

TCFD Reporting and Other ESG Related Risks and Opportunities Table

TCFD Recommendation	Arçelik's TCFD Response
<p>Governance: Disclose the organization's governance around climate-related issues and opportunities.</p> <p>a. Describe the board's oversight of climate-related risks and opportunities.</p> <p>b. Describe management's role in assessing and managing climate-related risks and opportunities.</p>	<p>a. Board Oversight of Climate Related Risks and Opportunities:</p> <p>The Board of Directors (BoD) is the highest governing body for the management of sustainability strategy including climate risks and opportunities is responsible for overseeing the implementation of Arçelik's Net Zero Strategy. One board member, who is also Arçelik's parent Company Koç Holding Consumer Durables President, has been appointed by the BoD as the responsible board member to inform the BoD on major achievements, risks and opportunities faced by Arçelik in implementation of the Net Zero Strategy. In 2022, three reports were prepared to the attention of the BoD, which were presented in the BoD meetings. The submission of the commitment to make our 2050 Net Zero commitment in line with Science Based Targets initiative's (SBTi) Net Zero Standard to the SBTi, investments on renewable energy, engagement with suppliers on emission reduction target plans, Scope 3 product emission tracking system implemented on more than 40 subsidiaries were part of items included in these reports.</p> <p>Arçelik's Net Zero 2050 Roadmap and the implementation action plan has been presented to the attention of BoD and the shareholders at the Annual General Shareholders Meeting held in 2022.</p> <p>The Risk Management Committee is the Board level committee responsible to monitor and review the climate related risks and opportunities and has responsibility to oversee the implementation of the mitigation action plans for both transition risks and physical risks. In 2022, the infrastructure to integrate the climate related risk issues to these meetings was implemented. The climate related risk items discussed in the Risk Management Committee meetings were:</p> <ul style="list-style-type: none"> · Potential financial implications of the implementation of the EU Carbon Border Adjustment mechanism based on several scenario analysis of the cost of the potential tax · Arçelik's Net Zero 2050 Commitment to the Science Based Targets initiative, the long-term investment needs, risks and opportunities on the way to implementation of the roadmap, including the cost of carbon on voluntary markets · Water scarcity risk as a result of physical risk analysis, and the investments, actions needed to reach a 70% water recycling ratio in production facilities globally · Regulations that would have direct financial impact on Arçelik operations such as the WEEE regulations as well as plastic packaging taxes <p>b. Management's Role in Assessing and Managing Climate Related Risks and Opportunities</p> <p>Sustainability Council: The Sustainability Council, chaired by the Chief Finance Officer (CFO) is the highest management level committee that governs the climate-related and other ESG risks and opportunities. It is the highest governing body to manage climate related issues in the executive management team. The executive members of the Sustainability Council include the Chief Executive Officer, Chief Production and Technology Officer, Chief Strategy&Digital Officer, Chief People Officer, Chief Purchasing and Supply Chain Officer, Quality, Sustainability and Corporate Affairs Executive Director, Finance&Enterprise Risk Executive Director, R&D Executive Director, and Legal & Compliance General Counsel .</p> <p>In order to ensure effective integration of the climate related risks and opportunities as well as other ESG risks, the issues discussed in the Sustainability Council for effective management of the climate and other ESG related risks and opportunities are reported to the Risk Management Committee at least twice a year.</p> <p>The Sustainability Council gathers quarterly during a year. The purpose of the Sustainability Council is to monitor the implementation of the Group Sustainability Strategy, with a specific focus on implementation of the Net Zero 2050 Roadmap. The below mentioned climate related issues have been discussed with necessary action plans during the meetings:</p> <ul style="list-style-type: none"> · Investment need and related action plans to increase the renewable energy capacity globally, · Long-term investment need related to the Science Based Targets Net Zero 2050 commitment, the potential implications of the price increases in the voluntary carbon markets, especially nature-based removals · Biodiversity and deforestation commitments and the necessary action plans needed · Information demand from trade partners in the retail channel on energy efficiency, recycled content, durability, reparability <p>Sustainability Working Groups: The Energy Working Group (WG), Green Chemistry WG, Environment WG, Operational Health and Safety WG, Sustainable Supply Chain WG, Climate Change WG and the Human Rights WG gather periodically throughout the year to determine the issues to be brought up at Sustainability Council Meetings.</p> <p>Highest Management Level Position with Responsibility: The Quality, Sustainability and Corporate Affairs Executive Director, reporting directly to the CEO, is the highest management level position with responsibility to adapt strategic action plans for climate change related mitigation and adaptation risks. The Quality, Sustainability and Corporate Affairs Executive Director has been mandated by the BoD with a Board Decision to report and inform the BoD of the company's overall Sustainability strategy.</p>

