KORDSA TEKNİK TEKSTİL A.Ş. - Climate Change 2021

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 great know-how on reinforcement materials. Kordsa now operates in 5 countries, namely, Turkey, Brazil, Indonesia, Thailand and the US with 4,580 reinforcers at its 12 production facilities. 2 of these production facilities have also R&D activities. Kordsa had 35 active R&D projects in the reporting year. These projects focus on issues like: reducing rolling resistance, eco-design, chemical recycling, reducing the weight of products, reducing water pollution and GHG emissions.

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 employees and customers. 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 for all its key stakeholders and the society by offering high value-added innovative reinforcement solutions to its customers, 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
Reporting year	January 1 2020	December 31 2020	Yes	1 year

C0.3

(C0.3) Select the countries/areas 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 chosen approach for consolidating your GHG 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, some of the climate-change related responsibilities of the CEO are as follows: - Reviewing and guiding climate-related strategies - Identification of targets and approval and financing of projects that will lead the way to achieving the climate targets. - Ensuring the company performs within the limits of the pre-determined energy and water management goals - Management of climate-related risks and opportunities. During the reporting year, our CEO has led many climate-change related decisions, one of them being the approval of a renewable energy (Solar PV) investment in our Thailand plant. This investment was approved in 2020, and will be finalized in 2021. Another decision led by our CEO was appointment of EMEA Region COO as our Sustainability Sponsor.
Board-level committee	In our organization chart, our Executive Board, which is named as Executive Leadership Team, is responsible for making decisions on how to take action on climate related issues. The Kordsa Executive Leadership Team (ELT) is chaired by the CEO and consists of Regional COO's who are in charge of plant operations, Chief Finance and Supply Chain Officer, Composites COO, Chief Human Resources, Legal and IT Officer, Chief Global Sales and Market Development Officer and Global Technology Director. Some of the climate-related responsibilities of ELT are: - Application of climate-related strategies - Monitoring targets and performance - Assessing and managing climate-related risks and opportunities. In 2020 one of the major climate-related decisions approved by our ELT is inclusion of all relevant Scope 3 emission categories in our GHG inventory calculations.

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	Scope of board-level oversight	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	<Not Applicable>	The Board of Directors, our supreme governing body, supervises performance on the sustainability priorities at Kordsa. The Kordsa Executive Leadership Team (ELT) is chaired by the CEO and consists of Regional COO's who are in charge of plant operations, Chief Finance and Supply Chain Officer, Composites COO, Chief Human Resources, Legal and IT Officer, Chief Global Sales and Market Development Officer and Global Technology Director. ELT is responsible for plant operations and sets targets for sustainability focus areas determined biennially within the company and revises them when necessary. ELT quarterly discusses and approves action plans based on reported monthly Business Process Review outcomes. This quarterly ELT reviews not only include Kordsa's progress against set targets (including climate-related energy consumption targets and GHG emission reduction targets) but also the risk assessment process outcomes (climate-related issues being covered under various risk types such as production and legal risks).

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)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Operating Officer (COO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Financial Officer (CFO) *At Kordsa this position is named as: "Chief Finance and Supply Chain Officer"*	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Environment/ Sustainability manager *At Kordsa his position is named as "Corporate Brand, Communication and Sustainability Manager"*	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Other, please specify (Sustainability Management Team)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Environmental, Health, and Safety manager *At Kordsa this position is named as "Safety, Health and Environment Manager"*	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Energy manager	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than 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).

Our performance in sustainability priorities is embraced at the level of Board of Directors (BoD), our supreme governing body in Kordsa. The BoD takes sustainability principles and the environmental impacts of company activities into account when determining its corporate governance strategy.

Our CEO, who reports to the BoD, works with the Kordsa Executive Leadership Team (ELT) to determine our company's environmental, social, and governance (ESG) priorities, risks, and opportunities, and develops ESG policies accordingly.

ELT is chaired by the CEO & consists of:
- **Regional COOs** who are in charge of plant operations,
- **Chief Finance & Supply Chain Officer**,
- Composites COO,
- Chief HR, Legal & IT Officer,
- Chief Global Sales & Market Development Officer
- Global Technology Director.

