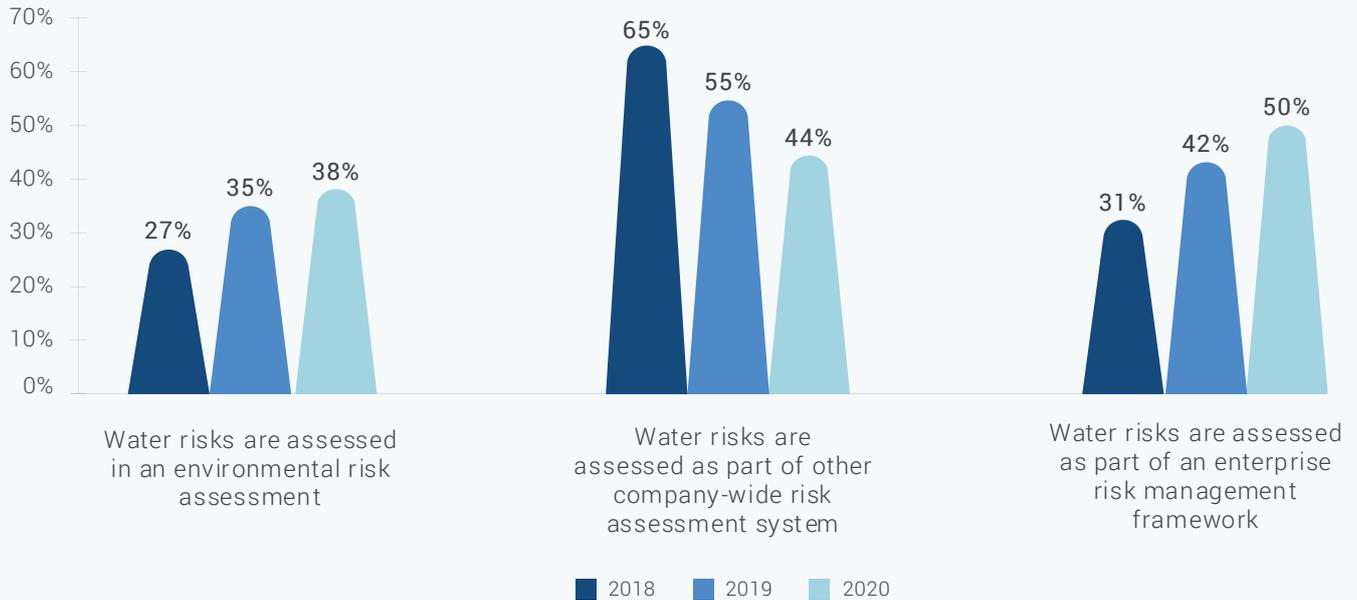
Water-related regulatory frameworks are the **most considered contextual issues** in the company's water-related risk assessments. Water is also a local issue and each river basin faces distinct challenges as a function of the different water users operating

there. **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. 71% of companies in Turkey conduct risk assessment with a consideration of river basin management authorities and a further 88% with local communities. However, regulators are the **most considered stakeholders** (91%) that are considered in the company's water-related risk assessments.

71% assessed water related risks for more than 6 years

When **Garanti BBVA** runs a project through its Environmental and Social Impact Assessment Model, one of the most important stakeholders is always the local community. Local communities are consulted as part of stakeholder engagement processes of environmental and social impact assessment. Where relevant, a Stakeholder Engagement Plan (SEP) is prepared to describe the mechanisms by which local communities and other stakeholders are informed about the Project and which gives an opportunity to provide comments and input to the Project development. Garanti BBVA's assessment model makes sure that water usage rights of downstream communities are protected.

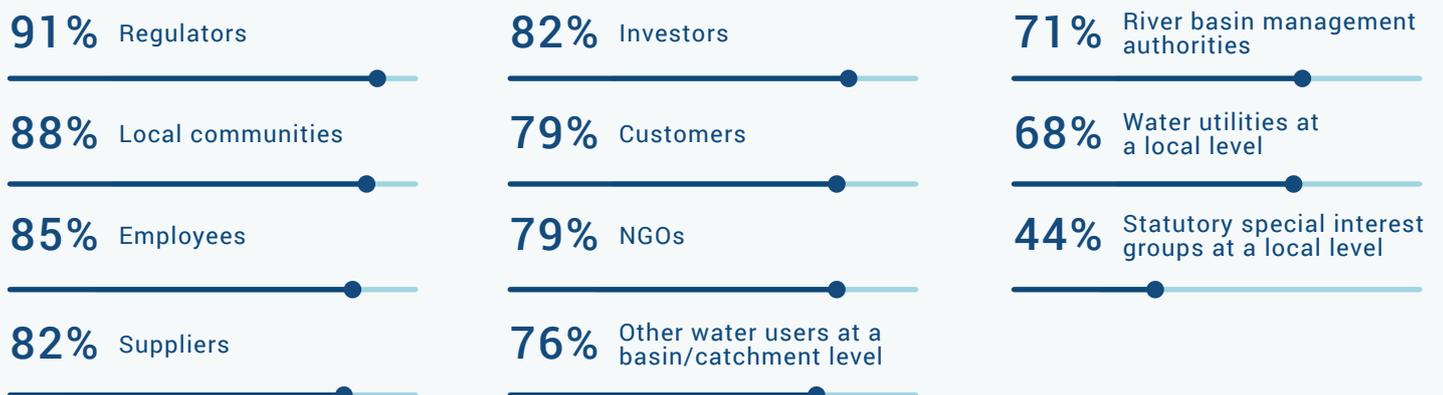
Risk assessment procedures to assess water-related risks (2018-2020 comparison)



The following contextual issues are the most frequently considered ones in the organization's **water-related risk** assessments:



Stakeholders, which are always considered in the organization's **water-related risk** assessments:



50%

identified water-related risks both in direct operations and the rest of the value chain

Aydem Enerji's Hydro Power Plants are highly dependent on adequate hydrological conditions in the geographic regions they are located. HPPs are exposed to droughts, excess water, climate change and developments in the watercourse upstream of the relevant facility. Any of these factors can cause volatility in production levels and impair the effectiveness of power plants, and therefore can cause volatility in profitability. For example, over the last three years, the Dalamani HPP has been generating approximately 40% less power as compared to its historical average performance in the period between 2016 and 2018, due to the drought in the local region.

Albaraka Turk opts for increasing resource efficiency in the HQ and all branches. The increased resource efficiency already resulted in a reduction in water consumption. For instance, by the water-saving projects carried out by Albaraka, around 20% reduction in water consumption was achieved. Better competitive position to reflect shifting consumer preferences, resulting in increased revenues. Increase in demand for loans for new sustainable energy and resource efficiency products resulting in new business and increased revenue for the bank.

▼ Risks Assessment & Opportunities

Companies should undertake water risk assessments that account for the regional context in both direct operations and supply chains. By improving their understanding of the way in which water is managed around them, companies are better prepared to respond proactively to challenges. Therefore, CDP asked companies to report **substantive water-related risks** and to share any **water-related opportunities** being realized that could substantively benefit their business.