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	<p>Policy Influence: The role includes managing climate related policy making agenda with the external stakeholders such as NGO's, trade associations and other business partners, periodically reviewing and monitoring to make sure the alignment of such policy making activities to be in line with the Paris Agreement.</p> <p>Sustainability-linked Pay: GHG emission reduction targets as part of the Science Based Targets of Arçelik (decreasing energy consumption in factories, decreasing Scope 3 use phase energy consumption of the products) are included in the performance scorecards of the CEO, CFO, Chief Product&Technology Officer, Chief Purchasing&Supply Chain Officer, Product Management Executive Director as well as the Quality, Sustainability and the Corporate Affairs Executive Director and Factory Executive Directors.</p>
<p>Strategy Disclose the actual and potential impacts of climate related risks and opportunities on the organization's business, strategy and financial planning, where such information is material.</p> <p>a. Describe the climate related risks and opportunities the organization has identified over the short, medium and long term</p> <p>b. Describe the Impact of climate related risks and opportunities on the organization's businesses, strategy and financial planning</p> <p>c. Describe the resilience of the organization's strategy, taking into consideration different climate related scenarios, including a 2 degree or lower scenario.</p>	<p>a. Describe the climate related risks and opportunities the organization has identified over the short, medium and long term</p> <p>b. Describe the impact of climate related risks and opportunities on the organization's businesses, strategy and financial planning</p> <p>As a company operating in a vast geography, Arçelik is exposed to different climate change and ESG-related risk factors in the short, medium and long term. Since the effects of climate change and other ESG risks on our operations cannot be observed immediately, time intervals are defined as differently.</p> <p>The climate related risks and opportunities are broken down to transition risks and physical risks based on the TCFD requirements. The transition risks are further broken down into; policy, market, reputation and technology risks.</p> <p>Methodologies applied</p> <p>The potential impacts of the transition to a low-carbon economy on Arçelik operations were analyzed in terms of the policy, market, reputation, and technology risks. For policy risk and the related price of carbon, the S&P Trucost ESG methodology has been outsourced. The S&P Trucost ESG Methodology includes a Corporate Carbon Pricing Tool that analyzes carbon price risk premiums on High, Medium, Low carbon price scenarios based on the responsiveness level of each scenario to limit global warming to 2 degrees Celsius. The scenarios have been based on 2030 and 2050 projections.</p> <p>In the high carbon price scenario for 2030, Scope 3 emissions is the largest contributor to Arçelik's carbon pricing risk.</p> <p>The market, reputation, and technology risk analysis are based on the internal expertise of Arçelik, using IEA STEPS, Sustainable Development Scenario (SDS), and International Energy Agency (IEA) Net- Zero 2050 Scenarios.</p> <p>For physical risk, the S&P Trucost ESG methodology, WRI Aqueduct and Arçelik internal expertise have been used.</p> <p>Various parameters were developed for alternative scenarios to observe the possible effects of the physical and transition risks of climate change. By using alternative scenarios, Arçelik develops resilient strategic business plans and reduces the vulnerability of its operations.</p> <p>Related to climate change, Arçelik considers potential material impacts such as destructive natural events caused by rising temperatures, additional costs such as taxes on carbon and GHG emissions, and regulatory changes like EU's Carbon Border Adjustment Mechanism and shifting customer demand to more energy-efficient products. Arçelik evaluates the impact of all these potential risks on its operations in terms of both financial and non-financial results. These risks have decisive impacts on supply chain, product development, R&D, innovation, purchasing, production and sales, as well as on premises such as manufacturing plants and warehouses. Therefore, in critical decision-making processes such as setting strategic goals, allocating financial resources or making a new investment decision, the risks and possible impacts of climate change have been directly integrated into the process.</p> <p>While deciding on robust strategies over climate related risks & opportunities, Arçelik considers the IPCC's low (RCP2.6), moderate (RCP 4.5) and high (RCP 8.5) scenarios, which are mainly depending on the global warming levels by 2100, together to decide on the company's short, medium and long-term targets. According to the possible scenarios indicated by the IPCC, the increase in global mean surface temperature averaged over 2081-2100 compared to pre-industrial periods would be as follows:</p> <p>RCP 2.6- 1.6°C RCP 4.5- 2.4°C RCP 8.5- 4.3°C</p>

TCFD Recommendation	Arçelik's TCFD Response
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Transition Risks

Risk Type: Policy Risk

Term: Short-Medium & Medium-Long Term

Financial Impact: High

Likelihood: High

Risk

In order to keep the global warming trajectory to an optimistic scenario aligned with 1.5 degree, reducing adverse and irreversible impacts of global warming is in the main agenda of international and regional organizations, there are increasing trend to set rules and standards for companies operating in different sectors. Arçelik's possible risks are shaped around the new regulations especially set by the EU from the perspective of the EU Green Deal and the potential ETS mechanisms to be applied in Arçelik's production countries globally.

According to Arçelik's analysis, potential climate related policy risks of Arçelik are defined as:

- Increasing cost of carbon and potential introduction of ETS mechanisms in countries where Arçelik operates
- EU Green Deal potential carbon tax implications on Arçelik operations regarding cost increases in Arçelik's key production inputs such as steel and glass, potential impact on the company's exports from the non-EU countries to the EU (almost half of Arçelik's revenue),
- Cost up per product to innovate more energy efficient appliances to meet potential upcoming regulations in the global markets Arçelik operates, coupled with the mid-term 2030 Science Based Targets and the 2050 Net Zero Science Based Targets Commitment
- Rise in voluntary carbon prices especially the carbon removal credit prices
- Costs associated with reducing logistics emissions in the value chain
- Costs associated with helping suppliers transform to a low carbon economy and reduce raw material emissions for Arçelik production

Opportunity

Below mentioned actions taken create GHG, water and waste reduction opportunities for Arçelik, all the while increasing the capacity to get access to green financing, increase investor and strategic customer confidence. Arçelik also continuously seeks new business opportunities generated by the transition to net zero.

