KORDSA TEKNİK TEKSTİL A.Ş. - Climate Change 2019

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Established in 1973 as a subsidiary of Sabancı Holding, Kordsa is a global player in the tire and construction reinforcement as well as composite technologies markets and the leading manufacturer of industrial nylon and polyester yarn, tire cord fabric and single end cord. The success story started in İzmit-Turkey in 1973 with Sabancı Holding's tire cord manufacturing plant investment. Through the years, Kordsa became the market leader in Turkey and accumulated a great know-how on reinforcement materials. Kordsa now operates in 5 countries, namely, Turkey, Brazil, Indonesia, Thailand and the US with 4,500 reinforcers at its 8 production facilities. Owing to the market leadership and strong knowledge base on reinforcement processes, the company became the global market leader empowered by its strategic approach to tire reinforcement market.

Kordsa provides high quality service and end to end solutions with a high level of technical competency. The main objective of the company is to "progress with innovative value added technologies" by continuously investing in its customers, its shareholders and its employees. Worldwide the company is the acclaimed holder of "The Reinforcer" title, thanks to its market leader position, its strong global footprint, its technological leadership and its experience on reinforcement.

"Today, Kordsa, whose story started in Turkey, spread on the whole world with its products. Every one in three automobile tires and every two in three aircraft tires are globally reinforced by Kordsa."

Kordsa aims to create sustainable value by offering high value-added innovative reinforcement solutions for its customers, employees, stakeholders and communities with a mission to “Reinforce Life.”

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Row 1	January 1 2018	December 31 2018	No	<Not Applicable>

C0.3

(C0.3) Select the countries/regions for which you will be supplying data.

Brazil
Indonesia
Thailand
Turkey
United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Operational control

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Chief Executive Officer (CEO)	CEO has the ultimate overall responsibility at all terms including climate change-related issues, primarily energy and water management performance as well as the management of climate-related risks and opportunities, are among the responsibilities of Kordsa's CEO.
Board-level committee	There is an Executive Committee named as the Executive Lead Team (ELT) in charge of making decisions on how to take action on climate-related issues. ELT consists of each Kordsa site's Chief Operation Officers (COO). Business Process Review (BPR) meetings are held monthly where all corporate targets and performance is discussed under the chairman of the CEO and the outcomes of these BPR meetings are reported to the ELT who reviews and makes decisions on these matters quarterly. Global Safety, Health and Environment (SHE) and Sustainability Manager also reports directly to the ELT on sustainability performance – sustainability roadmap progress-, including GHG emissions and water consumption, periodically.
Chief Operating Officer (COO)	Chief Operating Officer is the main operational responsible for the sustainability performance at plants which include but are not limited to energy and water management as well as GHG emissions performance of each Kordsa site.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	The Kordsa Executive Committee (Executive Lead Team, ELT) who quarterly discusses and approves action plans based on reported monthly Business Process Review outcomes chaired by the CEO with participation of the Global COO as well as COO's (Site Present Director) of each Kordsa site. This quarterly ELT reviews not only include Kordsa's progress against set targets (including climate-related energy consumption targets) but also the risk assessment process outcomes (climate-related issues being covered under various risk types such as production and legal risks). One of the main outcomes of the ELT decisions made in the reporting period was the approval of placing more energy and water meters on each Kordsa site globally to have access to monitor and set better as well as more reliable energy and water reduction targets. As Kordsa has only started reporting its Global performance from each location in 2017, having access to adequate breakdown of energy data was presented as one of the main problems identified by the Global SHE & Sustainability Manager who is a member of the Sustainability Committee and the sole responsible of Kordsa Sustainability Roadmap (medium term commitments) initiation.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Operating Officer (COO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Sustainability committee	Both assessing and managing climate-related risks and opportunities	Quarterly
Safety, Health, Environment and Quality committee	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Energy manager	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Environmental, Health, and Safety manager	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Environment/ Sustainability manager	Both assessing and managing climate-related risks and opportunities	Quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

Under the Board of Directors (BoD), the Executive Lead Team (ELT) has the responsibility of assessing and monitoring of climate related issues. ELT consists of the Site Present Directors (COOs of every country) from every site. ELT meets quarterly.

The CEO as well as the COO's of each Kordsa site are the members of the ELT. ELT reviews the outcomes of the monthly Business Process Review (BPR) conducted with the participation of each Kordsa site's Directors covering all business functions. Business objectives, targets and performance against these targets are reviewed as part of BPR meetings at which current status of each Kordsa site is discussed. These review includes strategic and emerging aspect covering topics like safety, health and environment, sustainability roadmap progress, production, supply chain, human resources, sales etc.

Under the ELT, there is Sustainability Task Force (Sustainability Committee, STF) to assess and manage climate-related topics and the STF consists of Global Project Leader, Global SHE Manager, Brand & Corporate Communication Manager, Legal Manager, Global Finance Manager, Global Quality Manager, Supply Chain Manager, Lean Manufacturing Manager, Market Development Specialist, SHE Managers of all sites, Energy Committee members from all sites. Sustainability-related all issues, including climate-related issues such as energy consumption and GHG emissions performance are managed by the STF.

Climate-related issues assessment and management is also conducted as part of Safety, Health and Environment Committee which reports to the Maintenance and Utility Group Manager monthly covering mainly energy consumption at each Kordsa facility, progress against targets, and improvement measures that can be included to improve energy efficiency and manage GHG emissions effectively. The Maintenance and Utility Group Manager then reports these monthly Committee meeting outcomes at the monthly BPR whose outcomes are discussed and the ultimate decisions on necessary actions are made quarterly at the ELT meetings. In addition to the committees and Leadership Team that takes active management role regarding climate-related issues, also manager level individuals are responsible of managing operational actions as part of their roles such as Energy Managers, Safety, Health and Environment (SHE) and Sustainability Managers both on local and global level. Monthly meetings are held among each site's Energy Managers as well as the Global Energy Manager to discuss energy management activities, status and outcomes as well as potential improvement measures to be implemented. As part of SHE activities, all operational and safety related climate change issues are discusses at weekly Site Safety Manager Meetings which is held with the participation of Global SHE Manager periodically once a month. During these meetings, climate-related impacts that may affect the business continuity at site level is among the main discussion topics.

While the above-mentioned Committees and Individuals have active assessment and management role regarding climate-related issues, there is also a standard risk management process as well as business continuity management process which are under the sole leadership of the CFO and the CEO respectively. Climate-related issues are reviewed under all risk types with different dimensions such as loss of revenue under financial risks, loss of market share due to inability to meet customer expectations under strategic risks, production and supply chain disruption under production risks, inability to meet regulatory requirements under compliance risks, loss of brand credibility as well as customers due to inaction on climate change under brand image risks and all environmental aspects under environment, security, health and safety risks.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

Yes

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Who is entitled to benefit from these incentives?
Chief Executive Officer (CEO)

Types of incentives
Monetary reward

Activity incentivized
Energy reduction target

Comment
The CEO is ultimately responsible of all climate-related issues on a company level. Achievement of business objectives including meeting energy consumption targets, OPEX optimization due to energy reduction etc. Any improvement measures that are proposed by the operational team and approved by the CEO (under ELT) will affect the Company Scorecard, meaning it will have positive impact. As a result of achievement of before-mentioned measures, the CEO fulfills his/her targets and becomes entitled to a monetary reward in the form of an enhanced salary and a bonus.

Who is entitled to benefit from these incentives?
Chief Operating Officer (COO)

Types of incentives
Monetary reward

Activity incentivized
Energy reduction project

Comment
The COO is ultimately responsible of all climate-related issues on a site level. Achievement of business objectives including meeting energy consumption targets, OPEX optimization due to energy reduction etc. Any improvement measures that are proposed by the operational team and approved by the COO (at ELT meetings) will affect the Company Scorecard, meaning it will have positive impact. As a result of achievement of before-mentioned measures, the COO fulfills his/her targets and becomes entitled to a monetary reward in the form of an enhanced salary and a bonus.

Who is entitled to benefit from these incentives?
Chief Financial Officer (CFO)

Types of incentives
Monetary reward

Activity incentivized
Efficiency target

Comment
The CFO is responsible of managing all finance and risk related performance. Implementation of measures contributing to the Company annual targets such as optimizing OPEX will help the CFO achieve his/her targets resulting in a monetary reward in the form of an enhanced salary and a bonus.