In Turkey, half of responding companies identified **inherent water-related risks** with the potential to have a substantive financial or strategic impact on the business both in direct operations and in the rest of our value chain. Other 50% of responding companies reported that more than half of company-wide facilities are **exposed to water risks**. That percentage at the facilities on river basin is 35%. Potential financial impacts of identified risks in the direct operations of companies in Turkey is US\$733 billion.

In addition to impact in direct operations, companies were also asked to assess their water risk in their value chain. **Physical risks** are the most reported types of risks in the direct operations (76%) and in the value chain (38%). Physical risks include droughts, flooding, increased water scarcity and increased water stress and so on. In direct operations, physical risks were reported mostly as a result of increased operating costs (29%) and reduction or disruption in production capacity (15%). Increased operating costs are also **the most reported potential impact** (38%) of identified risks in the direct operations; in the value chain, the most reported risk drivers are drought (15%) and increased water scarcity (9%).

Assessment of impacts required the lens of timeframes and magnitude. 47% of companies anticipate that the **substantive financial or strategic impacts** of identified risks in direct operations will be realized within one to six years. A further 47% anticipate that it is going to realize over a period of more than six years. The chart below represents the estimated timeframe for realization of substantial financial and strategic impacts on businesses.

There are also positive opportunities identified from taking action on water issues. 82% of responding companies identified **water-related opportunities** with the potential to have a substantive financial or strategic impact on the business and stated that some/all are being realized. Efficiency (71%) and markets (35%) are the most reported types of opportunities currently being realized.

77%

identified physical risks in the direct operations

Brisa describes substantive financial and strategic impact as any risk causing a daily shut-off of its production facilities. However, in the case of a severe weather event related damage to assets, the shut-off period is likely to be longer. Assuming a shut-off range of 2 to 5 days for Production Facilities, Brisa is faced with the stated potential implication. The financial impact of a daily shut off of production facilities was determined as US\$1.86 million/day.

47%

anticipate risks to materialize within 1 - 6 years in direct operations

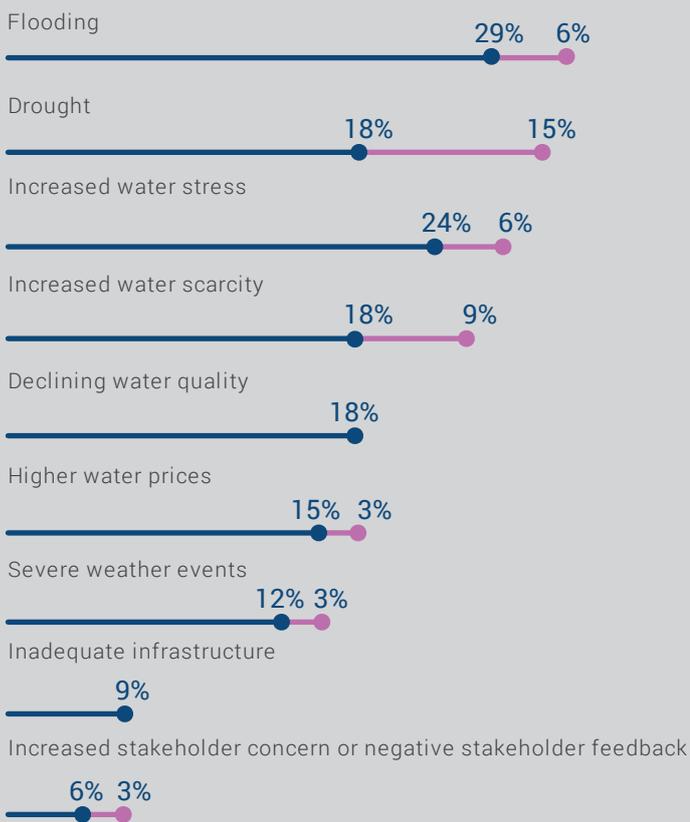
82%

identified water-related opportunities and some/all are being realized

+ Percentage of **risk types** identified in direct operations and within the value chain



Primary **risk drivers** in direct operations and within the value chain



Primary **potential impact** of identified risks in direct operations and within value chain



■ Direct Operations ■ Value Chain

Timeframe of substantive financial or strategic impacts of identified risks and opportunities in direct operations to realize



Primary water related **opportunities** currently being realized



97%
have board level oversight of water-related issues

56%
identified CEO with responsibility for water-related issues on the board

79%
have a company-wide water policy

▼ Governance

The strategic decisions taken by the CEO and the Board can truly transform a company's impact on water resources. By providing board members with the information and tools to plan for a transition to a water-secure world and by publicly monitoring their progress, water stewardship can become part of companies' business strategy. Almost all (97%) companies report that they have **board-level oversight of water-related issues** within the organization. In more than half of the responding companies (56%), CEO is the one with responsibility for water-related issues and 59% have **incentives in place** for C-Suite executives on water-related issues.

In Turkey, 79% of responding companies have **company-wide water policy**. A further 88% engage in activities that could either directly or indirectly influence public policy on water. 41% of companies include information about their response to water-related risks in their most recent mainstream financial report.

Likewise climate change risks, in **Eti Soda**, the Board – the highest level of the company are responsible to manage, monitor and take action for the water-related issues and its impacts over the Board strategy discussions, portfolio review and investment decisions. With the assist of the Sustainability Committee, the Board is the decision maker on water-related issues, risks and opportunities. The Sustainability Committee works to identify potential risk before the company face. In order to enhance this work, the Board has decided to receive support from experts and academicians. The Sustainability Committee schedule its regular meetings with those climate change, GHG emission, socio-economic, biodiversity experts.

65%
use climate-related
scenario analysis

18%
use an internal price on
water

As water cost is a part of **Kordsa's** OPEX and they also use this cost while deciding on the feasibility of water-related CAPEX, Kordsa always includes water price in budget planning. As Kordsa operates in very different geographies including Turkey, Indonesia, the United States, Thailand and Brazil, they take into account local water price while planning their budget. Therefore, they don't have a single figure. As the water scarcity is expected to increase in the future, they make sure they plan and initiate efficiency projects to ensure water security and prevent the OPEX increase likely to be caused by increasing water prices.

▼ **Business Strategy**

Leading companies recognize that business-as-usual responses to business and water management are no longer sufficient to deal with the risks and opportunities they face. Integrating water into financial planning, long-term objectives and having strategies for achieving these are crucial steps on this journey. The purpose of this module is to collect information on how a company is adapting its long-term business model to secure a sustainable future, in terms of both its own resilience and securing water for all.

65 percent of responding companies in Turkey identified water-related outcomes from the organization's **climate-related scenario analysis**.