- [Approved 2030 Science Based Targets \(SBTi's\) for a well below 2°C scenario and pending targets for 1.5°C scenario.](#)
- Commitment to make its Net Zero 2050 target aligned with the [SBTi Net Zero Standard](#)
- Green bond and green loan used solely to finance green investments to keep up with the climate targets including energy and water efficiency in production, energy efficient appliance production, recycled material usage, waste management- [Arçelik Green Bond Allocation and Impact Report](#)
- Commitment to [EP100](#) to double energy productivity per revenue by 2030
- Ensure 100% green electricity purchase in global production facilities by 2030
- 50MW renewable energy investment by 2030
- EUR 50 Internal carbon price mechanism applied on investment of machinery and equipment exceeding €50,000 and 50 kW capacity
- Policy influence actions taken with distinguished NGO's and trade associations to align the policy setters' actions with 1.5 degree goal of the Paris Agreement

Risk Type: Market and Technology Risk

Term: Medium-Long Term

Financial Impact: High

Likelihood: High

Risk

- Shift in demand expected to **more energy-efficient appliances** as part of efforts to keep the global warming in line with 1.5°C scenario (IEA STEPS, SDS, Net Zero 2050)
- Increasing number of companies committing to net zero targets and further improvement of innovative business models and emergence of new technologies on the way to net zero
- **40% of energy consumption is related to household appliances in homes.** Demand for electricity is expected to grow especially in emerging economies as middle class increases. Demand for major domestic appliances such as dishwashers, washing machines, air conditioners and refrigerators is expected to increase significantly in the emerging markets as the purchasing power increases and as the world keeps getting warmer in the APAC region. Especially demand for air conditioners and refrigerators will increase in a fast manner.

TCFD Recommendation **Arçelik's TCFD Response**

- Arçelik intends to grow in the APAC region. The countries in these regions are not heavily regulated as in the EU. EU has stringent Energy Labelling requirements. In contrast, in the emerging markets, majority of countries lack even minimum energy labelling requirements. The unregulated market in terms of energy efficiency creates challenges for a company like Arçelik who has global Science Based Targets in place to reduce the energy consumption of the appliances it produces globally.
- **GHG emissions related to the product use phase of appliances sold by Arçelik constitutes nearly 80% of Scope 3 emissions in Arçelik's value chain.**
- In line with Arçelik's Net Zero commitment to the Science Based Targets initiative, the company **aims to follow a strategy to provide energy efficient appliances ahead of legislation in the developing countries where Arçelik operates such as South Africa, Pakistan, India and Bangladesh.**
- Since Arçelik has a significant growth potential in Southeast Asia and other emerging markets, investment in PU installation technologies with significantly smaller GWP; investments in heat pump technologies and transition from HFCs will play a crucial part for producing energy-efficient products that exceed regulations in the market.
- Arçelik will have to incur increasing cost per product and investment expenditures to provide energy efficient appliances in the emerging markets despite the lack of energy efficiency regulations in these markets. It might not be able to reflect increasing costs to its customers and this might even impact the profitability of the company going forward.

Opportunity

- Creating demand to innovate for energy efficient appliances and new features to both boost sales and increase the green revenue in the emerging markets in a resource efficient manner is a major opportunity. Entering new business opportunities created by the transition to net zero in terms of energy tracking connected IoT devices and heat pump technologies to heat homes are also major opportunities.
- Previous experience in South African market to provide energy efficient appliances in a non-regulated market, which can be copied in other emerging markets:
 - o Following the acquisition of DEFY in 2011, Arçelik invested heavily in R&D and innovation to increase energy efficient appliances put on the market despite lack of regulations and the costs. Arçelik enabled the faster introduction of energy efficiency requirements in the market, and increased the average energy efficiency levels of the products from E class to A in 5 years. Now, the company has upgraded Arçelik's refrigerator product range to A+. The gap between what the company offers at minimum and the legal limit speaks of more than a 40% energy saving.
 - Dawlance, the market leader in Pakistan was acquired four years ago. 70% of the population either have no access to power grid or suffer daily power cuts. In Pakistan, there is no current regulatory mandate for energy efficiency standards and labeling of home appliances. Many fridges are still made containing fluorinated refrigerant gases (HFCs).
 - After Dawlance acquisition by Arçelik, the company started introducing high-quality, energy-efficient and affordable products that meet the highest environmental standards.
 - Arçelik considers the low penetration rates and the lack of regulations in certain markets as an opportunity to educate customers on the importance of energy efficient appliances. Arçelik is aware of the opportunity that it can lead such markets with energy efficient products.
 - Increasing investments to innovate for energy efficient appliances via green financing also provides an opportunity to finance these investments in a cost-effective manner.
 - Arçelik sets sustainability awareness targets for its brand managers to increase the sustainability awareness of its major global brands Arçelik, Beko and Grundig. The GHG emission reduction targets aligned with the targets to keep with the Science Based Targets commitments are also included in the performance score cards of the C level, D level and manager level employees.
 - Arçelik has introduced the [SaveWater](#) range in the IFA Trade Fair in 2022 (tumble dryer and dishwasher combined) which provides water savings of 7,8 liters of water each water cycle.
 - As examples of leading energy efficient products introduced in the market in 2022;
 - o Arçelik has introduced the A-10% 60 cm platform dishwasher that consumes 10% less energy than the best A energy class in the market in the EU and Turkey markets.
 - o The patented Green and Clean technologies introduced with the Arçelik branded dishwashers in Turkey market provides 25% more energy savings in each wash compared to conventional models.
 - o The 9 kg 1400 rpm A-30% washing machine introduced in the EU markets is also a very distinguished energy efficient model, 30% more efficient than the best A energy class in the market.
 - Increasing number of IoT products which will be able to track energy efficiency levels of home appliances and direct end users into choosing less energy and water consuming programs will enable the company to enter into extended business opportunities with other distinguished business partners.