ELT meets quarterly & 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 & performance against these targets are reviewed as part of BPR meetings at which current status of each Kordsa site is discussed. These reviews include strategic and emerging aspects & also covers climate-change related topics.

In 2020, Kordsa ELT appointed our **EMEA COO** as Kordsa Sustainability Sponsor globally. This appointment will be effective from 2021.

Our Corporate Brand, Communication and **Sustainability Manager** who reports to the BoD & CEO, leads the **Sustainability Management Team (SMT)**, with whom she meets four times a year. She ensures the coordination between departments & senior management to achieve the relevant goals while coordinating the preparation of the annual sustainability performance report.

"**9 Sustainability Leaders (SLs)**", most of whom are Safety, Health and Environment executives at their relevant Kordsa plants, are permanent members of the **Sustainability Management Team**.

To achieve the climate-related targets envisaged as part of the company's strategic plans, performance indicators were defined and one of the SLs' responsibilities is to monitor them. Another responsibility is to ensure the implementation of the planned projects that will help reach the targets by following them with the relevant regional departments. The Team also has members from the Market Development, R&D, Supply Chain, HR, Finance, and Operations departments who are not permanent but who act as "Advisory Members" when necessary.

SLs track and report sustainability performance indicators for their regions. These reports include Kordsa's sustainability performance indicators. SLs also create Quarterly Sustainability Performance Tracking Reports, which include tracking & evaluations towards achieving the targets, & are submitted to senior management every three months.

Monthly meetings are held among each site's **Energy Managers** to discuss energy management activities, status and outcomes as well as potential improvement measures to be implemented. As part of Environment, Health and Safety activities, all operational and safety related climate change issues are discussed at weekly Site **SHE (HSE) Manager**Meetings which is held with the participation of **Global SHE (EHS) 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 roles have active assessment & 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 & 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 & all environmental aspects under environment, security, health and safety risks.

At Kordsa, we create implementation and action plans in line with our short and long-term goals and make them public through our reports. We included the actions taken and their results within the scope of our first five-year sustainability roadmap in the 2019 Sustainability Report. As part of the new targets set in 2020, we have formed four new workgroups. In 2020, Employment and Human Rights, Business Ethics, Environment, and Sustainable Supply Chain workgroups all started to design projects and programs to be carried out towards the new five-year goals.

C1.3

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

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	The management of climate-related issues are included in the KPI's of key decision-makers.

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).

Entitled to incentive	Type of incentive	Activity inventivized	Comment
Chief Executive Officer (CEO)	Monetary reward	Emissions reduction target	The CEO is ultimately responsible of all climate-related issues on a company level. Achievement of business objectives including meeting emission reduction 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 fulfils his/her targets and becomes entitled to a monetary reward in the form of an enhanced salary and a bonus.
Chief Operating Officer (COO)	Monetary reward	Emissions reduction target	The COO's of each region are ultimately responsible of all climate-related issues on regional level. Achievement of business objectives including emission reduction targets, OPEX optimization due to energy reduction etc. Each region/site COO has a target to contribute to Kordsa's overall GHG reduction target, which is 2.5 % reduction of Scope 1 & 2 GHG emissions with respect to 2018 which is our base year. This target is also included in their KPI's. If they meet or exceed this target, they become entitled to a monetary reward in the form of an enhanced salary and a bonus.
Chief Procurement Officer (CPO)	Monetary reward	Supply chain engagement	The position that equals to CPO in our organizational chart is our Chief Finance and Supply Chain Officer. Our CPO has supply chain engagement related targets which is also included in her KPIs. If the target is met, our CPO becomes entitled to a monetary reward in the form of an enhanced salary and a bonus.
Environment/Sustainability manager	Monetary reward	Emissions reduction target	The position that equals to Environment/Sustainability Manager in our Organizational Chart is our Corporate Brand, Communication and Sustainability Manager. Kordsa has a global level Sustainability Roadmap consisting of the Company's medium and long-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 Brand & Corporate Communication and Sustainability Manager has individual targets in achieving each target in the Sustainability Roadmap. As a result of realization of these targets, Brand & Corporate Communication and Sustainability Manager receives a monetary reward.
All employees	Monetary reward	Efficiency project	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 2020, a total of 98 applications were received globally, 39 of which have been announced as winners and deemed their monetary rewards.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time 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	5	Mid-term and relatively larger commitments/projects are managed with a dedicated CAPEX X+ 5 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	5	35	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 starting from a CAPEX X+5 horizon.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