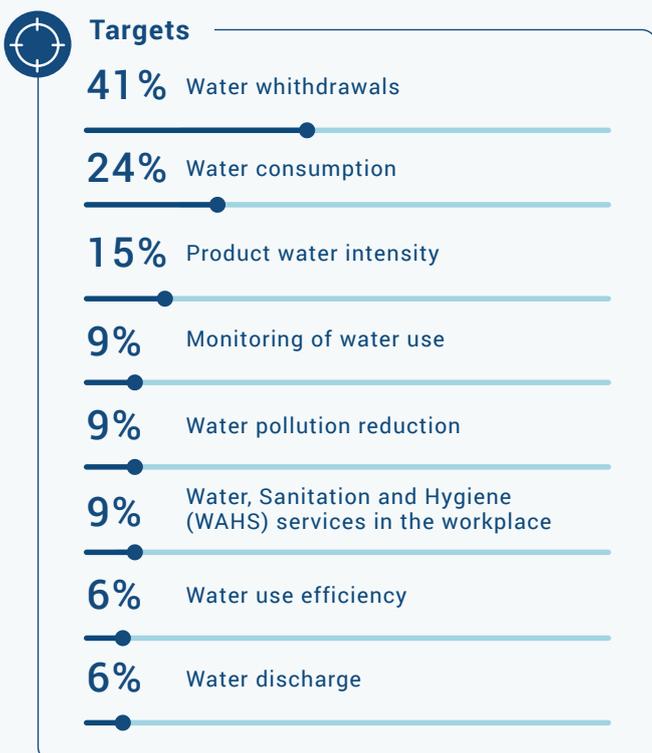
Only 18% of companies use an **internal price on water**, which is much lower than the companies that use an internal carbon price in Turkey (41%).

Companies are also looking into medium and long-term strategies on water issues and have integrated the water aspects (strategy for achieving long-term objectives, long-term business objectives and financial planning) into their business plans. Looking at the longer term 85% of respondents in Turkey are integrating water-related issues into organization's **long-term strategic business plan**. A further 44% integrated those issues into strategic business plan for more than 10 years. While 74% of companies

82%
company-wide targets
and goals in place to
manage water risks

Migros uses the WRI Aqueduct Tool to assess water risk for facilities within operational control and for suppliers, which relies on two different climate-related scenarios for projecting future changes to water supply, seasonal variability, demand, etc. Thanks to the tool, Migros gets information on what water risks and food security risks are, especially regarding agricultural products, by 2030 and 2040. Water risks include risks such as water stress, drought risk, and seasonal variability. In this way, Migros has established a vital tracking mechanism for agricultural products that make up 77% of the sales in our stores. Migros indicated that this tracking mechanism is vital because by identifying which agricultural products have higher/much higher risk related to seasonal variability or any other water issue, it has an opportunity to engage with suppliers and plan diversification of suppliers for most risky products.

The categories of **targets and goals** that are monitored at the corporate level



Thanks to water efficiency projects realized in **Arçelik**'s plants, in 2018, Arçelik reduced their average water withdrawal per product 48% (incl. Turkey, China, Romania, Russia, and South Africa) compared to 2012. In 2017, their 2020 water target was to reduce water withdrawal per product in production by 38%. In 2018, water withdrawal per product was reduced by 48% and the target for 2020 has been reached. Because of this, they have updated their 2020 water target to 52%, and South Africa Plants were also included in the target.

have considered water-related issues in their **financial planning**, 82% have considered it in their long-term business objectives.

Companies must set and achieve ambitious targets to reduce impacts on water availability and quality. There is an increased commitment of companies in Turkey to manage and sustain water security. CDP defines a **'target'** as a specific measurable output within a clear timeline, while a **'goal'** aims to achieve a longer-term qualitative outcome or a specific change in behavior or circumstances. Targets are quantifiable objectives to manage water resources, and goals are qualitative aims leading towards improved water stewardship. Most of the companies (82%) have set **company-wide targets and goals** in place to better manage water risks. 56% of responding companies achieved more than half of their **water targets**.

In middle of the 2018 our new factory, tumbler dryer machine, has been run. This change lead to an increase in water consumption. In this manner, a new base year and target have been set. **Vestel Beyaz Eşya** set the goal of reducing water usage amount by %15 per water sourced from municipal supply compared to 2019 until 2030 to manage and reduce water consumption in domestic and overseas sites.

79%

have a company-wide water policy

Since **Yünsa** operates in Ergene Basin which has both water quality and water quantity risks, Yünsa has targets for water withdrawals and water consumption. They aim to decrease their water intensity (m3 of water withdrawals per meter of produced fabric) by 40% from the year 2016 to 2020.

In Turkey, 85% of responding companies are **monitored targets and goals at the corporate level**. Water withdrawals are the most common category of targets that are monitored (41%). The most common category of water-related goals monitored at the corporate level are engagement with customers to help them minimize product impacts (18%) and providing access to safely managed Water, Sanitation and Hygiene (WASH) in workplace (18%).

The percentage of respondents that provide a **quantitative metric** for water targets is 82%. A further 65% provide a **description of water goals**. Reduced environmental impacts (50%) is the primary motivation behind targets and the **primary motivation** behind the goals is water stewardship (32%)

82%

provided a quantitative metric for water targets

Motivations behind the water related targets and goals



SCORE DISTRIBUTION

TURKEY 2020

CDP Scoring: A growing environmental awareness among the business in 2020

Globally 313 companies named on CDP's prestigious 'A List' this year for environmental transparency and action, a 45% increase from 2019.

The A List showcases the companies leading on environmental transparency and action, based on their annual disclosure through CDP's climate change, forests and water security questionnaires. This year has seen a major increase in the number of companies achieving an A score, with increases across all three themes that CDP assesses. Along with the high levels of disclosure, this shows growing environmental awareness among the business world in 2020 despite the unprecedented challenges posed by Covid-19.

In Turkey, **Garanti BBVA** made the CDP Climate A list and **Tekfen Holding** achieved

a 'double A' score for Climate and Water, being one of the 63 companies in the World.