Who is entitled to benefit from these incentives?
Environment/Sustainability manager

Types of incentives
Monetary reward

Activity incentivized
Emissions reduction project

Comment
Kordsa has a global level Sustainability Roadmap consisting of the Company's medium term sustainability targets and commitments including GHG emissions management, responsible use of raw materials, recycling targets, supply chain sustainability assessment, awareness raising activities on climate-related issues. The Global Safety, Health, Environment (SHE) and Sustainability Manager has individual targets in achieving each target in the Sustainability Roadmap. As a result of realization of all the activities selected in the previous column, the SHE and Sustainability Manager receives a monetary reward.

Who is entitled to benefit from these incentives?
All employees

Types of incentives
Monetary reward

Activity incentivized
Efficiency project

Comment
Kordsa monitors its performance through progress against annually set targets. All employees are encouraged to share their innovative ideas that can contribute and lead to the achievement of these annual targets. When the Company meets with annually set targets, this affects the Company scorecard positively and therefore results in a monetary award for all employees in the form of an additional bonus. In addition to the performance related monetary reward, Kordsa has a program called Kordsa All Stars. It fosters energy efficiency projects. All employees are entitled to a monetary reward if their project offer is deemed worthy. In 2018, a total of 121 applications were received globally, 29 of which have been announced as winners and deemed their monetary rewards.

C2. Risks and opportunities

C2.1

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

	From (years)	To (years)	Comment
Short-term	0	1	Kordsa sets annual corporate targets including climate-related aspects such as energy and emission efficiency as part of its short-term business objectives.
Medium-term	1	3	Mid-term and relatively larger commitments/projects are managed with a dedicated CAPEX X+ 3 budget. This budget includes investments or initiatives to be realized as part of improving climate-related performance as well as risk and opportunity management.
Long-term	3	5	Kordsa also has long-term strategic plan on sustainability and climate-related issues in line with the overall company objectives. The long-term business objectives are set with a CAPEX X+5 horizon.

C2.2

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	

C2.2b

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

Kordsa Global and its entities operate in a highly competitive industry with a broad geographical presence. Given the dynamics of the industry in different markets along with the strategic initiatives of the Company, elements of different risks are inherent covering the whole value chain. Kordsa formed a Global Risk Management Company Standards (CFN.007) regarding Corporate Risk Management. The process for identifying and assessing all risks including climate-related risks are defined in the Kordsa Global Risk Management Procedure applied under the leadership of the CFO.

Risks are grouped under 6 main categories: financial, strategic/market, production, legal and compliance, brand image/reputation and lastly, environment, security, health & safety risks. While company level climate-related risks are identified and assessed as part of financial, strategic, legal/compliance and brand image/reputation risks, asset level climate-related risks are identified and assessed mainly as part of production, legal/compliance and environment, security, health & safety risks.

As part of the Global Risk Management structure, Kordsa identifies internal/external business risks, including climate-related risks, through workshops and brainstorming sessions held with function leaders both on company and asset level. While doing so, both top-down and bottom up approaches are effectively utilized. After risk identification process is completed, risks are prioritized according to their likelihood and impact on business results listed in Risk Tolerance Tables. Impact aspect of the Risk Tolerance Table includes the following 4 grades: catastrophic, severe, moderate and minor whereas the likelihood aspect includes the following 4 grades: almost certain, highly likely, reasonably likely and unlikely. Likelihood and impact grades are selected from the Risk Tolerance Table. Selection process is performed incorporation with the process owner and reviewed with entity site management. As part of risk prioritization process; likelihood and impact score of each risk is multiplied to define the overall risk score. Risk prioritization scheme is composed of 3-level grouping; high (16-8), moderate (6-3) and Low (2-1).

While determining the relative significance of climate-related risks in relation to other risks, afore-mentioned 3 risk prioritization groups are used and climate-related risks with "High" overall score in the risk Prioritization Table is managed promptly.

In parallel to corporate-wide risk assessment process, climate-related and other sustainability risks are reviewed by the Sustainability Committee on an annual basis as part of sustainability reporting materiality assessment process. During materiality assessment, key internal and external stakeholder groups' feedbacks are received in order to holistically identify sustainability issues that are material to Kordsa.

As the climate-related issues are integrated into Kordsa's overall company-wide risk assessment process and cross-checked by the outcomes of sustainability materiality assessment, these risks are managed effectively. The main climate-related risks that have the potential to have significant impact are; inability to have access to sufficient energy and raw material needed for production, and compliance with emissions reporting regulations on a global scale.

The substantive strategic impact for Kordsa is the supply chain or production disruption for over 1 day, while the substantive financial impact threshold is defined as the monetary loss of 500,000 USD or above.

C2.2c

(C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Operating in wide range of geographies, Kordsa is an energy- end emissions-intensive company. Therefore, the company is directly affected by current as well as emerging regulations covering climate-related issues such as energy usage and GHG emissions reporting and reduction targets. Compliance measures to these types of regulations can result in an increase of operational costs Kordsa is under reporting obligation as part of "The Regulation on Monitoring of GHG Emissions" which came into force in Turkey in 2012. According to this regulation, facilities operating in emissions intensive sectors must monitor their emissions and annually report the verified emissions to the Ministry of Environment and Urbanisation (MoEU). Kordsa has been reporting its emissions from Izmit Facility fully compliant with the requirements. As mentioned in the rationale, non-compliance with this regulation can result in increased operational cost. In order to manage this risk, consultancy service is received from a competent party and external verification is obtained in line with the requirements.
Emerging regulation	Relevant, always included	As part of the corporate-wide risk assessment, emerging regulations-related risks are also assessed covering all operational locations. For example, it Turkey, there is a process on initiation of a carbon pricing mechanism either in the form of an emissions trading scheme or a carbon tax. Operating in an emission intensive sector, Kordsa's Izmit site is currently reporting its stationary emissions to the MoEU. In the case of an implementation of a carbon pricing mechanism, this can pose a risk for Kordsa either as an increased operational cost or a fine in cases if noncompliance occur. In order to avoid the later from happening, Kordsa takes active measures to improve its emissions performance through a dedicated team.
Technology	Relevant, always included	Kordsa defines energy efficiency and optimum use of raw materials as one of the main climate-related risk management activities. In cases of inaction, Kordsa can be subjected to an increased operational cost due to increasing energy and raw material costs. In order to optimise operational cost, stay competitive and provide new products while minimizing the environmental impact, implementation of innovative and clean technologies as well as low carbon machinery is realized through dedicated budgets on short-term (annual), mid-term (CAPEX X+3) and long-term (CAPEX X+5). Technology related risks. For example, in the reporting period, 2% of the revenue was dedicated to R&D projects.
Legal	Relevant, always included	Kordsa monitors the development of litigation in all areas and geographies relevant to the company. In relation to regulatory risks, Kordsa takes into account legal aspects concerning the implications of its activities, including those related to climate change, such as water stress. This risk has been assessed and controlled via active measures to continuously reducing its water withdrawal. In the reporting period, Kordsa realized a total of 677k USD CAPEX globally for improving water management/consumption performance.
Market	Relevant, always included	Kordsa Global and its entities operate in a highly competitive industry with a broad geographical presence. Therefore, as part of Kordsa Global Risk Management process Market risks are identified as one of the 6 main risk groups as Strategic/Market risks and mainly includes risks affecting Kordsa's market share and customer relationship management. As the Market drives the economic indicators of the company and the competition, any change occurring as a result of megatrends or changing customer preference due to Kordsa's inaction to meet enhanced expectations on low carbon products, will have a significant impact on both the revenue and therefore the profitability.
Reputation	Relevant, always included	Kordsa always considers the best interest of all of its stakeholders. Any risk occurring as a result of bad reputational incidents is assessed as part of brand image/reputation risks, being one of the 6 main risk categories evaluated as part of Kordsa Global Risk Management Standard. As Kordsa is a global industry leader offering products to a wide-range of sectors through emissions intensive products, it is expected to act proactively on climate change related challenges. Moreover, 28.89% of Kordsa's shares are traded publicly on BORSA Istanbul, and therefore any incidents about climate-related issues (i.e. inaction to curb GHG emissions or noncompliance with emissions reporting regulations) causing bad reputation can result in decreased share prices. As part of inclusion of this risk in the assessment, Kordsa's Investor Relations and Corporate Communication responsibles are working towards meeting expectations of investors and other stakeholders with regards to climate change.
Acute physical	Relevant, always included	Climate-related acute physical risks like storms, floods, extreme weather conditions and their impacts both on Kordsa's direct operations (production) and indirect operations (mainly supply chain)are considered as part of Kordsa's climate related risk assessments. While the impact of acute physical risks can cause disruption in our facilities and cause damage, they can also cause disruption on our supply chain. As we operate in 5 countries in very different geographies, each Kordsa site individually assesses acute as well as chronic physical risks caused by climate change covering our direct operations. As for the indirect operations, diversification of suppliers' method is used to always have an alternative supplier in cases of disruption. As an example of acute physical risk, our Izmit facility in Turkey is located next to a river bed. Therefore, in cases of extreme precipitation, this may cause flooding and can damage our facility or cause production disruption. In order to prevent this risk, we have developed Flood Emergency Plan to be applied on all Kordsa sites globally.
Chronic physical	Relevant, always included	As climate change is expected to cause drastic chronic physical impact if not well managed, it is important for Kordsa to understand chronic trends that may impact our facilities globally over time. Chronic physical conditions such as increased temperature and humidity are factored in climate-related risk assessment because processes and the product quality, so the profitability could be directly affected by the changes to be occurred in temperature or humidity levels. For example, at yarn production process line, indoor climate control is important, because the dipping solution is sensitive to particles in the air as well as humidity level and temperature. Therefore, we implement a climate control management system to maintain the process indoor ambient conditions at optimum levels. However, if mean temperatures rise and humidity levels change accordingly, this may cause our climate control management system to malfunction according to the severity of climate conditions, the break response time to restart our control system may be extended, causing production disruption and therefore revenue loss. In order to effectively manage this risk, we periodically do the maintenance and checks on all control systems.
Upstream	Relevant, always included	Kordsa defines its climate-related other upstream risks as supply chain-related risks. Disruptions in the supply chain will not only affect Kordsa's production operations, but also can result in increased operational cost arising from raw material scarcity and upstream transportation costs in cases of transition as well as physical climate-related risks occur. As Kordsa has globally distributed suppliers, the associated climate-related physical and transitional risks are assessed and evaluated on a case-by case basis with the ultimate aim to avoid supply chain disruption. For example, if due to the physical conditions such as storm our sea freight operations are disrupted over a certain period of time until our stocks are out, then we face a production disruption risk. Depending on the extend of the disruption, Kordsa may be exposed to a significant financial impact. In order to manage any adverse effects that this risk poses, Kordsa establishes a diversified supply chain and always considers alternative modes of freight such as road and air.
Downstream	Relevant, always included	Customer relations and product transportation are among the main downstream categories for Kordsa. Climate-related risks can occur both on a transition and physical scale. Changing customer preferences due to increasing climate change awareness as well as regulatory requirements are main downstream climate-related risks while, risks of product distribution disruptions due to physical climate-related acute and chronic conditions are also has a top priority in Kordsa's climate change risk assessment process. Kordsa implements an effective regulatory changes follow-up procedure to always remain compliant with regulations facing its direct production process as well as product properties. Continuous R&D activities are conducted in Kordsa's 2 R&D centers in Turkey to continually optimize and enhance our products' climate-related KPI's such as carbon emissions and chemical usage.