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	<ul style="list-style-type: none"> · Entry into residential heat pump business will also provide new opportunities for Arçelik. · Arçelik's major retail customers also have Science Based Targets focused on reducing the impact of appliances sold by their channel. Therefore, Arçelik's Science Based Targets and offerings on energy and water efficient appliances coupled with Arçelik's leadership in sustainability indices makes Arçelik a trusted partner for strategic retail customers. <p>Risk Type: Reputation and Market Risk, Failure to Transition to a Low Carbon Economy</p> <p>Term: Short-term</p> <p>Financial Impact: Low</p> <p>Likelihood: Low</p> <p>Risk</p> <ul style="list-style-type: none"> · Increasing demand from investors and international/national sustainability indices for companies to commit to international credible initiatives like the Science-based Targets Initiative, implement further TCFD requirements, comply with newly introduced regulations such as the IFRS-ISSB or EU CSRD. · Increasing demand from strategic retail partners of Arçelik to provide them with data on Arçelik's energy and resource efficient products. Retail channels started differentiating products with high energy efficiency and recycled content or water efficiency used in the products in their websites in sales offerings to the end users. Each retail channel has their own product grading system. Under lack of unified and internationally accepted grading criteria, this poses a competition threat to manufacturers because the system now is dependent on declarations from manufacturers. · Arçelik reports to international indices such as Dow Jones Sustainability Indices, CDP, Corporate Knights, FTSE, MSCI and has Science Based Targets for 2030 and 2050. The company has the ambition to differentiate itself from the competition by getting best results from indices and also by keeping up with its commitments to the Science Based Targets initiative. · The company is publicly traded with more than 30% of the shares held by international investors. Therefore, any failure from Arçelik's end to meet the company's ambitious targets for SBTi or placing in significant sustainability indices cause critical reputational damage. <p>Opportunity</p> <ul style="list-style-type: none"> · Arçelik is one of the pioneers among the company's industry and also among other sectors globally in terms of putting sustainability at the center of doing business. · Board-level support to transform not only the company but also Arçelik's value chain. · Arçelik's pathway for 2050 net-zero target clearly shows the company's great effort upon investor demands and the requirements defined by the indices and frameworks. · Arçelik has approved Science Based Targets and committed to the Science Based Targets Net Zero Standard to set a science-based net zero target. Arçelik also joined to the Business Ambition for 1.5 degree Celsius and the Race to Zero in 2021. · Arçelik received the highest score from the Dow Jones Sustainability Index for four (2019, 2020, 2021, 2022) consecutive years in the company's industry. · The company also places in the Corporate Knights Top 100 Most Sustainable Companies list as 89th for third consecutive year. · Arçelik is the 16th company on The Real Leaders Top 300 Impact Companies of 2023. · The company has low risk ranking from ESG perspective by 12.8 by Sustainalytics. · Arçelik actively reports to the CDP Climate Change and Water Security programs and has A-/A score for both of the reports. · Finally, Arçelik is one of the 45 global companies awarded the Terra Carta Seal and the first and only company from the company's industry and Turkey. <p>Physical Risks</p> <p>Risk Type: Continuity of Operations</p> <p>Term: Medium-Long Term</p> <p>Financial Impact: Low</p> <p>Likelihood: High</p> <p>Risk</p> <p>In a world where the RCP 4.5 moderate or RCP 8.5 scenarios become reality, the adaptation costs to put up with the continuity of operations will be significantly higher compared to the Low Climate RCP 2.6 scenario. In that case, the extreme weather events will have significant impacts on supply chains, on production and on purchasing power of customers.</p>

TCFD Recommendation **Arçelik's TCFD Response****Methodology**

For physical risk scenario analysis, the S&P Trucost ESG methodology, WRI Aqueduct and Arçelik internal expertise have been combined to develop a methodology. The combined methodology leverages physical risks of Arçelik at the asset level, as well as its suppliers, taking into consideration climate hazard indicators such as water stress, flood, heatwaves, cold waves, hurricane, sea level rise, etc. and their impact on Arçelik's operations. The High Climate Scenario (RCP 8.5), the Moderate Climate Scenario (RCP 4.5) and the Low Climate Scenario (RCP 2.6) were taken into consideration with a forecast for the 2030 and 2050 fiscal years from a 2020 baseline.