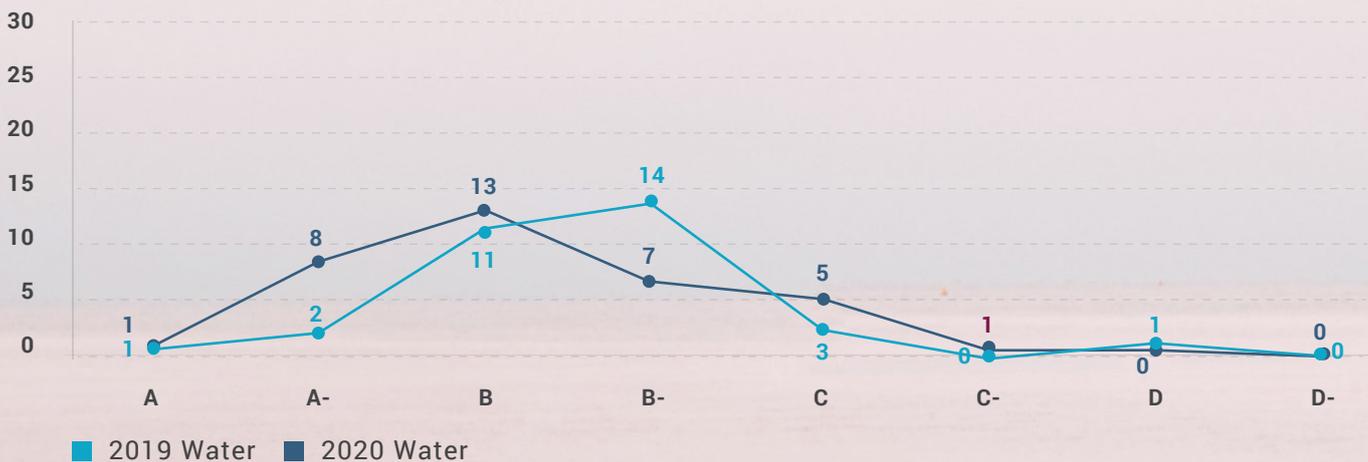
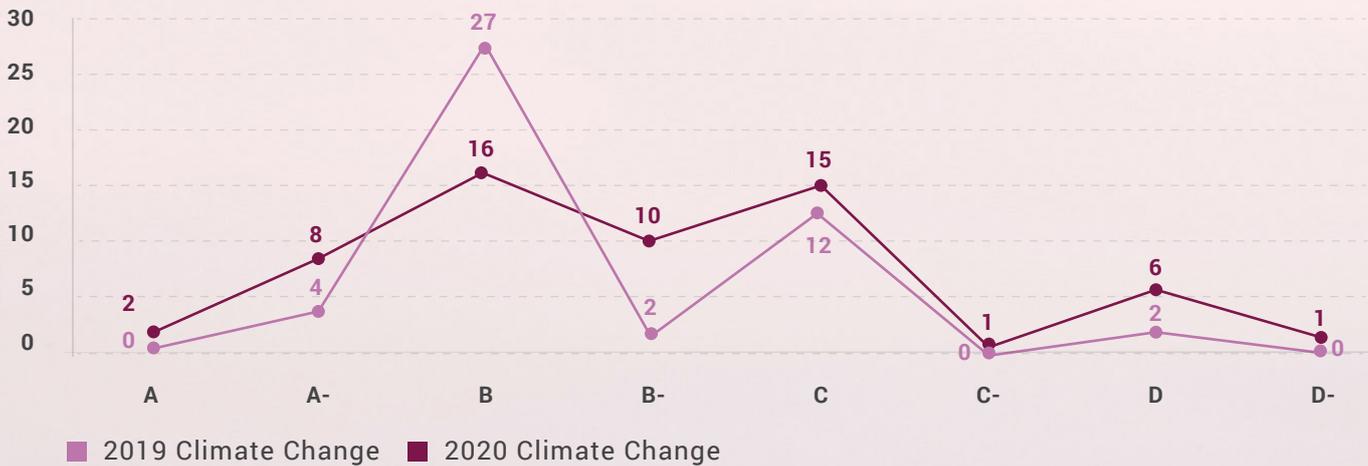
8 companies (5 in 2019) achieved a score of 'A-' across Climate and another 8 (2 in 2019) across Water are recognized as pioneers of business in Turkey for environmental reporting.

Management and leadership levels (A & B scores) require demonstration of good or leading environmental performance as well as transparency. In 2020, the number of A and B band scored companies in Turkey across Climate is 36 and across water is 29 in total. That number is steadily increasing year by year.

CDP Supplier Engagement Rating (SER)

Companies' average upstream emissions are around 11.4 times greater than their direct operations. Therefore, companies have much greater potential to reduce

global emissions by influencing their supply chains. CDP's annual Supplier Engagement Rating provides a rating for how effectively companies are engaging their suppliers on climate change. CDP assesses performance on supplier engagement using a company's response to selected questions on governance, targets, value chain (scope 3) emissions and supplier engagement strategies in the CDP Climate Change questionnaire. By engaging their suppliers on climate change companies are playing a crucial role in the transition towards the net-zero sustainable economy. We have 3 companies in Turkey achieved a score of A: **Arçelik**, **Brisa** and **Garanti BBVA**. A further 11 companies from various sectors also receive 'A-'. The highest-rated companies are celebrated in the Supplier Engagement Rating Leaderboard: <https://www.cdp.net/en/research/global-reports/transparency-to-transformation>



CDP TURKEY LEADERS

TURKEY 2020

CDP GLOBAL CLIMATE CHANGE A LIST

	ACS INDUSTRY	SCORE
T.GARANTİ BANKASI A.Ş.	Services	A
TEKFEN HOLDİNG A.Ş.	Infrastructure	A

CDP GLOBAL WATER A LIST

TEKFEN HOLDİNG A.Ş.	Infrastructure	A
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CDP TURKEY CLIMATE CHANGE LEADERS

ALBARAKA TÜRK KATILIM BANKASI A.Ş.	Services	A-
ARÇELİK A.Ş.	Manufacturing	A-
ASELSAN ELEKTRONİK SANAYİ VE TİCARET A.Ş.	Manufacturing	A-
BRİSA BRIDGESTONE SABANCI LASTİK SAN. VE TİC. A.Ş.	Manufacturing	A-
KORDSA TEKNİK TEKSTİL A.Ş.	Manufacturing	A-
PEGASUS HAVA TAŞIMACILIĞI A.Ş.	Transportation services	A-
T.İŞ BANKASI A.Ş.	Services	A-
TÜRKİYE KALKINMA VE YATIRIM BANKASI A.Ş.	Services	A-

CDP TURKEY WATER LEADERS

AKSA AKRİLİK KİMYA SANAYİİ A.Ş.	Materials	A-
ARÇELİK A.Ş.	Manufacturing	A-
BRİSA BRIDGESTONE SABANCI LASTİK SAN. VE TİC. A.Ş.	Manufacturing	A-
ETİ SODA A.Ş.	Materials	A-
KORDSA TEKNİK TEKSTİL A.Ş.	Manufacturing	A-
MİGROS TİCARET A.Ş.	Retail	A-
PINAR SÜT MAMULLERİ SANAYİİ A.Ş.	Food, beverage & agriculture	A-
YAPI VE KREDİ BANKASI A.Ş.	Services	A-

CDP SUPPLIER ENGAGEMENT RATING GLOBAL LEADERS

ARÇELİK A.Ş.	Manufacturing	A
BRİSA BRIDGESTONE SABANCI LASTİK SAN. VE TİC. A.Ş.	Manufacturing	A
T.GARANTİ BANKASI A.Ş.	Services	A

CDP'S OTHER CAMPAIGNS AND PROGRAMS

TURKEY 2020

What is TCFD?

The Task Force on Climate-Related Financial Disclosures (TCFD) is an organization that was established in December of 2015 with the goal of developing a set of voluntary climate-related financial risk disclosures that can be adopted by companies so that those companies can inform investors and other members of the public about the risks they face related to climate change. The organization was formed by the Financial Stability Board (FSB) as a means of coordinating disclosures among companies impacted by climate change. In 2017, the TCFD released climate-related financial disclosure recommendations designed to help companies provide better information to support informed capital allocation. The recommendations are structured around four thematic areas that represent core elements of how organizations operate: governance, strategy, risk management, and metrics and targets.

What is Science-Based Targets

Science-based targets provide a clearly-defined pathway for companies to reduce greenhouse gas (GHG) emissions, helping prevent the worst impacts of climate change and future-proof business growth. Targets are considered 'science-based' if they are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement – limiting global warming to well-below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C.

CDP disclosure and the TCFD recommendations

With an amendment made in 2018, CDP questions were aligned with the TCFD Framework. CDP added 25 TCFD-aligned questions contained within the Governance, Risks & Opportunities, Strategy, Targets, and Emissions modules. Therefore, companies responding to CDP can also make a reporting that largely complies with the recommendations of TCFD and can reduce their reporting burden.