C2.2d

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

According to the Kordsa Global Risk Management Standard, all risks identified and assessed as part of pre-defined 6 main risk categories. Once the risk assessment is completed and all the identified risks are scored and prioritized by multiplying likelihood and impact as high, medium or low importance, risk actions are determined after listing risks in to Risk Follow-up Tables. Risk appetite help to properly define the importance and acceptable levels of risks and provides basis to decide whether an action will be applied or not. Main risk actions are; avoid, accept, reduce, share and transfer the risk.

Risk monitoring responsibilities are distributed in accordance with the prioritization level of the risks. All risks of each entity is reviewed periodically with the entity management in details. High risks of each entity and global risks which may effect all entities are reviewed periodically with the Executive Team (ET) members periodically. For each risk, relevant key risk indicator/s (KRI) and acceptable tolerance limits are determined by entity management and/or ET, to be used in risk monitoring process. The tolerance limits for each KRI will be approved by ET and/or entity site management. Programs. Risk Management process is included as an audit item to Annual Audit program for each audit. Effectiveness of defined Risk Action Plans are also verified during Audit processes.

Risk management, covering climate-related risks, are under the functional responsibility of the board via Risk Monitoring Committee while the CEO is ultimately responsible to ensure effective risk management process is in place. Moreover, the ET members are also ultimately responsible for managing risks at functional and entity level.

While prioritizing climate-related risks and aiming to create and capitalize on opportunities, Kordsa manages compliance risks and operational risks promptly. As for all the corporate risks, the ones that have a high overall risk score are prioritized in terms of risk action planning.

Example of a climate-related transition risk management: In accordance with the Turkish regulation on Monitoring of GHG emissions, Kordsa is required to monitor, verify and report its stationary GHG emissions to the Ministry of Environment and Urbanisation. In cases of failing to comply with this requirement, Kordsa will be subjected to a fine. In order to avoid compliance risks, Kordsa receives consultancy to make sure the GHG emission sources are monitored and the data is collected within the required uncertainty limits.

Example of a climate-related physical risk management: Acute physical risks pose a substantive financial impact if their frequency and severity levels increase. For example, in our Thailand and Turkey facilities, due to their location, they can be exposed to flooding risks, where our Indonesia facility can be subjected to water scarcity risks. In order to manage these type of risks, Kordsa has a Global Business Continuity Management Standard, which is approved by both the Global Quality Director and the CEO and is annually reviewed to include all risks to ensure it is implemented on each Kordsa site. In order to manage flooding related risks, our facilities are insured to compensate any financial impact.

While effective management of risks is at utmost importance for business continuity and sustaining the operations, capitalizing on climate-related opportunities are also considered.

The Sustainability Committee as well as the Global SHE and Sustainability Manager periodically seek to identify climate-related opportunities. For example, being one of Kordsa's main customers, tire manufacturers have high expectations in terms of their suppliers' environmental performance covering energy and raw material consumption and the implementation of environmentally friendly production processes that result in low-carbon products. For example reporting to Ecovadis or CDP supply chain programmes and possibly in the future setting a threshold for required scores from this programmes enables Kordsa to act proactively to make efforts to minimise its environmental impact. We are aware that this measures will enable us to have an opportunity to increase our market share.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Enhanced emissions-reporting obligations

Type of financial impact

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description

Among 5 countries Kordsa has direct operations in, Turkey is the only country where Kordsa is obligated to monitor its stationary GHG emissions resulting from Izmit Facility and report the verified results to the Ministry of Environment and Urbanisation (MoEU) on an annual according to the Regulation on Monitoring GHG emissions which came into force in 2014. This regulation was an adoption of the EU Monitoring, Reporting and Verification of GHG Emissions (MRV) which is the basis of the EU Emissions Trading Scheme (EU ETS) where the emission intensive sectors are given an emission cap to control and reduce their emissions. As Turkey is following a similar path, there is a probability that additional requirements will be implemented in the short to medium term. Moreover, emissions to air is also closely monitored in all locations Kordsa operates in. In the case of a decreased emissions threshold limits come into force, Kordsa will need to implement additional measures in order to comply. These risks pose a non-compliance as well as increased cost risks for Kordsa. As we consider non-compliance with laws and regulations a substantive risk, if such a case occurs, this will mean increased operational costs such as additional monitoring CAPEX investment as well as third party consultancy services. Moreover, over the long term, there is a risk for other countries to introduce GHG reporting obligations.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact
Low

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
297000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
As the uncertainty of how the reporting requirements or other regulatory obligations will take shape, it is not possible to give an exact figure. In order to take the necessary risk management actions, Kordsa assumes the potential financial impact associated with this risk to be 0.1% of its total revenue gained from Turkey. In 2018, Kordsa Turkey had a revenue of 297 million USD. Therefore, the potential financial impact was calculated approximately 297,000 USD.