- According to the Trucost Physical Risk assessment, Arçelik's overall physical risk score is moderate, main risk item being water stress.
- India, Romania, Turkey (Ankara and Çayyirova) sites are prone to high water stress risk.
- Based on Trucost analysis, Arçelik's suppliers' main physical risks are related to water stress as well. Therefore, Arçelik has to consider water stress risks in water stress countries of Arçelik and the company's suppliers' operations and potential disruption in supply chains of critical materials in countries prone to high heatwave/cold wave/flood risks. Due to these risks, Arçelik might potentially incur reduced revenue and market loss from decreased production capacity, logistics problems, and supply chain interruptions. There might also be a potential CAPEX need in case of damage to production facilities or at a supplier/customer site.
- Since physical risks are expected to result in significant economic losses and social consequences, the purchasing power of customers especially in the APAC and Africa regions more prone to physical risks from climate catastrophe might decline and thus this potentially will have a negative impact on Arçelik sales.

Opportunity

- Arçelik's production facilities are based in more than one location to manage business interruption risks better.
- While deciding on a new acquisition, extreme weather event risks and land resilience is factored into the due diligence process.
- The company also takes necessary precautions to diversify Arçelik's supply chain.
- Arçelik is also cooperating with suppliers to collect GHG emissions, water, waste and energy data from suppliers. Arçelik informs suppliers about the mitigation costs to be incurred today vs the adaptation risks to be incurred in the future if the planet cannot be on track with a 1.5 degree warming scenario.
- As a physical risk mitigation measure, Arçelik has set targets based on Trucost Approach risk assessment result to increase the water recycling ratio* to 70% in all production plants by 2030 aiming to achieve closed loop water system in production.
- The Insurance Management Team under the Enterprise Risk Directorate calculates financial and non-financial risks related with the extreme weather events where Arçelik production facilities are located in correlation with all related bodies within the company.
- The company has several lines of insurance policies globally including Third Party and Pollution policies, all risk Property Damage and Business Interruption policies for the physical and non-physical risks in place to mitigate the adverse consequences as much as possible. Finally, based on modeling studies, in case of any events that are related with business interruption due to physical risks, compensation methodologies are already defined accordingly.

*Water recycling ratio = Total recycled water/Total water withdrawal.)

*Arçelik became a CEO Water Mandate signatory at the beginning of 2022 and commits to make continuous improvements based on the six commitment areas set forth by the CEO Water Mandate, which are: 1) Direct Operations 2) Supply Chain & Watershed Management 3) Collective Action 4) Public Policy 5) Community Engagement 6) Transparency

c. Describe the resilience of the organization's strategy, taking into consideration different climate related scenarios, including a 2 degree or lower scenario.

Transition Risk

Climate-related scenario: Transition scenarios - IEA STEPS

Scenario analysis coverage: Company-wide

- A qualitative and quantitative approach considering reporting year, 2030&2050 years.
- A combination of IPCC's RCP 8.5, 4.5 and SSP potential pathways are analyzed in line with IEA STEPS Scenario.
- This is a mid-scenario between business as usual with no or minimal change in emissions reductions, delayed regulations would not meet Paris Agreement promises to limit global warming in line with a 1.5°C.
- Temperatures would rise somewhere between 1.6°C-3.2°C-5.4°C, increasing physical risks faced by Arçelik, thus the business disruption adaptation costs.

TCFD Recommendation	Arçelik's TCFD Response
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· Facts:

- o We have global 2030 Science Based Targets and committed to set a Net Zero 2050 SBT.
- o More than 80% of the GHG emissions of Arçelik comes from the use phase of sold products. Production and sales of energy efficient yet affordable appliances are the key to drive revenue growth.

· Parameters:

- o Increased global warming leading to decreased GDP, slowdown in the economy from increased extreme weather events, increasing pandemics disrupting business, inflation hikes and increased material costs coupled with decreased consumer spending.
- o Rise of middle-income consumers in the APAC and Africa region and increased demand for AC's and refrigerators in a continuously warming climate. Customers would demand more energy efficient appliances, but it is not clear if they pay extra for such appliances. Access to electricity globally would be slower compared to SDS/NZE Scenarios.

· Assumptions:

- o Cost of carbon not to increase as rapidly as in SDS/NZE Scenarios, EU ETS like mechanisms and CBAM to be delayed.
- o Voluntary carbon markets to be still significant but at a lower cost.
- o Arçelik to incur increased costs due to increase in physical risks-disruption at the supplier level and company level.
- o Delay in minimum energy efficiency regulations in developing regions where we intend to grow. Increasing costs to design and produce energy efficient appliances despite consumer intention to pay extra.

· Risks&Opportunities:

- o We could potentially not be able to reflect increasing costs to consumers, leading to profitability risk. However, we have extensive R&D experience to produce energy efficient appliances, can innovate cost efficient production systems and increase its energy efficient product sales.
- o Extreme weather events could increase risk of other pandemics and supply chain disruptions, causing further inflation hikes and increase production costs. However, our value chain exposure to acute/chronic risks are medium level and resilience plans are put in place.