In 2019, 2,508 companies from around the world – worth over US\$ 41 trillion in market capitalization – responded to CDP's climate change information request, which was sent to them by CDP on behalf of their investors. The overviews below examine to what extent these companies are disclosing in line with the recommendations of the Task Force on Climate-related Financial Disclosure (TCFD).

Globally, CDP finds that a large number of companies are already disclosing climate-related information through CDP in a way that is aligned with the TCFD recommendations:

- 35% of companies provide information on all TCFD recommended disclosures through CDP.
- A further 34% responded to the majority of the TCFD recommended disclosures.
- 69% (over 1700 companies) are thus disclosing information on at least 80% of the recommended disclosures.

CDP and Science-Based Targets

The Science Based Targets Initiative (SBTi) is a partnership between CDP, the United Nations Global Compact (UNGC), World Resources Institute (WRI), and the World Wide Fund for Nature (WWF). The SBTi call to action is one of the We Mean Business Coalition commitments. SBTi:

- defines and promotes best practice in emissions reductions and net-zero targets in line with climate science.
- provides technical assistance and expert resources to companies who set science-based targets in line with the latest climate science.
- brings together a team of experts to provide companies with independent assessment and validation of targets.
- is the lead partner of the Business Ambition for 1.5°C campaign - an urgent call to action from a global coalition of UN agencies, business, and industry leaders, mobilizing companies to set net-zero science-based targets in line with a 1.5°C future.

As of 2019, companies who signed up to the SBTi had operational emissions totaling over 750 million tonnes of CO₂e – more than the annual emissions of France and Spain put together. Their combined market capitalization was over US\$10.8 trillion. Among them are pioneers from some of the highest-emitting sectors, such as cement, power generation, and steel.

Science-based target setting is already becoming part of the yearly reporting practice of companies and the data infrastructure for institutional investors through incorporation in the CDP questionnaire and scoring.

SBTi Status of Companies in Turkey*	Company name
The companies that have already set a Science- Based Target that well-below 2°C	ARÇELİK A.Ş.
	KAYSERİ ULAŞIM A.Ş.
The companies committed to set a Science-Based Target	ABDİ İBRAHİM İLAÇ SANAYİ VE TİCARET A.Ş.
	ALBARAKA TÜRK KATILIM BANKASI A.Ş.
	T.GARANTİ BANKASI A.Ş.
	T.SINAI KALKINMA BANKASI A.Ş.
	TÜRKİYE İŞ BANKASI A.Ş.
	TÜRKİYE VAKIFLAR BANKASI T.A.O.

*(As of 10/03/2021)

CDP Commit to Action Campaign and We Mean Business Coalition

What are the We Mean Business Coalition and the Commit to Action campaign?

We Mean Business is a global non-profit coalition that brings together seven international nonprofit organizations including CDP. The mission is to ensure that the world economy is on track to avoid dangerous climate change while delivering sustainable growth and prosperity for all.

CDP's Commit to Action campaign works with the world's most influential companies to encourage them to sign up to climate leadership commitments supported by the We Mean Business Coalition which mobilizes businesses to set ambitious targets and equipping them to seize the opportunities of the zero-carbon transition and encourage governments to create the enabling policies that support companies to deliver bold climate action at scale.

CDP Cities Program

CDP provides the global platform for cities to measure, manage and disclose their environmental data. CDP works with over 900 cities measuring and disclosing environmental data each year to manage emissions, build resilience, protect themselves from climate impacts and create better places for people to live and work. The main benefits of reporting through CDP include:

- Gain insight and feedback on your city's climate action and response through CDP scoring.
- Compile all your environmental data in one place.
- Track your city's sustainability and climate efforts annually.
- Access data from 900+ cities, 120+ states and regions, and 9,500+ companies.
- Enter the ecosystem of the world's best city initiatives and programs. Participate in the Global Covenant of Mayors, as well as other initiatives offered by our partners ICLEI, C40 and WWF.

- Profile your low carbon mitigation projects with CDP's investor network representing \$106 trillion in assets.

In 2019, CDP partnered with ICLEI Local Governments for Sustainability to present one unified platform for city climate reporting, streamlining the process of reporting and ensuring simplicity and standardization for reporting cities.

In 2020, 11 municipalities from Turkey disclosed their environmental data through CDP:

- Adana Metropolitan Municipality
- Balıkesir Metropolitan Municipality
- Denizli Metropolitan Municipality
- Eskişehir Metropolitan Municipality
- Gaziantep Metropolitan Municipality
- İstanbul Metropolitan Municipality
- Kadıköy Municipality (İstanbul)
- Mezitli Municipality (Mersin)
- Nilüfer Municipality (Bursa)
- Seferihisar Municipality (İzmir)
- Village of Kadıovacık (İzmir)

CDP Turkey Respondents that Committed to Action*	SBT's	Carbon Pricing	Responsible Climate policy	Report Climate Change Information
ABDİ İBRAHİM İLAÇ SANAYİ VE TİCARET A.Ş.				
AKÇANSA ÇİMENTO SANAYİ VE TİCARET A.Ş.				
ALBARAKA TURK KATILIM BANKASI A.Ş.				
ARÇELİK A.Ş.				
ÇİMSA ÇİMENTO SANAYİ VE TİCARET A.Ş.				
KAYSERİ ULAŞIM A.Ş.				
ŞEKERBANK T.A.Ş.				
T.GARANTİ BANKASI A.Ş.				
T.SINAI KALKINMA BANKASI A.Ş.				
TÜRKİYE İŞ BANKASI A.Ş.				
TÜRKİYE VAKIFLAR BANKASI T.A.O.				

*(As of 10/03/2021)