Management method
Measures taken to manage and prevent this risk includes consultancy and verification fees for GHG emissions reporting (MRV) as well as CDP reporting advisory. In terms of managing emissions to air, the cost of management includes periodic measurements for chimneys and air quality. In the reporting period, as since 2016, Kordsa receives third party consultancy service in order to comprehensively manage its data and disclose it with consistency. The cost of management for this risk, for now, only includes the GHG emissions monitoring and reporting advisory as well as verifications services we obtain in Turkey (5,200 USD), together with the total cost for chimney and air quality tests conducted by third parties globally on each Kordsa facility (128,000 USD). The cost of management given in the following column is the sum of fees paid for these services in the reporting period.

Cost of management
133200

Comment

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Customer

Risk type
Transition risk

Primary climate-related risk driver
Reputation: Shifts in consumer preferences

Type of financial impact
Reduced revenue from decreased demand for goods/services

Company- specific description
Defined as one of the main risk categories in Kordsa Global Risk Management process, Brand Image/Reputational risks are evaluated with utmost importance. Disclosed by the World Economic Forum's Global Risk Report 2019 as the top two global risk in terms of both likelihood and impact, "failure of climate change mitigation and adaptation" is the most significant risk humankind faces today. Based on this reality, awareness raising activities and increasing demand from all stakeholders on climate change management may result in reduced interest in Kordsa's products, if Kordsa is to take no action towards combatting climate change. This will result in a revenue loss in line with decreased sales. As one of Kordsa's main customers are the leading tire manufacturer and due to rapidly rising climate commitments, they tend to get more ambitious with their expectations from suppliers and their products. 2 of our main tire producer customers invite Kordsa to report to CDP Supply Chain programme, and in medium term, they may set a threshold performance score as a condition to collaborate with certain suppliers such as ourselves.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
8199855

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
As the defined type of financial impact is defined as decreased revenue due to changing consumer preferences, Kordsa assumes a loss of 1% of its global revenue due to decreased sales will result in a substantive financial impact. The estimated figure is calculated based on Kordsa's 2018 revenue (819.9 million USD). So the figure is calculated as 8,199,885 USD.

Management method
In worst case scenario, this risk is defined as having potential to cause substantive financial impact for Kordsa. However, Kordsa implements drastic measures both in terms of managing climate change-related impacts and mitigate them, and takes an active approach by communicating its climate-related performance on various leading platforms such as UN Global Compact, CDP, Ecovadis, sustainability reporting, EIRIS ESG rating through BIST Sustainability Index as well as active involvements as a member in leading NGOs and associations such as Turkish Business Council on Sustainable Development (SKD) and TUSIAD. Moreover, Kordsa dedicates a CAPEX to improve energy efficiency in its operations. The cost of management for this risk is stated in the following column and represents the total cost of reporting, advisory and

membership fees paid in 2018 as part of Kordsa's effort to monitor, enhance and communicate its effort to remain as a responsible company.

Cost of management
374000

Comment

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Direct operations

Risk type
Physical risk

Primary climate-related risk driver
Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact
Reduced revenue from decreased production capacity (e.g., delayed planning approvals, supply chain interruptions)

Company- specific description
Kordsa's production facility in Izmit (KTR), Turkey is located next to a river and is therefore in the boundary of a river flood basin. Although not directly due to a precipitation related flood, the facility was exposed to flood related disruption in production in the reporting period. This incident was caused by the opening of nearby dam flood gates to release the access water to maintain the dam operations at optimum level. However, in line with climate projections, it is expected that severe weather events will become more frequent (including extreme precipitation). Therefore, this facility is under the risk of production disruption due to increased likelihood of flooding.

Time horizon
Current

Likelihood
Likely

Magnitude of impact
Medium-low

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
8199855

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The financial impact was determined from potential impact of 1% revenue loss due to production disruption. While calculating the potential financial impact, we used 2018 realized revenue (819.9 mio USD).

Management method
In the reporting period, we experienced a temporary flooding incident at the KTR production facility resulting in disruption in our Line 1 production process. Our first response to managing this risk was to develop a flood emergency plans and protect our assets and avoid production disruption. This outcome was also reflected in Kordsa Business Contingency Plans. Moreover, our cost to respond to this incident was to maintain the L1 equipment as any potential disruption to this process line affects the quality of polymer used as raw material, and causing maintenance needs to recover the process.

Cost of management
150000

Comment

Identifier
Risk 4

Where in the value chain does the risk driver occur?
Direct operations

Risk type
Physical risk

Primary climate-related risk driver
Chronic: Rising mean temperatures

Type of financial impact
Reduced revenue from decreased production capacity (e.g., delayed planning approvals, supply chain interruptions)

Company- specific description
One of Kordsa's main product is nylon yarn, production of which requires certain indoor ambient conditions to meet the desired quality properties; mean temperature and humidity level. As the climate change scenarios foresee a rise of mean temperature, this poses 2 risks for Kordsa both of which will result in decreased revenue. The first risk will be declining product quality if the certain climate conditions cannot be provided by the Climate Control System in place resulting in decreased sales. The second risk will be production disruption if the mean temperature rises beyond acceptable limits for our Climate Control System to handle. Temperature levels higher than average causes Climate Control System to malfunction and "the break response time" for the system to reboot gets longer as the temperature gets higher.

Time horizon
Short-term

Likelihood
More likely than not

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
820000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
As the defined type of financial impact is defined as decreased revenue due to either decrease in sales in line with affected product quality or increased operational costs due to maintaining or replacing existing Climate Control System to avoid production disruption, Kordsa assumes a loss of 0.1% of its global revenue due to decreased sales will result in a substantive financial impact. The estimated figure is calculated based on Kordsa's 2018 revenue (819.9 million USD). So the figure calculated is approximately 820,000 USD.

Management method
Management method for now only includes the effective operation of the existing Climate Control System through periodic maintenance. The cost of management provided in the following column includes the maintenance fees paid in the reporting period.

Cost of management
90000

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?
Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Opp1

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Use of more efficient production and distribution processes

Type of financial impact
Reduced operating costs (e.g., through efficiency gains and cost reductions)

Company-specific description
In line with Kordsa's target to reduce its energy related OPEX by 2% each year, we consider the implementation of measures to save energy as an opportunity to become resilient to unstable and increasing energy/fuel prices. Through a dedicated CAPEX budget, Kordsa implements energy efficiency projects to reduce the operating costs.

Time horizon
Current

Likelihood
Virtually certain

Magnitude of impact
Medium-low

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
445873

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The financial impact realized as part of this opportunity represents the realized energy cost savings achieved through efficiency projects implemented during the reporting

period. As the stated financial impact is annual, the initiatives will help achieve cumulative energy savings, resulting in greater financial impact over their lifetime.

Strategy to realize opportunity
Our strategy to maximize our operating cost savings is to dedicate a budget for energy efficiency initiatives. In the reporting period we have realized an investment of 678,000 USD under 13 different projects to achieve a total of 7,644,192 kWh energy; 96% of which consists of electricity saving measures including but are not limited to; optimizing building HVAC system, machinery replacement with higher performing ones etc. Our strategy to realize this opportunity covers our global operations however, the disclosed financial impact and cost to realize opportunity represents the Turkey operations only (KTR Kordsa turkey production Facility in Izmit).

Cost to realize opportunity
678000

Comment

Identifier
Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Use of recycling

Type of financial impact
Reduced operating costs (e.g., through efficiency gains and cost reductions)

Company-specific description
As part of yarn production (one of our 3 main product groups along with Single end core and greige fabric), we have a by-product called “Nylon 6.6” (NY66) chips which have a potential to be used in the engineering industry. Therefore, there is an opportunity for us to find ways to further process this material to become a raw material for the industry. This opportunity has multiple benefits as reprocessing N66 chips not only helps us reduce our waste generation but also helps us implement the basis of a circular economy by supplying the side-product of our production process as a raw material to the engineering industry, resulting in an additional source of revenue.

Time horizon
Current

Likelihood
Virtually certain

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
1700000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The financial impact figure provided represent the realized annual savings gained via implementation of a reprocessed chip machinery. Through this process, we are able to reprocess around 1,000 tons of NY66 by-products and generate an additional 1.7 mio USD revenue annually.

Strategy to realize opportunity
As described in the explanation of financial impact figure column, our strategy to capitalize on this opportunity was to invest in a technology (machinery) to be able to reprocess NY66 chips to be sold as a raw material to the engineering industry. Cost to realize this opportunity is the cost of the reprocess chip machinery.