The impact level of any risk and opportunity on our business, is determined by the financial and non-financial evaluation criteria. The activities of Kordsa are taken into account in terms of external and internal contexts when the areas in terms of which risk impact will be evaluated (e.g. financial, reputation, people, business continuity, legal and environment) and the qualitative and quantitative indicators for risk assessment criteria are determined; the expectations and needs of the external and internal stakeholders are taken into consideration when forming the risk assessment framework. We identify impact level of the risk or opportunity to be substantive (**medium impact or higher**) if:

1. Finance: Within one-year period more than 0.5% deviation from the budgeted EBITDA (For 2020 this ratio corresponds to 410,000 USD), or

2. Company Reputation: Short-term campaign in the national media, regional long-term campaign in against the company or a request from the local media to make a detailed explanation and call for public lighting,

Damage to relations with stakeholders, which could lead to cancellation of important contracts (sales, investment, business partnership),

Long-term loss of more than one customer with an effect of 500,000 USD or more or one customer with an effect of more than 1 million USD or more on the profitability of the company, or

3. People: Serious injuries requiring hospital care and medical treatment

A few key personnel from some units collectively leave in a short period of time,

10-15%% negative change in employee satisfaction survey in comparison with the previous period,

Staff turnover rate is between 7% and 9%, or

4. Business Continuity: Between 2 days and 1 week business interruption at a production line, or

5. Legal: Facing a legal sanction that could result in the company's at least one activity stopping for a period up to 1 month

Facing high penal sanctions (e.g. a fine over 500,000 USD) or

6. Environment: Sudden and / or gradually accumulating environmental damage affecting the areas nearest to the plant (e.g. environmental pollution up to 1 km from site limits)

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered
Direct operations
Upstream
Downstream

Risk management process
Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment
More than once a year