RESPONSE STATUS

CLIMATE CHANGE / TURKEY 2020

CDP TURKEY CLIMATE CHANGE SAMPLE (BIST-100)		2020 SCORE	2020 RESPONSE STATUS	2020 PERMISSION STATUS	2020 DISCLOSED EMISSIONS (ACROSS ALL 3 SCOPES)	HAVE EMISSION REDUCTION TARGET
COMPANY - REQUESTED	PRIMARY QUESTIONNAIRE					
A.V.O.D. KURUTULMUŞ GIDA VE TARIM ÜRÜNLERİ A.Ş.	Food, beverage & tobacco	F	NS			
ADESE ALIŞVERİŞ MERKEZLERİ TİCARET A.Ş.	General	F	NS			
AFYON ÇİMENTO SANAYİ T.A.Ş.	Cement	B-	SA			
AG ANADOLU GRUBU HOLDİNG A.Ş.	Food, beverage & tobacco	F	NS			
AKBANK T.A.Ş.	Financial services	B-	S	P	Yes	Intensity target
AKSA AKRİLİK KİMYA SANAYİ A.Ş.	Chemicals	B	S	NP	Yes	Absolute & intensity targets
AKSA ENERJİ ÜRETİM A.Ş.	Electric utilities	F	NS			
ALARKO GAYRİMENKUL YATIRIM A.Ş.	Real estate	F	NS			
ALARKO HOLDİNG A.Ş.	Construction	F	NS			
ALBARAKA TÜRK KATILIM BANKASI A.Ş.	Financial services	A-	S	P	Yes	Absolute & intensity targets
ANADOLU CAM SANAYİ A.Ş.	General	C	SA			
ANADOLU EFES BİRACILIK VE MALT SANAYİ A.Ş.	Food, beverage & tobacco	C	S	P	Yes	Intensity target
ARÇELİK A.Ş.	General	A-	S	P	Yes	Absolute & intensity targets
ASELSAN ELEKTRONİK SANAYİ VE TİCARET A.Ş.	Capital goods	A-	S	P	Yes	Intensity target
BERA HOLDİNG A.Ş.	Paper & forestry	F	NS			
BEŞİKTAŞ FUTBOL YATIRIMLARI SANAYİ VE TİCARET A.Ş.	General	F	NS			
BİM BİRLEŞİK MAĞAZALAR A.Ş.	General	F	NS			
COCA-COLA İÇECEK A.Ş.	Food, beverage & tobacco	B	S	P	Yes	Intensity target
ÇELEBİ HAVA SERVİSİ A.Ş.	General	F	NS			
ÇEMAŞ DÖKÜM SANAYİ A.Ş.	Steel	F	NS			
ÇEMTAŞ ÇELİK MAKİNA SANAYİ VE TİCARET A.Ş.	Steel	F	NS			
DOĞAN ŞİRKETLER GRUBU HOLDİNG A.Ş.	Oil & gas	F	NS			
DOĞTAŞ KELEBEK MOBİLYA SANAYİ VE TİCARET A.Ş.	General	F	NS			
EGE ENDÜSTRİ TİCARET A.Ş.	General	F	NS			
EİS ECZACIBAŞI İLAÇ, SINAI VE FİNANSAL YATIRIMLAR SANAYİ VE TİCARET A.Ş.	General	F	NS			
EMLAK KONUT GAYRİMENKUL YATIRIM ORTAKLIĞI A.Ş.	General	F	NS			
ENERJİSA ENERJİ A.Ş.	Electric utilities	D-	S	P	Yes	
ENKA İNŞAAT VE SANAYİ A.Ş.	Electric utilities	B	S	P	Yes	Intensity target
EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.	Steel	F	NS			
FENERBAHÇE SPOR TİF HİZMETLER SANAYİ VE TİCARET A.Ş.	General	F	NS			
FORD OTOMOTİV SANAYİ A.Ş.	Transport OEMS	B	S	P	Yes	Absolute & intensity targets
GALATASARAY SPOR TİF SINAI VE YATIRIMLAR A.Ş.	General	F	NS			
GENTAŞ GENEL METAL SANAYİ VE TİCARET A.Ş.	General	NS	S	NP		
GERSAN ELEKTRİK TİCARET VE SANAYİ A.Ş.	General	F	NS			
GÖLTAŞ GÖLLER BÖLGESİ ÇİMENTO SAN. VE TİC.A.Ş.	Cement	F	NS			
GÖZDE GİRİŞİM SERMAYESİ YATIRIM ORTAKLIĞI A.Ş.	Financial services	F	NS			
GSD HOLDİNG A.Ş.	Financial services	F	NS			
GÜBRE FABRİKALARI T.A.Ş.	Chemicals	F	NS			
HEKTAŞ TİCARET T.A.Ş.	Chemicals	F	NS			
HÜRRİYET GAZETECİLİK VE MATBAACILIK A.Ş.	General	F	NS			
ICBC TURKEY BANK A.Ş.	Financial services	F	NS			
İŞIKLAR ENERJİ VE YAPI HOLDİNG A.Ş.	General	F	NS			

RESPONSE STATUS

CLIMATE CHANGE / TURKEY 2020

CDP TURKEY CLIMATE CHANGE SAMPLE (BIST100)		2020 SCORE	2020 RESPONSE STATUS	2020 PERMISSION STATUS	2020 DISCLOSED EMISSIONS (ACROSS ALL 3 SCOPES)	HAVE EMISSION REDUCTION TARGET
COMPANY - REQUESTED	PRIMARY QUESTIONNAIRE					
IHLAS GAYRİMENKUL PROJE GELİŞTİRME VE TİCARET A.Ş.	General	F	NS			
IHLAS HOLDİNG A.Ş.	Construction	F	NS			
İNDEKS BİLGİSAYAR SİSTEMLERİ MÜHENDİSLİK SANAYİ VE TİCARET A.Ş.	General	F	NS			
İPEK DOĞAL ENERJİ KAYNAKLARI ARAŞTIRMA VE ÜRETİM A.Ş.	Oil & gas	F	NS			
İSKENDERUN DEMİR VE ÇELİK A.Ş.	Steel	F	NS			
İŞ FİNANSAL KİRALAMA A.Ş.	Financial services	F	NS			
İŞ GAYRİMENKUL YATIRIM ORTAKLIĞI A.Ş.	Real estate	F	NS			
İTTİFAK HOLDİNG A.Ş.	Financial services	F	NS			
KARDEMİR KARABÜK DEMİR ÇELİK SANAYİ VE TİCARET A.Ş.	Steel	C-	S	NP	No	Intensity target
KARSAN OTOMOTİV SANAYİ VE TİCARET A.Ş.	Transport OEMS	F	NS			
KEREVİTAŞ GIDA SANAYİ VE TİCARET A.Ş.	Food, beverage & tobacco	F	NS			
KOÇ HOLDİNG A.Ş.	Oil & gas	F	NS			
KONYA ÇİMENTO SANAYİ A.Ş.	Cement	F	NS			
KORDSA TEKNİK TEKSTİL A.Ş.	General	A-	S	P	Yes	Absolute target
KOZA ALTIN İŞLETMELERİ A.Ş.	Metals & mining	F	NS			
KOZA ANADOLU METAL MADENCİLİK İŞLETMELERİ A.Ş.	Metals & mining	F	NS			
MAVİ GİYİM SANAYİ VE TİCARET A.Ş.	General	B	S	P	Yes	
METRO TİCARİ VE MALİ YATIRIMLAR HOLDİNG A.Ş.	Transport services	F	NS			
MİGROS TİCARET A.Ş.	General	B	S	P	Yes	Intensity target
MLP SAĞLIK HİZMETLERİ A.Ş.	General	F	NS			
NET HOLDİNG A.Ş.	Financial services	F	NS			
NETAŞ TELEKOMÜNİKASYON A.Ş.	General	C	S	NP	Yes	
ODAŞ ELEKTRİK ÜRETİM SANAYİ TİCARET A.Ş.	Electric utilities	F	NS			
OTOKAR OTOMOTİV VE SAVUNMA SANAYİ A.Ş.	Transport OEMS	F	NS			
ÖZDERİCİ GAYRİMENKUL YATIRIM ORTAKLIĞI A.Ş.	General	F	NS			
PARK ELEKTRİK ÜRETİM MADENCİLİK SANAYİ VE TİCARET A.Ş.	Electric utilities	F	NS			
PARSAN MAKİNA PARÇALARI SANAYİ A.Ş.	Transport OEMS	F	NS			
PEGASUS HAVA TAŞIMACILIĞI A.Ş.	Transport services	A-	S	P	No	Intensity target
PETKİM PETROKİMYA HOLDİNG A.Ş.	Chemicals	F	NS			
POLİSAN HOLDİNG A.Ş.	Chemicals	C	S	NP	Yes	Intensity target
SABANCI HOLDİNG A.Ş.	General	C	S	P	Yes	Absolute target
SASA POLYESTER SANAYİ A.Ş.	Chemicals	F	NS			
SODA SANAYİ A.Ş.	Chemicals	C	SA			
ŞEKERBANK T.A.Ş.	Financial services	B	S	P	Yes	Intensity target
ŞOK MARKETLER TİCARET A.Ş.	General	F	NS			
T.GARANTİ BANKASI A.Ş.	Financial services	A	S	P	Yes	Absolute & intensity targets
T.İŞ BANKASI A.Ş.	Financial services	A-	S	P	Yes	Absolute target
T.SINAI KALKINMA BANKASI A.Ş.	Financial services	B	S	P	Yes	Absolute target
T.ŞİŞE VE CAM FABRİKALARI A.Ş.	General	C	S	P	No	Intensity target
TAV HAVA LİMANLARI HOLDİNG A.Ş.	General	F	NS			
TEKFEN HOLDİNG A.Ş.	Chemicals	A	S	P	Yes	Absolute target
TOFAŞ TÜRK OTOMOBİL FABRİKASI A.Ş.	Transport OEMS	C	S	P	Yes	Absolute & intensity targets
TRAKYA CAM SANAYİ A.Ş.	General	C	SA			