Climate-related scenario: *Transition scenarios - IEA SDS*

Scenario analysis coverage: Company-wide

A qualitative and quantitative approach considering reporting year, 2030&2050 years. Scenario in line with RCP 2.6, keeping global warming in line with a well below 2°C goal.

Energy related SDG's are assumed to be met and current net zero pledges are achieved.

Arçelik's policy related risks as well as market, new technology risks are increased and climate adaptation risks are minimized.

· Facts:

- o We have global 2030 Science Based Targets and committed to set a Net Zero 2050 SBT.
- o More than 80% of the GHG emissions of Arçelik comes from the use phase of sold products.
- o Production and sales of energy efficient yet affordable appliances is the key to drive revenue growth.

· Parameters:

- o Global economic losses due to global warming less impacted compared to a STEPS scenario, limited to c. 0,5% of global GDP.
- o Inflation hikes expected to continue in the near future, increasing raw material costs.
- o Rise of middle-income consumers in the APAC and Africa region, and increased access to electricity in least developed regions increasing demand for energy efficient appliances.
- o 50% of population increase coming from Africa around 2050, a major market for Arçelik growth.

· Assumptions:

- o Increased carbon price, rapid introduction of ETS and minimum energy performance standards no later than 2025 in developing regions.
- o Introduction of CBAM no later than 2025, leading to increased steel costs. Increased demand for carbon removal credits pushing voluntary removal credit prices more than EUR 80/ton as of 2030.
- o Increased CAPEX need of Arçelik as of 2025 to invest in renewable energy and energy efficient appliances.

TCFD Recommendation **Arçelik's TCFD Response**

Risks:

- Increasing production costs to produce energy efficient appliances globally on Best Available Technology.
- Increases in carbon taxes and cost of steel increasing production costs, impacting profitability.
- Increased reputation risks faced by Arçelik if SBTi targets cannot be met coupled with demand from investors and particularly B2B customers.
- Increased demand from B2B customers on low carbon products, especially recycled plastics, low carbon steel and energy efficient appliances.
- Increased risk of rising price of blue carbon credits needed for Net Zero targets.

Opportunities:

- Strong innovative in-house R&D skills to produce most energy efficient products and answer market demand and grow in developing regions.
- Robust and publicly available decarbonization strategy, more than EUR 500 million green investment to meet SBTi targets. In-house nature based- technology based direct air capture removal know how.

Climate-related scenario: *Customized publicly available transition scenario*

Scenario analysis coverage: Company-wide

Temperature alignment of scenario: 1.5°C

Arçelik has outsourced S&P to conduct climate-related transition risk analysis in terms of policy risk for its own activities as well as its selected suppliers to understand to potential impact of transition to low-carbon economy based on different scenarios and timelines.

A qualitative and quantitative approach considering three time periods (2020 baseline, 2030 and 2050) has been applied.

S&P Trucost Carbon Pricing Risk Assessment has been applied to measure the impact of rising carbon prices on Arçelik financial performance.

The below mentioned components have been considered to calculate the risks related to Arçelik and its value chain:

- Carbon Price Database of current carbon taxes, emissions trading schemes and fuel taxes in over 100 geographies.
- Carbon Price Scenarios, High (below 2°C aligned), Medium (below 2°C aligned delayed action), Low (based on current policy commitments, 2-3°C aligned) carbon price scenarios.
- Projections of Arçelik revenue, OPEX and GHG emissions for future years based on assumptions concerning future growth.
- Modelling the pass-through of rising carbon prices to a company from its suppliers.

Risks:

- Rise in green electricity prices and availability of green electricity in countries where Arçelik operates
- Potential implications of EU CBAM, EU Green Deal implications on Arçelik operations regarding cost increases in Arçelik's key production inputs such as steel and glass, potential impact on the company's exports from the non-EU countries to the EU
- Cost up per product to innovate more energy efficient appliances to meet 2030 Science Based Targets
- Possible introduction of an ETS mechanism in countries in which Arçelik operates
- Costs associated with reducing logistics emissions in the value chain and costs associated with helping suppliers transform to a low carbon economy
- Rise in voluntary carbon removal credit prices

Opportunities:

- Arçelik has global 2030 Science Based Targets and committed to set a SBTi Net Zero 2050. Arçelik's net-zero roadmap is publicly available on its website.
- At the supplier level, Arçelik has collected a signed commitment letter from more than 180 of its core 400 suppliers making up more than 90% of purchasing volume to have set GHG reduction targets.