Cost to realize opportunity
2000000

Comment

Identifier
Opp3

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Development of new products or services through R&D and innovation

Type of financial impact
Better competitive position to reflect shifting consumer preferences, resulting in increased revenues

Company-specific description
Climate change and related impacts are becoming on the prioritized agenda of private sector, investors and customers representing the community. As the awareness is raising and the climate change-related impacts are becoming more visual, there is a shift in customer preferences towards more sustainable/low-carbon products with lower environmental impact. If well managed and met, the shift in customer preferences pose an opportunity for Kordsa to develop matching products and gain competitive advantage while increasing its share on the market.

Time horizon
Short-term

Likelihood
Likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
23300000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Potential financial impact figure represents the revenue generated in 2018 from sales of innovative products developed through R&D projects and commercialized by Kordsa namely TWIXTRA and CAPMAX. This figure is around 3% of Kordsa's global revenue in reporting period, therefore the magnitude of impact is considered to be medium-high.

Strategy to realize opportunity
Placing utmost importance with R&D activities and seeing those as one of the main contributors to business success to sustain operations in a rapidly changing environment, Kordsa dedicates an annual budget to develop products with better performance parameters and to a maximum extend low-carbon/energy efficient/eco-friendly. Strategy to realize the above-mentioned opportunity, Kordsa has dedicated a budget amounting around 2% of its global revenue in the reporting period. Kordsa's global revenue in 2018 was 819.9 mio USD, therefore an R&D investment of around 16.4 mio USD was realized in the same year.

Cost to realize opportunity
16400000

Comment

C2.5

(C2.5) Describe where and how the identified risks and opportunities have impacted your business.

	Impact	Description
Products and services	Impacted for some suppliers, facilities, or product lines	2 of Kordsa's main innovative and environmentally friendly products developed to achieve low-carbon performance both during production and end-usage phases have benefited from climate-related expectations of our customers and end-users. These products are; (a) TWIXTRA: virtually the lightest hybrid cord product in the world and achieved expected sales volumes, allowing the tire to be produced with fewer raw materials and lighter weight tires allow for reduced fuel consumption, and (b) CAPMAX: is a cap ply product that can be applied directly without the need for rubber coating at the tire manufacturing unit. By eliminating the need for rubber coating, Capmax® reduces the total rubber content of the tire, which translates into a cost advantage, as well as contributing to a reduction in rolling resistance and fuel consumption. The realized total revenue from these 2 products constituted 3% of Kordsa's global revenue in 2018. The magnitude of this financial impact is considered to be medium and is expected to increase in the medium term following the commercialization of new low-carbon products.
Supply chain and/or value chain	Impacted	As a result of our continuous risk assessment covering our supply chain, we have identified a risk with an impact leading to disruption of our operations. Together with the incident trends around the globe regarding different sectors' vulnerability to supply chain disruptions, we are aware that is we don't maintain a sustainably supply chain, we are faced with a risk to our business continuity. For example, one of our raw material is plastic, deriving from fossil fuels, therefore our plastic polymer suppliers are subjected to be impacted from climate change related transition risks. Expanding this example to all our strategic raw materials and assets, the potential impact is greater. In order to effectively manage supply chain-related risks, we have developed a Sustainability Supplier Assessment system through which, we assess top 10 raw material as well as strategic machinery and equipment suppliers on a global scale based on economic, social and SHE aspects such as energy and emissions management. This assessment system was implemented during the reporting period and the first round of assessment covering 13 top suppliers was completed also in 2018. The magnitude of this strategic impact is considered to be high as sustainable supply chain is a critical element of our business success.
Adaptation and mitigation activities	Impacted	Failure of climate change mitigation and adaptation is listed amount the top risks in WEF's Global Risk Report 2019. The climate projections show a high risk of substantive impact. Kordsa is aware of these facts and considers the actions towards climate change mitigation and adaptation is a matter of sustaining its business continuity. Therefore, we consider to be affected by this area and accordingly plan our operational and capital expenditures to ensure becoming resilient to climate change impacts. We consider the magnitude of impact of this area to be medium, with a potential to become high in the long-term.
Investment in R&D	Impacted	Kordsa considers climate-related need to invest in R&D as an opportunity to create new markets and extend the presence on the existing market. In order to capitalize on this opportunity, Kordsa dedicates an annual budget to R&D activities. In the reporting period, 2% of Kordsa's global revenue was invested in R&D activities to develop low carbon products with lower environmental impact. The magnitude of impact that this area has on our business is considered to be medium.
Operations	Impacted	Climate-related physical risks have already impacted our operations. Over a decade ago, our Thailand production facility experienced a severe flooding event, causing substantive damage to our asset and resulted in a production disruption for over a month. Similar event with much mower magnitude took place in our Izmit- Turkey production facility in the reporting period, causing a temporary disruption to our production. Not only physical climate risks pose damage to our assets and result in additional CAPEX, but also they increase our OPEX through maintenance and testing costs. The magnitude of impact is therefore considered to be medium, with a potential to become high as the frequency and the severity of severe weather events are expected to increase over time.
Other, please specify	Please select	

C2.6

(C2.6) Describe where and how the identified risks and opportunities have been factored into your financial planning process.

	Relevance	Description
Revenues	Impacted	Our financial planning process recognizes the climate-related risks and opportunities. In terms of risks, our net revenue is decreased as a result of increasing operational as well as capital expenses as a result of increasing raw material and energy prices. This has a direct impact on our profitability. In terms of opportunities, our revenue is increased as a result of 2 new innovative and environmentally friendly products developed to achieve low-carbon performance both during production and end-usage phases have benefited from climate-related expectations of our customers and end-users. These products are; (a) TWIXTRA: virtually the lightest hybrid cord product in the world and achieved expected sales volumes, allowing the tire to be produced with fewer raw materials and lighter weight tires allow for reduced fuel consumption, and (b) CAPMAX: is a cap ply product that can be applied directly without the need for rubber coating at the tire manufacturing unit. By eliminating the need for rubber coating, Capmax® reduces the total rubber content of the tire, which translates into a cost advantage, as well as contributing to a reduction in rolling resistance and fuel consumption. The realized total revenue from these 2 products constituted 3% of Kordsa's global revenue in 2018. The magnitude of this financial impact is considered to be medium and is expected to increase in the medium term following the commercialization of new low-carbon products.
Operating costs	Impacted	Our operating cost planning process takes the climate-related risks into account as we are already experiencing raw material and energy price increase on especially fossil fuel derived products. As there is a consistent and increasing trend to divest from fossil fuel intensive sectors, the prices become higher. Moreover, in order to introduce climate change mitigation and adaptation efforts, several countries have introduce CO2 emissions trading or pricing systems. In one of the countries we operate (Turkey), we are currently monitoring and reporting our CO2 emissions to the national authorities (the Ministry of environment and Urbanization). Turkey is also in the process of assessing the right mechanism to price CO2 emissions. In which case, we may have a potential OPEX increase to comply with regulations. The resulting overall total cost is likely to increase further from current levels if such a mechanism is introduced for CO2 allowances similar to the European ETS. We consider the magnitude of impact to be medium as only 5 to 10% of our total OPEX consists of energy costs and our CO2 emissions are not as intensive as many of the other facilities reporting their emissions mandatorily.
Capital expenditures / capital allocation	Impacted	As both the water and energy prices are affected from climate-related root causes, the potential/forecasted increase in our OPEX intensifies our CAPEX to maintain the costs at a feasible level. Among some CAPEX realized recently, investment in a new LEED Gold certified CTECH R&D building in Istanbul and a total of 2.4 mio USD dedicated CAPEX budget to enhance energy efficiency (therefore GHG emissions) in the reporting period. We consider the magnitude to be within our substantive threshold; medium.
Acquisitions and divestments	Not yet impacted	In the reporting period, we have made an acquisition of Invista in Chattanooga USA, who has the facilities to meet most of its energy demand. Climate-related long-term transition as well as physical risks are always factored into our financial planning and investment decision making process. We have not yet made a divestment decision on any of our business areas but if the risks become to greater to take, we will consider divesting in line with our Business Contingency Plan. The magnitude of impact is considered as low at this stage covering our direct operations.
Access to capital	Not yet impacted	Kordsa is a publicly listed company and also is listed in Borsa Istanbul Sustainability Index which indicates its strong ESG performance and disclosure. Companies with recognized ESG performance have high chance to attract investors and have easier access to capital. Although we have not yet had such a situation/need to access to capital, we consider there is a high chance for us to have access to alternative capital easier based on our strong ESG presence and sustainability performance when such a need arises.
Assets	Impacted for some suppliers, facilities, or product lines	Especially climate related physical risks have already impacted some of our facilities, namely Thailand and Turkey production facilities. As a result of a flooding event took place in both locations, we have experienced damage to our facilities, causing temporary disruption to production increasing capital expenditure as well as operating costs. We consider the impact so far to be low-medium, with a likelihood of an increase over the medium to long-term.
Liabilities	Impacted	Lenders as well as insurers consider ESG risks and opportunities while determining our liabilities. Due to its location (by a river flood plain) our Izmit production facility has experienced insurance cost increase in the recent years. We consider the magnitude of impact to be low. Moreover, as a mandatory reporter to the Turkish Ministry of environment and Urbanisation's Regulation on Monitoring GHG Emissions, we may potentially have a future liability if the Country is to introduce a GHG emissions pricing mechanism. Although our GHG emissions intensity is not as high as the most of the other mandatory reporters under the same Regulation, this will still be an addition of another low magnitude impact in the future.
Other	Please select	