RESPONSE STATUS

CLIMATE CHANGE / TURKEY 2020

CDP TURKEY CLIMATE CHANGE SAMPLE (BIST-100)		2020 SCORE	2020 RESPONSE STATUS	2020 PERMISSION STATUS	2020 DISCLOSED EMISSIONS (ACROSS ALL 3 SCOPES)	HAVE EMISSION REDUCTION TARGET
COMPANY - REQUESTED	PRIMARY QUESTIONNAIRE					
TUKAŞ GIDA SANAYİ VE TİCARET A.Ş.	Food, beverage & tobacco	F	NS			
TURKCELL İLETİŞİM HİZMETLERİ A.Ş.	General	B	S	P	Yes	Absolute target
TÜMOSAN MOTOR VE TRAKTÖR SANAYİ A.Ş.	General	F	NS			
TÜPRAŞ-TÜRKİYE PETROL RAFİNERİLERİ A.Ş.	Oil & gas	F	NS			
TÜRK HAVA YOLLARI A.O.	Transport services	F	NS			
TÜRK TELEKOMÜNİKASYON A.Ş.	General	B-	S	NP	Yes	
TÜRK TRAKTÖR VE ZİRAAT MAKİNELERİ A.Ş.	Capital goods	F	NS			
TÜRKİYE HALK BANKASI A.Ş.	Financial services	B	S	P	Yes	Intensity target
TÜRKİYE VAKIFLAR BANKASI T.A.O.	Financial services	B	S	P	Yes	Absolute & intensity targets
ÜLKER BİSKÜVİ SANAYİ A.Ş.	Food, beverage & tobacco	C	S	NP	Yes	Intensity target
VERUSA HOLDİNG A.Ş.	General	F	NS			
VESTEL ELEKTRONİK SANAYİ VE TİCARET A.Ş.	General	C	S	P	Yes	Absolute target
YAPI VE KREDİ BANKASI A.Ş.	Financial services	B	S	P	Yes	Absolute target
YATAŞ YATAK VE YORGAN SANAYİ VE TİCARET A.Ş.	General	F	NS			
ZORLU ENERJİ ELEKTRİK ÜRETİM A.Ş.	Electric utilities	B	S	P	Yes	Absolute & intensity targets
OTHER RESPONDING COMPANIES						
ABDİ İBRAHİM İLAÇ SANAYİ VE TİCARET A.Ş.	General	B-	S	NP	Yes	
AKÇANSA ÇİMENTO SANAYİ VE TİCARET A.Ş.	Cement	B-	S	P	Yes	Intensity target
AKENERJİ ELEKTRİK ÜRETİM A.Ş.	Electric utilities	B-	S	P	Yes	Intensity target
AYDEM YENİLENEBİLİR ENERJİ A.Ş.	Electric utilities	D	S	P	Yes	
BRİSA BRIDGESTONE SABANCI LASTİK SAN. VE TİC. A.Ş.	General	A-	S	P	Yes	Absolute & intensity targets
CARREFOURSA CARREFOUR SABANCI TİCARET MERKEZİ A.Ş.	General	D	S	NP	No	
ÇİMSA ÇİMENTO SANAYİ VE TİCARET A.Ş.	Cement	B-	S	P	Yes	Absolute & intensity targets
DURAN DOĞAN BASIM VE AMBALAJ A.Ş.	General	B-	S	NP	Yes	Absolute & intensity targets
EKOTEN TEKSTİL SANAYİ VE TİCARET A.Ş.	General	C	S	P	Yes	Absolute & intensity targets
ETİ SODA A.Ş.	Metals & mining	B	S	P	Yes	Absolute & intensity targets
GAZDAŞ GAZİANTEP DOĞAL DAĞITIM A.Ş.	General	C	S	P	Yes	
GENEL ENERGY PLC	Oil & gas	D	S	P	No	Absolute target
İHLAS EV ALETLERİ İMALAT SANAYİ VE TİCARET A.Ş.	General	D	S	NP	No	
KAYSERİ ULAŞIM A.Ş.	Transport services	B	S	P	Yes	Intensity target
OSMANGAZİ ELEKTRİK DAĞITIM A.Ş.	Electric utilities	D	S	P	Yes	
PINAR ENTEGRE ET VE UN SANAYİ A.Ş.	Food, beverage & tobacco	B-	S	NP	Yes	Intensity target
PINAR SÜT MAMULLERİ SANAYİ A.Ş.	Food, beverage & tobacco	D	S	NP	Yes	Intensity target
SUN TEKSTİL SANAYİ VE TİCARET A.Ş.	General	C	SA			
TÜRKİYE KALKINMA VE YATIRIM BANKASI A.Ş.	Financial services	A-	S	P	Yes	Absolute & intensity targets
VESTEL BEYAZ EŞYA SANAYİ VE TİCARET A.Ş.	General	C	S	P	Yes	Intensity target
YÜNİSA YÜNLÜ SANAYİ VE TİCARET A.Ş.	General	B-	S	P	Yes	Intensity target
ZORLU DOĞAL ELEKTRİK ÜRETİMİ A.Ş.	Electric utilities	B	SA			