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	<p>Physical Risk</p> <p>Climate-related scenario: <i>Customized Publicly Available Physical Scenario</i></p> <p>Scenario analysis coverage: Company-wide</p> <p>Arçelik has outsourced S&P to conduct a physical risk analysis for its own operations as well as of its selected suppliers to understand the damage to assets, interruption of operations and disruption to supply chains based on different climate warming scenarios and timelines.</p> <p>S&P Trucost Climate Change Physical Risk Analytics has been applied to measure Arçelik's physical risks in terms of adaptation scenarios.</p> <p>An asset level approach has been adopted at the company and portfolio level based on three time periods (2020 baseline, 2030 and 2050) and three climate scenarios (RCP 2.6, 4.5 and 8.5 to model the magnitude and the potential impact of both acute and chronic physical risks on company financials and operations.</p> <p>Private Trucost owned datasets as well as other datasets including but not limited to WRI Aqueduct, CMIP5 multimodel-average, NOAA and Climate Central have been used. Seven key climate change physical hazards have been considered: flood, water stress, heatwave, cold wave, hurricanes, sea level rise and wildfires.</p> <p>The below mentioned factors have been considered to calculate the risks related to Arçelik and its value chain:</p> <ul style="list-style-type: none"> · Excess Heat Factor (EHF) and Excess Cold Factor (ECF) Index to measure heatwave occurrence and intensity · Baseline Water Stress Index to measure total water withdrawals to the available water sources · Burnt Area in terms of wildfires, Riverine Flood Risk in terms of floods · Coastal Inundation in terms of sea level rise · Hurrican Index to measure the frequency and intensity of hurricanes. <p>5 analytical approaches have been considered:</p> <p>Climate Hazard Mapping, Physical Asset Geolocation and Corporate Ownership Mapping, Asset and Company Level Physical Risk Scoring, Revenue Exposure Based on Physical Risk Estimation and Composite Score Calculation.</p> <ul style="list-style-type: none"> · Based on the outcomes of the S&P Trucost Climate Change Physical Risk Analysis, Arçelik and its suppliers are exposed to a moderate level of physical risk with greatest exposure to water stress, heat wave and cold wave. · As water stress is the biggest risk factor, Arçelik has a target to increase water recycling ratio to 70% in global operations as of 2030. At the supplier level, Arçelik has collected a signed commitment letter from more than 180 of its core 400 suppliers making up more than 90% of purchasing volume to have set publicly available water reduction/recycling targets no later than the end of 2023 in their sustainability reports/websites.

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<p>Risk Management</p> <p>Disclose how the organization identifies, assesses, and manages climate-related risks</p> <p>a. Describe the organization's process for identifying and assessing climate related risks</p> <p>b. Describe the organizations process for managing climate related risks</p> <p>c. Describe how the process for identifying, assessing and managing climate related risks are integrated into the organization's overall risk management.</p>	<p>a. Describe the organization's process for identifying and assessing climate related risks</p> <p>The Enterprise Risk Management and Finance Directorate and the dedicated sustainability teams consisting of Sustainability, Environment, Energy, International Regulations and Sectoral Relations HQ teams as well as the related teams working in each factory work cooperatively to evaluate, measure and prioritize the climate-related risks and opportunities. Their main aim is designed to turn nonfinancial risk items into financial metrics. Various reports are prepared by taking physical and transition risks stemming from the climate change into account.</p> <p>In consideration of the identification of such risks, the HQ teams and the factory teams work on location wise hazard maps and scenario analysis for climate related physical risks. As such, the water scarcity, floods, extreme weather likelihood and impact scenarios are considered for each location. Water scarcity risks turn out to be the most predominant risk that would affect operations both for company operations and operations at the supply chain.</p> <p>For transition related policy risks, Arçelik HQ teams work on consolidated GHG emissions data of the Company together with respective future forecasts based on production, and work on scenario analysis on how the cost of carbon would change over time based on potential Emission Trading Scheme (ETS) scenarios and Carbon Border Adjustment Mechanism (CBAM) scenarios. The potential rise in the cost of carbon in voluntary markets and the Project offerings in the market for nature-based and technological carbon removal credits is also closely monitored and the related financial risks are computed.</p> <p>Arçelik also receives third-party consultancy from insurance companies as well as consultancy companies such as S&P Trucost to determine the level of financial risk related to climate related transition and physical risks based on different scenario analysis.</p> <p>Climate-related risks take the form of financial risks under both transition and physical risks and thus these risks are viewed as an integrated part of overall Risk Framework. Climate-related transition and physical risks are assessed as part of a qualitative and quantitative risk reporting based on how they would impact the balance sheet and cash flow of the Company. Arçelik has worked with S&P Trucost to determine the scenario analysis based potential future impacts of climate related risks on Company financials. Arçelik's major transition and physical risks due to climate change are explained in detail in the Strategy section together with mitigation plans. A brief summary of key climate-related transition and physical risks are indicated below:</p> <p>Transition Risks:</p> <p>Policy & Legal: Increase in the cost of carbon, potential introduction of EU Carbon Border Adjustment Mechanism carbon taxes, potential introduction of ETS mechanisms in countries where Arçelik operates, cost of green electricity, electricity consumption, incentives provided to energy efficiency projects, green investment needs, WEEE regulations, plastic taxes.</p> <p>Technology & Market: Demand to keep up with more energy efficient appliances and cost of producing such appliances, keeping up with the introduction of new business models, net zero home concept, energy tracking appliances, risks associated with connected appliances.</p> <p>Reputation: Risk of falling behind publicly declared Science Based Targets, energy and water efficiency targets, renewable energy targets.</p> <p>Physical Risks: Risk of location wise analysis of potential disruption in company operations due to physical risks in different warming scenarios. Predominantly water scarcity risks, flood, extreme heatwave risks are taken into consideration.</p>