C3. Business Strategy

C3.1

(C3.1) Are climate-related issues integrated into your business strategy?

Yes

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

Yes, qualitative

C3.1c

(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

Kordsa first initiated its Safety Health and Environmental (SHE) Standard back in 2008. In line with Kordsa's business objectives and strategy as well as recognizing the agile business environment and megatrends, the SHE standard was fully revised in 2016 to include climate change and GHG emissions, related verification and reporting standards as well as biodiversity aspects.

Kordsa also established its Sustainability Task Force (Committee) with participation from responsibles on manager and specialist level who are the most active group to assess and manage Kordsa's sustainability performance via implementing the Sustainability Road Map which has a 5-year lifespan and is updated based on annual progress. The outcomes of the Sustainability Task Force activities are reported to the Executive Lead Team (ELT – a Board Level Committee) on a quarterly basis by the Global SHE & Sustainability Manager. By doing so, we make sure the ELT is kept up to date on Kordsa's progress as well as sustainability-related megatrends so they are always well equipped to maintain Kordsa Sustainability Road Map consistent with the overall business objectives and strategy. As the primary climate-related commitment we make, we set a target to reduce our GHG emissions intensity per unit of production by 2% year on year.

Climate-related issues affecting our direct operations are mainly focused on compliance with related regulations, energy - GHG emissions - raw material consumption performance together with maintaining our resilience against physical climate-related risks. In order to achieve all, we dedicate an OPEX for continuous improvement on energy efficiency, as well as CAPEX on an annual basis to minimize the negative (and substantive) impact while capitalizing on opportunities. Every year, our energy OPEX targets are 2% lower than the previous year. We strive to achieve this target through projects financed by our annual CAPEX. We develop and modify our machinery to consume less energy, less raw materials and create less waste.

For example, in 2018 Kordsa has made an investment of 678,000 USD to implement 13 emissions reduction initiative which resulted in 3,458 t CO2e GHG emissions reduction. Moreover, Kordsa also dedicated an annual budget for R&D activities to develop new products with low-carbon and low environmental footprint.

Climate-related issues affecting our supply chain are investigated as part of company-wide Global Risk Assessment process. As the most substantial business decisions made during the reporting period, we have developed a Sustainability Supplier Assessment Process, in order to ensure the resilience of our supply chain (top 10 strategic suppliers) against sustainability related issues. The Assessment consists of a 3 separate lists of questions covering economic, social and SHE aspects. SHE checklist includes comprehensive questions on climate-related issues such as energy management, renewable energy usage/generation, low-carbon products, and raw material consumption as well as reduction initiatives. As a result of this assessment process, we not only identify the "as is" situation of our strategic raw material and machinery & equipment and be able to identify areas where we can support our suppliers sustain their operations and particularly become resilient to climate-related risks.

C3.1d

(C3.1d) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenarios	Details
Nationally determined contributions (NDCs)	Kordsa operates in 5 countries all of which developed Nationally Determined Contribution (NDC) in line with the Paris Agreement. Kordsa evaluates all relevant NDCs to have a clear indication of expected emissions performance/reduction requirements on a national level. As an example, in Kordsa's Headquarter location, Turkey, the Government intends (INDC) to reduce the Business as Usual emissions by 21% until 2030. This is not interpreted as an ambitious contribution but in 2023, countries are expected to revise their plans and the level of ambition can be increased. Therefore, while adapting the (I)NDC scenario related outcomes to its strategy, Kordsa aims to achieve the best emissions performance where physically and financially feasible. As a result of the scenario-analysis and identifying the need to perform beyond national targets, Kordsa is conducting feasibility analysis on existing production lines and aim to optimize them maximize efforts to be in line with global combat against climate change and global warming. As part of this strategy, R&D projects are given a high priority. Among the 101 patents applied so far, 60 of them were related with energy/raw material reduction efforts, where 7 of them were related to eco-friendly products and 12 of them being low carbon product or process related applications.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?
Intensity target

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number
Int 1

Scope
Scope 1+2 (location-based)

% emissions in Scope
50

Targeted % reduction from base year
10

Metric
Metric tons CO2e per metric ton of product

Base year

2018

Start year
2018

Normalized base year emissions covered by target (metric tons CO2e)
0.702

Target year
2023

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

% of target achieved
0

Target status
New

Please explain
As Kordsa we have 3 main products which differ from each other in terms of production process. Therefore, we determine our intensity target per 3 main products. This target covers our Greige Fabric product emissions intensity per ton of fabric produced. This is a new target.

% change anticipated in absolute Scope 1+2 emissions
-5

% change anticipated in absolute Scope 3 emissions
0

Target reference number
Int 2

Scope
Scope 1+2 (location-based)

% emissions in Scope
40

Targeted % reduction from base year
10

Metric
Metric tons CO2e per metric ton of product

Base year
2018

Start year
2018

Normalized base year emissions covered by target (metric tons CO2e)
0.885

Target year
2023

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

% of target achieved
0

Target status
New

Please explain
As Kordsa we have 3 main products which differ from each other in terms of production process. Therefore, we determine our intensity target per 3 main products. This target covers our YARN product emissions intensity per ton of fabric produced. This is a new target.

% change anticipated in absolute Scope 1+2 emissions
-4

% change anticipated in absolute Scope 3 emissions
0

Target reference number
Int 3

Scope
Scope 1+2 (location-based)

% emissions in Scope
4

Targeted % reduction from base year
12

Metric
Metric tons CO2e per metric ton of product

Base year
2017

Start year
2017

Normalized base year emissions covered by target (metric tons CO2e)
5.142

Target year
2023

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

% of target achieved
87.2

Target status
Underway

Please explain
As Kordsa we have 3 main products which differ from each other in terms of production process. Therefore, we determine our intensity target per 3 main products. This target covers our SEC (single end cord) product emissions intensity per ton of fabric produced. In 2018 the normalised emissions per ton of SEC produced was decreased by 10.5% to 4.604 t CO2e/ton SEC.

% change anticipated in absolute Scope 1+2 emissions
-0.4

% change anticipated in absolute Scope 3 emissions
0

C4.2

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.
Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	4	
To be implemented*	12	2573
Implementation commenced*	0	0
Implemented*	13	3458
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative type
Energy efficiency: Processes

Description of initiative
Machine replacement

Estimated annual CO2e savings (metric tonnes CO2e)
349

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
46000

Investment required (unit currency – as specified in C0.4)
445000

Payback period
4 - 10 years

Estimated lifetime of the initiative
11-15 years

Comment
A total of 3 emissions reduction initiatives were implemented as part of this initiative category chosen, achieving annual electricity savings equal to 750,000 kWh.

Initiative type
Energy efficiency: Processes

Description of initiative
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
1291

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
96016

Investment required (unit currency – as specified in C0.4)
33000

Payback period
<1 year

Estimated lifetime of the initiative
11-15 years

Comment
A total of 5 emissions reduction initiatives were implemented as part of this initiative category chosen, achieving annual electricity savings equal to 2,777,063 kWh.