Key to Response Status Tables

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RESPONSE STATUS

WATER SECURITY / TURKEY 2020

CDP TURKEY WATER SAMPLE (BIST-100)		2020 SCORE	2020 RESPONSE STATUS	2020 PERMISSION STATUS	DISCLOSED WATER WITHDRAWAL, DISCHARGE AND CONSUMPTION DATA	WATER CONSUMPTION STATUS COMPARED TO PREVIOUS YEAR
COMPANY - REQUESTED	PRIMARY QUESTIONNAIRE					
AFYON ÇİMENTO SANAYİ T.A.Ş.	Cement	B	SA	NP	Yes	
AKÇANSA ÇİMENTO SANAYİ VE TİCARET A.Ş.	Cement	B-	S	P	Yes	Higher
AKENERJİ ELEKTRİK ÜRETİM A.Ş.	Electric utilities	B-	S	P	Yes	Higher
AKSA AKRİLİK KİMYA SANAYİİ A.Ş.	Chemicals	A-	S	NP	Yes	About the same
AKSA ENERJİ ÜRETİM A.Ş.	Electric utilities	F	NS			
ANADOLU CAM SANAYİİ A.Ş.	General	F	NS			
ANADOLU EFES BİRACILIK VE MALT SANAYİİ A.Ş.	Food, beverage & tobacco	F	NS			
ARÇELİK A.Ş.	General	A-	S	P	Yes	Lower
ASELSAN ELEKTRONİK SANAYİ VE TİCARET A.Ş.	Capital goods	F	NS			
AYGAZ A.Ş.	General	F	NS			
BİM BİRLEŞİK MAĞAZALAR A.Ş.	General	F	NS			
BORUSAN MANNESMANN BORU SANAYİ VE TİCARET A.Ş.	Metals & mining	F	NS			
BRİSA BRIDGESTONE SABANCI LASTİK SAN. VE TİC. A.Ş.	General	A-	S	P	Yes	Much higher
CARREFOURSA CARREFOUR SABANCI TİCARET MERKEZİ A.Ş.	General	C	S	P	No	Lower
ÇİMSA ÇİMENTO SANAYİİ VE TİCARET A.Ş.	Cement	B	S	P	Yes	Much higher
COCA-COLA İÇECEK A.Ş.	Food, beverage & tobacco	B	S	P	Yes	Higher
DOĞAN ŞİRKETLER GRUBU HOLDİNG A.Ş.	Oil & gas	F	NS			
EİS ECZACIBAŞI İLAÇ, SINAI VE FİNANSAL YATIRIMLAR SANAYİ VE TİCARET A.Ş.	General	F	NS			
ENERJİSA ENERJİ A.Ş.	Electric utilities	N/A	S	P	No	
ENKA İNŞAAT VE SANAYİ A.Ş.	Electric utilities	B	S	P	Yes	
EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.	Steel	F	NS			
FORD OTOMOTİV SANAYİ A.Ş.	Transport OEMS	B	S	P	Yes	Lower
GÜBRE FABRİKALARI T.A.Ş.	Chemicals	F	NS			
İSKENDERUN DEMİR VE ÇELİK A.Ş.	Oil & gas	F	NS			
İPEK DOĞAL ENERJİ KAYNAKLARI ARAŞTIRMA VE ÜRETİM A.Ş.	Steel	F	NS			
KARDEMİR KARABÜK DEMİR ÇELİK SANAYİ VE TİCARET A.Ş.	Steel	F	NS			
KOÇ HOLDİNG A.Ş.	Oil & gas	F	NS			
KORDSA TEKNİK TEKSTİL A.Ş.	General	A-	S	P	Yes	About the same
KOZA ALTIN İŞLETMELERİ A.Ş.	Metals & mining	F	NS			
KOZA ANADOLU METAL MADENCİLİK İŞLETMELERİ A.Ş.	Metals & mining	F	NS			
MİGROS TİCARET A.Ş.	General	A-	S	P	Yes	
NET HOLDİNG A.Ş.	Financial services	F	NS			
OTOKAR OTOMOTİV VE SAVUNMA SANAYİ A.Ş.	Transport OEMS	F	NS			
PETKİM PETROKİMYA HOLDİNG A.Ş.	Chemicals	F	NS			
POLİSAN HOLDİNG A.Ş.	Chemicals	C	S	NP	Yes	Lower
SASA POLYESTER SANAYİ A.Ş.	Chemicals	F	NS			
SODA SANAYİ A.Ş.	Chemicals	F	NS			
ŞOK MARKETLER TİCARET A.Ş.	General	F	NS			
T.ŞİŞE VE CAM FABRİKALARI A.Ş.	General	F	NS			
TEKFEN HOLDİNG A.Ş.	Chemicals	A	S	P	Yes	Much higher
TOFAŞ TÜRK OTOMOBİL FABRİKASI A.Ş.	Transport OEMS	B	S	P	Yes	Lower

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COMPANY - REQUESTED	PRIMARY QUESTIONNAIRE					
TRAKYA CAM SANAYİİ A.Ş.	General	F	NS			
TÜMOSAN MOTOR VE TRAKTÖR SANAYİ A.Ş.	General	F	NS			
TÜPRAŞ-TÜRKİYE PETROL RAFİNERİLERİ A.Ş.	Oil & gas	F	NS			
TÜRK TRAKTÖR VE ZİRAAT MAKİNELERİ A.Ş.	Capital goods	F	NS			
TÜRK TUBORG BİRA VE MALT SANAYİİ A.Ş.	Food, beverage & tobacco	F	NS			
ÜLKER BİSKÜVİ SANAYİ A.Ş.	Food, beverage & tobacco	C	S	NP	Yes	About the same
VESTEL BEYAZ EŞYA SANAYİ VE TİCARET A.Ş.	General	B-	S	P	Yes	Higher
VESTEL ELEKTRONİK SANAYİ VE TİCARET A.Ş.	General	C	S	P	Yes	Lower
ZORLU ENERJİ ELEKTRİK ÜRETİM A.Ş.	Electric utilities	B	S	P	Yes	Much higher
OTHER RESPONDING COMPANIES						
ABDİ İBRAHİM İLAÇ SANAYİ VE TİCARET A.Ş.	General	B-	S	NP	Yes	Higher
ALBARAKA TÜRK KATILIM BANKASI A.Ş.	Financial services	B-	S	P	Yes	About the same
AYDEM YENİLENEBİLİR ENERJİ A.Ş.	Electric utilities	C	S	P	Yes	
DURAN DOĞAN BASIM AMBALAJ A.Ş.	General	B-	S	NP	No	
ETİ SODA A.Ş.	Metals & mining	A-	S	P	Yes	About the same
İHLAS EV ALETLERİ İMALAT SANAYİ VE TİCARET A.Ş.	General	C-	S	NP	No	
PINAR ENTEGRE ET VE UN SANAYİİ A.Ş.	Food, beverage & tobacco	B	S	NP	Yes	Lower
PINAR SÜT MAMULLERİ SANAYİİ A.Ş.	Food, beverage & tobacco	A-	S	NP	Yes	Higher
SABANCI HOLDİNG A.Ş.	General	B	S	P	Yes	Lower
ŞEKERBANK T.A.Ş.	Financial services	B	S	P	Yes	
T.GARANTİ BANKASI A.Ş.	Financial services	B	S	P	Yes	About the same
TÜRKİYE HALK BANKASI A.Ş.	Financial services	B	S	P	Yes	About the same
YAPI VE KREDİ BANKASI A.Ş.	Financial services	A-	S	P	Yes	Much higher
YÜNİSA YÜNLÜ SANAYİ VE TİCARET A.Ş.	General	B-	S	P	Yes	About the same
ZORLU DOĞAL ELEKTRİK ÜRETİMİ A.Ş.	Electric utilities	B	SA	NP	Yes	

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