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	<p>b. Describe the organizations process for managing climate related risks</p> <p>The Enterprise Risk Management is responsible to follow best practises such as the ISO 31000 Risk Management Standard and the COSO Enterprise Risk Management Integrated Framework. Once climate related risk items are qualitatively and quantitatively evaluated, action plans and related investment needs are carefully laid out by each team involved in the process. Such risks are first discussed at the Sustainability Council to inform the C-level and D-level about the implications of such risks and the decisions made at the Sustainability Council, together with the short term and long-term implications of the climate related risks are reported to the Risk Management Committee with the help of the Enterprise Risk Management Team.</p> <p>In order to manage and mitigate the risks, action plans are taken into consideration. The company takes proactive measures in the process of managing such risks. For instance, the Green Financing Framework and the green bond and green loan operations already in place allow Arçelik to create the financing needed to be solely allocated to financial investments for green investments.</p> <p>The internal carbon pricing tools used in the purchasing of machinery and equipment pave the way for the company to invest on lower emission generating production machinery.</p> <p>The publicly available global water recycling target at the production facilities enable efficient use of scarce water resources. The company also applies an internal water price on water efficiency projects.</p> <p>Arçelik proactively sets public targets to put itself and its suppliers into accountability to provide transparency on climate-related risks in the supply chain as part of the risk mitigation process. Arçelik has a publicly declared target in place to enable its suppliers to set publicly available GHG emission reduction, water and energy reduction, waste recycling targets as of the end of 2023 as cautionary measures to mitigate the risks in the supply chain.</p> <p>The climate targets to mitigate related transition and physical risks are also included in C and D level executive managers as well as line managers and employees annual score cards. The targets include GHG emission reduction, energy consumption and water withdrawal reduction, waste reduction, water recycling, increasing % of energy efficient appliance sales.</p> <p>c. Describe how the process for identifying, assessing, and managing climate related risks are integrated into the organization's overall risk management.</p> <p>The Board of Directors plays a central role in risk management processes. Risk Management Committee is the highest governing body overseeing the risks and implementation plans of the Group in a holistic manner. The Risk Management Committee advises the Board of Directors for early detection and evaluation of risks that may affect the Company, calculating their effects and possibilities, managing and reporting these risks in accordance with the Company's enterprise risk appetite, taking necessary measures to reduce the effects and possibilities of the identified risks, and, in this direction, the establishment of effective internal control systems.</p> <p>Enterprise Risk Management and Finance Directorate, operating within the structure of the Finance and Financial Affairs Deputy Directorate General, manages, coordinates, and oversees financial, strategic, operational, compliance, and external risks that may affect the Company through the risk management system it has established and reports to the Risk Management Committee. While the Finance and Enterprise Risk Management Directorate reports to the Risk Management Committee, the Internal Audit Management conveys information to the Audit Committee, and both units are functionally independent of each other.</p> <p>Risk Management Committee, Audit Committee, Ethics Committee are overall functions responsible from Board oversight of Company risks in an integrated manner.</p> <p>Arçelik Enterprise Risk Management Process is an integrated one, involving support from several functions. ISO 31000 Risk Management Standard and the COSO Enterprise Risk Management Integrated Framework are taken into considering during identification, review and risk mitigation processes. The predominant risks taken into consideration in the Risk Framework are including but not limited to the risks such as supply chain risks such as fluctuation in raw material prices, raw material shortages; liquidity risk, receivables risk, credit risk, interest rate, FX rate, regulatory risks, tax increases, product safety risks, cyber security risks, and climate related transition and physical risks.</p> <p>In this regard, the qualitative and quantitative findings related to climate related risks and the action plans are reported to the Risk Management Committee at least twice a year.</p>

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Metrics	<p>Please note: The following disclosures made in terms of metrics are related to metrics reported in 2021 Sustainability Report. 2022 Sustainability Report will be published in June under the link: https://www.arcelikglobal.com/en/sustainability/sustainability-reports/</p> <p>a. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process</p> <p>Please refer to pages 33, 42-74 and 141-144 of Arçelik 2021 Sustainability Report in which further information is provided on the below:</p> <ul style="list-style-type: none"> · Sector Leadership 33 · In Touch with Our Planet 42 · Combating Climate Crisis & Managing GHG Emissions 43-45 · Renewable Energy 46 · Energy Efficiency 47-49 · Water Management 51-52 · Water Risks Management 53-54 · Sustainable Supply Chain Management 141-144 <p>b. Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 GHG emissions, and the related risks</p> <p>Please refer to the following pages on Arçelik 2021 Sustainability Report for further information on: Scope 1, Scope 2, Scope 3: pages 45, 158-160 Water Metrics: 161</p> <p>c. Describe the targets used by the organization to manage climate related risks and opportunities and performance against targets.</p> <p>For Arçelik's 2030 targets and 2050 Net Zero commitment, please visit the following links below: 2030 Targets: https://www.arcelikglobal.com/media/6938/arcelik21_sustainability_report.pdf (pages 19-21) 2050 Net Zero Roadmap: https://www.arcelikglobal.com/en/sustainability/in-touch-with-our-planet/combating-the-climate-crisis/</p>