Initiative type
Energy efficiency: Processes

Description of initiative
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
60

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
7897

Investment required (unit currency – as specified in C0.4)
103500

Payback period
11-15 years

Estimated lifetime of the initiative
Ongoing

Comment
A total of 2 emissions reduction initiatives were implemented as part of this initiative category chosen, achieving annual natural gas savings equal to 337,420 kWh.

Initiative type
Energy efficiency: Building services

Description of initiative
HVAC

Estimated annual CO2e savings (metric tonnes CO2e)
2

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
310

Investment required (unit currency – as specified in C0.4)
5500

Payback period
16-20 years

Estimated lifetime of the initiative
Ongoing

Comment
One emissions reduction initiative was implemented as part of this initiative category chosen, achieving annual electricity savings equal to 5,000 kWh.

Initiative type
Process emissions reductions

Description of initiative
New equipment

Estimated annual CO2e savings (metric tonnes CO2e)
1756

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
109996

Investment required (unit currency – as specified in C0.4)
91000

Payback period
<1 year

Estimated lifetime of the initiative
11-15 years

Comment
A Total of 2 emissions reduction initiatives were implemented as part of this initiative category chosen, achieving annual natural gas savings equal to 3,775,429 kWh.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Dedicated budget for energy efficiency	Kordsa makes detailed annual budgets including a dedicated budget for continuous implementation of energy efficiency projects. Each Site's Energy Manager presents the feasible potential efficiency projects to the Global Chief Operating Officer who has the authority to approve project budgets up to 5% of the annual revenue. In the reporting period, we have dedicated a total budget of over 3 mio USD for climate and water-related reduction initiatives.
Dedicated budget for low-carbon product R&D	Kordsa prioritizes R&D investment as a natural consequence of its "we reinforce life" approach. Accordingly, a dedicated budget for the R&D of low-carbon and eco-friendly products is approved on an annual basis. In the reporting period, Kordsa dedicated 2% of its revenue to R&D projects.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?
Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation
Group of products

Description of product/Group of products
2 of Kordsa's main innovative and environmentally friendly products developed to achieve low-carbon performance both during production and end-usage phases have benefited from climate-related expectations of our customers and end-users. These products are; (a) TWIXTRA: virtually the lightest hybrid cord product in the world and achieved expected sales volumes, allowing the tire to be produced with fewer raw materials and lighter weight tires allow for reduced fuel consumption, and (b) CAPMAX: is a cap ply product that can be applied directly without the need for rubber coating at the tire manufacturing unit. By eliminating the need for rubber coating, Capmax® reduces the total rubber content of the tire, which translates into a cost advantage, as well as contributing to a reduction in rolling resistance and fuel consumption.

Are these low-carbon product(s) or do they enable avoided emissions?
Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions
Other, please specify (The GHG Protocol)

% revenue from low carbon product(s) in the reporting year
3

Comment
The realized total revenue from these 2 products constituted 3% of Kordsa's global revenue in 2018.

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start
January 1 2017

Base year end
December 31 2017

Base year emissions (metric tons CO2e)
76983

Comment

Scope 2 (location-based)

Base year start
January 1 2017

Base year end
December 31 2017

Base year emissions (metric tons CO2e)
250334

Comment

Scope 2 (market-based)

Base year start
January 1 2017

Base year end
December 31 2017

Base year emissions (metric tons CO2e)

Comment
We do not calculate market-based emissions to report in terms of Scope 2.

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.
IPCC Guidelines for National Greenhouse Gas Inventories, 2006
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)
80542

Start date
January 1 2018

End date
December 31 2018

Comment
The Scope 1 emissions figure includes emissions from 7 sites in 5 countries. The sources of emissions are natural gas, diesel and LPG that were used in these facilities in 2018.

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based
We are reporting a Scope 2, location-based figure

Scope 2, market-based
We have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

Comment
We are reporting on location-based Scope 2 emissions resulting from the use of electricity from the grid.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based
263967

Scope 2, market-based (if applicable)
<Not Applicable>

Start date
January 1 2018

End date
December 31 2018

Comment
We are reporting only location-based Scope 2 emissions resulting from electricity purchased and consumed from the grid for 7 plants in 5 countries. The emission factors for the electricity consumed from the grid for each country are taken from the publication "CO2 emissions from fuel combustion" IEA 2018.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?
No

C6.5

(C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

Capital goods

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

Upstream transportation and distribution

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

Waste generated in operations

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

Business travel

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

Employee commuting

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

Upstream leased assets

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

Downstream transportation and distribution

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

Processing of sold products

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

Use of sold products

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
All our products are intermediate products and need further processing (such as tire manufacturing) to be used. Therefore, this category is not applicable to our products.

End of life treatment of sold products

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

Downstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
We do not have any leased assets as part of our downstream operations. If this is to change, we will evaluate this source and based on its significance, we will consider including this category in our calculations.

Franchises

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
Kordsa does not have any franchises, therefore this category is not relevant for us.

Investments

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
We have not made any investments in the reporting period, therefore this category is not relevant for us.

Other (upstream)

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
No additional Scope 3 categories identified.

Other (downstream)

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
No additional Scope 3 categories identified.

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?
No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure
0.00042

Metric numerator (Gross global combined Scope 1 and 2 emissions)
344509

Metric denominator
unit total revenue

Metric denominator: Unit total
819985458

Scope 2 figure used
Location-based

% change from previous year
12.6

Direction of change
Decreased

Reason for change
Kordsa global revenue has increased by 20% between 2017 and 2018 while the gross Scope 1 and 2 emissions have increased by 5.2%. The main reason for the gross emissions increase to be lower than the revenue increase is the emission reduction initiatives implemented during the reporting period, which resulted in a 3,458 t CO2 emissions reduction (1% of 2017 gross emissions). On the other hand, the gross emissions have increased as a result of a 3% increase in production volume as well as due to the acquisition of Invista (Chattanooga USA) causing a 4% increase in Kordsa' gross global Scope 1 & 2 emissions.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	80542	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
United States of America	9079
Brazil	5961
Indonesia	18937
Thailand	7189
Turkey	39377

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By facility

C7.3b

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
USA / CH	3986	35.1128	-85.2476
USA / LH	5093	34.81	-79.5231
KBR / Brasil	5961	-12.66	-38.3101
IK / Indonesia	18937	-6.5019	106.8716
TIK / Thailand	7189	14.3321	100.6421
KTR / Turkey	39053	40.7665	29.9976
CTECH Turkey	323	40.9188	29.3153

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
United States of America	36018		83182.43	0
Brazil	3.4		28.5	0
Indonesia	121718.5		166966.39	0
Thailand	21743		45583.19	0
Turkey	84484		181685.36	0

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By facility

C7.6b

(C7.6b) Break down your total gross global Scope 2 emissions by business facility.

Facility	Scope 2 location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
USA / CH	29606	
USA / LH	6412	
KBR / Brasil	3.4	
IK / Indonesia	121718.5	
TIK / Thailand	21743	
KTR / Turkey	82847	
KTMM / Turkey	1637	

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	422	Decreased	0.1	Our previous year gross global Scope 1&2 emissions were 327,317 t CO2. We have extended our reporting boundary with the inclusion of a new and LEED certified CTECH building in Istanbul which has a solar PV system installed at its roof. In the reporting period, this system generated 980,118 kWh of renewable electricity resulting in a reduced emission of 422 t CO2 (calculated with grid electricity emission factor of 0.465 kg CO2/kWh (taken from the latest IEA publication): 980,118 * 0.465 / 100 = 0.1%.
Other emissions reduction activities	3458	Decreased	1	Our previous year gross global Scope 1&2 emissions were 327,317 t CO2. As a result of the 13 emissions reduction initiatives implemented in 2018, we achieved 3,458 tCO2 emissions reduction. The stated emissions value (percentage) was calculated with the following formula: 3,458 tCO2 / 327,317 *100 = 1%
Divestment		<Not Applicable>		
Acquisitions	14005	Increased	4	Our previous year gross global Scope 1&2 emissions were 327,317 t CO2. In the reporting period we have acquired a company, Invista, in Chattanooga, USA which has joined in our emissions reporting boundary to be reported under the existing Kordsa Chattanooga production facility (CH) boundary (as these two facilities are located next to each other and now have main meters to measure their consumption). Apart from the acquisition of Invista, CH production facilities operations have remained about the same. Therefore, the change in gross scope 1&2 emissions between 2017 and 2018 (14,005 t CO2) can directly be attributed to Invista's share. Chattanooga 2017 gross Sc 1&2 emissions: 19,587 tCO2 and 2018 emissions: 33,592 t CO2. The difference between 2 years' emissions give the Invista acquisition impact on year-on-year emissions change.
Mergers		<Not Applicable>		
Change in output	3187	Increased	1	Apart from the above-mentioned changes in the reporting period, the remaining change in gross Scope 1&2 emissions is calculated using the following approach: - Gross global Sc1&2 emissions: 327,317 t CO2 - Gross global Sc1&2 emissions: 344,509 tCO2 - Emissions increase due to Invista acquisition: 14,005 tCO2 - Change in gross global Sc1&2 emissions = (344,509 – 327,317) – 14005 = 3,187 t CO2
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 5% but less than or equal to 10%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	472629	472629
Consumption of purchased or acquired electricity	<Not Applicable>	0	477446	477446
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	908	<Not Applicable>	908
Total energy consumption	<Not Applicable>	908	950074	950982

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels (excluding feedstocks)
Natural Gas

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
470433

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
352824

MWh fuel consumed for self-generation of steam
117608

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

Fuels (excluding feedstocks)
Diesel

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
1958

MWh fuel consumed for self-generation of electricity
137

MWh fuel consumed for self-generation of heat
1821

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

Fuels (excluding feedstocks)
Liquefied Petroleum Gas (LPG)

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
238

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
238

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

C8.2d

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

Diesel

Emission factor
74100

Unit
metric tons CO2e per GJ

Emission factor source
IPPC 2016 Table 2.3

Comment
Diesel for both stationary and mobile combustion

Liquefied Petroleum Gas (LPG)

Emission factor
63100

Unit
metric tons CO2e per GJ

Emission factor source
IPPC 2016 Table 2.3

Comment
Stationary combustion

Natural Gas

Emission factor
56100

Unit
metric tons CO2e per GJ

Emission factor source
IPPC 2016 Table 2.3

Comment
Heating and steam generation

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	1045	1045	908	908
Heat	354883	354883	0	0
Steam	117608	117608	0	0
Cooling	0	0	0	0

C8.2f

(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.

Basis for applying a low-carbon emission factor
No purchases or generation of low-carbon electricity, heat, steam or cooling accounted with a low-carbon emission factor

Low-carbon technology type
<Not Applicable>

Region of consumption of low-carbon electricity, heat, steam or cooling
<Not Applicable>

MWh consumed associated with low-carbon electricity, heat, steam or cooling
<Not Applicable>

Emission factor (in units of metric tons CO2e per MWh)
<Not Applicable>

Comment

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	No third-party verification or assurance
Scope 3	No third-party verification or assurance

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 and/or Scope 2 emissions and attach the relevant statements.

Scope
Scope 1

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
Kordsa Turkey 2018 GHG Scope 1 Verification Statement_QSI.pdf

Page/ section reference
Pg 1&2

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
48

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
No, but we are actively considering verifying within the next two years

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?
No, but we anticipate being regulated in the next three years

C11.1d

(C11.1d) What is your strategy for complying with the systems in which you participate or anticipate participating?

Among the countries Kordsa operates in, Turkey is the only country which is in the process of establishing a carbon pricing mechanism. The method is not determined yet but it is expected to be either an emissions trading scheme (similar to EU ETS) or a carbon tax approach. KTR Kordsa Izmit production facility in Turkey is currently reporting its stationary emissions on a mandatory basis as part of the Regulation on Monitoring GHG Emissions. We are aware that the introduction of a carbon pricing mechanism in Turkey or any other country that we operate in, will result in future liabilities for us. Therefore, we intend to do a detailed analysis in the short term and set an internal price for carbon to be pro-active and resilient to future liability risks.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

No, but we anticipate doing so in the next two years

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

2

% total procurement spend (direct and indirect)

40

% Scope 3 emissions as reported in C6.5

0

Rationale for the coverage of your engagement

With the aim of establishing sustainable supply chain, we have started a Sustainability Supplier Assessment process in the reporting period. This assessment includes economic, HSE and social assessment questionnaires including but is not limited to energy and water management measures, life cycle resource efficiency approach, eco-friendly product design etc. We have selected our top 10 strategic raw materials and machinery & equipment suppliers total of 13 suppliers we collaborate with, 9 being raw material and 4 being machinery and equipment supplier. These 13 suppliers represent approximately 40% of our total procurement spent in the reporting period. As part of the process, we grade the assessment results under 4 categories; Not Participating, Low – Medium – High Participation and accordingly the assessment frequency and supportive actions are identified.

Impact of engagement, including measures of success

In the reporting period, 9 of the selected 13 suppliers have successfully completed the Sustainability Supplier Assessment Process and we have achieved a 69% participation rate. Our aim with this process is to identify the as is situation of our top 10 suppliers and accordingly establish a road map to support the ones scoring low, and encouraging the ones performing highly. 4 of the assessed suppliers have performed very highly whereas medium and low scores have been assigned to 3 suppliers for both categories. Overall, we measure the success of an impact as our effort to establish and maintain a sustainable supply chain. Therefore, initiation of this assessment process was a success. In the future, we may use this data to calculate and better manage our Scope 3 emissions arising from our immediate supply chain.

Comment

C12.1c

(C12.1c) Give details of your climate-related engagement strategy with other partners in the value chain.

Kordsa has established a Sustainability Roadmap, laying out the milestones to enable sustainable operations covering a 5 year period.

Moreover, as parts of initiatives conducted to engage our sustainability efforts with our value chain, including all key stakeholders, Kordsa annually publishes its Sustainability Report as part of which, periodic stakeholder engagements are held via one-on-one meetings and workshops in order to regularly update Kordsa's material sustainability topics. This engagement covers our key stakeholder groups which are identified by the Executive Lead Team during the first Kordsa Sustainability Task Force workshop, are; employees, customers, local communities and governments, suppliers, investors and shareholders.

Additionally, to be able to maintain active communication with its value chain covering sustainability topics such as climate change and water management, Kordsa actively participates in Business Council on Sustainable Development (BCSD Turkey). Measure of success for value chain engagement covers the continuation of our communication efforts. As a result of our performance disclosure and direct as well as indirect engagements, we continued our success to be in the BIST Sustainability Index (BIST SI). We measure our success on value chain engagements regarding sustainability (including climate-relate) performance via maintaining our position in the BIST SI.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

Direct engagement with policy makers

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Mandatory carbon reporting	Support	While Turkey was in the process of preparing the EU Acquis on Monitoring GHG Emissions (MRV) we contributed to the process via providing feedback on proposed Regulation draft.	We have supported the process during the preparation and announcement of the Reputation. Since the Regulation came into force, we have been reporting our emissions within the corresponding scope on an annual basis complying with the requirements.

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Our Sustainability Task Force (Sustainability Committee) meets quarterly and monitors Kordsa's progress against the 5-year Sustainability Road Map which is compiled following comprehensive preparation and defines the priorities and commitments covering all pillars of sustainability including climate change management. The Sustainability Road Map includes commitments and targets covering all material sustainability issues for Kordsa's direct and indirect operations (including energy and GHG emissions' management) which are determined following a holistic stakeholder engagements. The outcomes of the quarterly Sustainability Task Force meetings are reported to the Board level Executive Lead Team to make sure the actions taken and the targets set are in line with overall corporate objectives. As part of our indirect activities to influence climate-related policy, we actively participate with NGO's and associations such as Business Council on Sustainable Development Working Groups, through which we submit our feedback and recommendations on existing and emerging policies covering sustainability-related topics such as low carbon development and energy management.

Managing all activities with the Executive Lead Team's contribution and approval, we make sure our activities are consistent with our Sustainability Roap Map and on a broader level, long-term business objectives. By signing the UN Global Compact in 2014, we commit to implement universal sustainability principles to ensure our actions and activities are consistent with global agenda.

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication
In mainstream reports

Status
Complete

Attach the document
Kordsa Annual Report 2018_EN.pdf

Page/Section reference
44

Content elements
Governance
Strategy
Risks & opportunities

Comment

Publication
In voluntary sustainability report

Status
Underway – previous year attached

Attach the document
KORDSA_Sustainability Report_2017_EN.pdf

Page/Section reference
22, 26, 47, 54, 55

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

C14. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	COO EMEA	Chief Operating Officer (COO)