Time horizon(s) covered
Short-term
Medium-term
Long-term

Description of process
Kordsa has a Standard Operating Procedure (SOP) for Enterprise Risk Management. This SOP is based on various Corporate & Risk Governance standards developed over the last 15 years. Some of these are: COSO framework, AS / NZS 4360 and ISO31000. CFO is the leader for all risk management related activities. Kordsa's risk management process consists of risk identification, prioritization (analysis and evaluation), control, reporting & monitoring sub-processes. These processes aim to prevent the situations or mitigate their effects that may prevent Kordsa from reaching its objectives by ensuring that risks are identified, assessed and appropriately addressed. Creating risk register is one of the basic steps in the risk management process. In order to develop a "Risk Register", the risks of Kordsa must be defined. In risk identification, the risk is basically expressed as including three components; event, cause & result. Identified risks are prioritized according to their importance. Therefore, it is ensured that time & resources are transferred to primary topics for operations. Kordsa sets a level of risk tolerance to prioritize the risks & classifies the risks according to their probable effects that may occur at that level. While prioritizing risks, all risks are evaluated according to impact & likelihood criteria. The impact level is determined by the financial & non-financial evaluation criteria. The impact levels are related to the tolerance levels of Kordsa. Risk likelihood & impact scales, & risk heat map demonstrating the criticality categorization are reviewed & approved by the Executive Leadership Team. Risks are assessed throughout the entire value chain stages, including direct operations, upstream and downstream. While performing risk assessments time horizons covered start from 1 years (short-term) up to 35 years (Long term) which also gives us a chance to assess the long-term effects of climate change. If the outcome of a risk event is related to more than one heading (e.g. financial, reputation, people, business continuity, legal and environment) on the impact scale, the impact value in the heading with the highest effect as the relevant risk exposure value is taken into consideration. Both the risk impact & likelihood scales include 5 degrees, as follows: 1. Very low 2. Low 3. Medium 4. High 5. Very high Medium or higher impacts are identified as substantive impact (details of which are given under question C2.1b). A residual risk level score is the multiplication of the likelihood and impact values determined by taking existing controls into account. The complementary dimension of the organization's risk appetite is to define set of multipliers (from 1x1 to 5x5) correspond to the area of unacceptable risk level. Risk heat map is composed of 4-level grouping; 1. Low (1-2) 2. Medium (3-6) 3. High (7-12) 4. Critical (13-25) As part of the Global Risk Management structure, Kordsa identifies internal/external business risks, including climate-related risks, through yearly workshops & brainstorming sessions held with function leaders both on company and asset level. For prioritizing risks; Kordsa should identify the workshop participants for enterprise risk prioritization. The Enterprise Risk Management Specialist (ERMS) has the primary responsibility in organizing and ensuring the participation of the following group members: - Early Detection of Risk Committee (EDRC) - Enterprise Risk Management Committee (ERMC) - Key entity / site / unit managers The risks & relevant risk mitigating actions are followed up for any updates, in monthly basis. While doing so, both top down &bottom up approaches are effectively utilized. While determining the relative significance of climate-related risks in relation to other risks, afore-mentioned 4 risk prioritization groups are used & climate-related risks with "High" & "Critical" overall score in the risk Prioritization Table is managed promptly Risk appetite helps to properly define the importance & acceptable levels of risks & provides basis to decide whether an action will be applied or not. Main risk actions are; avoid, accept, reduce, share & transfer the risk. Risk monitoring responsibilities are distributed in accordance with the prioritization level of the risks. All risks of each entity is reviewed monthly with the entity management in details. While prioritizing climate-related risks & aiming to create & capitalize on opportunities, Kordsa manages compliance risks & operational risks promptly. As for all the corporate risks, the ones that have a critical and high overall risk score are prioritized in terms of risk action planning. Application of the process to a transition risk: Risk 1, which is given under Section 2.3a of this report was assessed as follows: This risk is the introduction of an ETS within the scope of Turkish MRV, which will result in some financial liability as we may need to purchase emission allowances and/or reduce our GHG emissions within the scope of this regulation. After this risk was identified, it was prioritized during the enterprise risk prioritization workshop, which was held with the function leaders both on company and asset level. During this assessment although impact of this risk was scored medium (3), the likelihood was scored as very high (5), which resulted in an overall score of 15 (critical risk). After this risk was scored as critical, main risk action is decided. Our action to manage this risk was reducing the effects and accepting the rest of the liability that comes with this risk. Application of the process to a physical risk: Acute physical risks may pose a substantive financial impact if their frequency & severity levels increase. This risk applies to both our direct operations & our supply chain. For example, in our Thailand, Indonesia & Turkey facilities, due to their location, they can be exposed to flooding risks, where our facility in Brazil faces the risk of electricity shortages due to the grid's dependency on hydropower in years of extreme drought. We have many critical suppliers in our supply chain, which are located in areas where there are severe winter storms or some which are located in hurricane zones. As the frequency & severity of extreme weather events increase, our supply chain operations may be disrupted. We may not be able to reach critical raw materials, or we may need to source from alternative suppliers which may implement a drastic increase in our raw material prices due to the scarcity of the raw material. In such a case our direct costs will increase considerably. During this assessment both the impact & the likelihood of this risk was scored as Very High (5), which resulted in an overall score of 25 (critical risk). After this risk was scored as critical, main risk action is decided. Our action to manage this risk was reducing the effects & accepting the rest of the liability that comes with this risk.

C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	RELEVANCE: Operating in wide range of geographies, Kordsa is an energy and emission 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 indirect operational costs. EXAMPLE: Kordsa is under reporting obligation as part of "The Regulation on Monitoring of GHG Emissions" which came into force in Turkey in 2014. 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, and we are in full compliance 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. As this risk is not assessed to have substantive impacts, it is not reported under section 2.3a of this report.
Emerging regulation	Relevant, always included	RELEVANCE: As part of the company-wide risk assessment, emerging regulations-related risks are also assessed covering all operational locations. For example, in 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. EXAMPLE: 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 occurs. In order to avoid this from happening, Kordsa takes active measures to improve its emissions performance through a dedicated team. In light of the Paris agreement, GHG monitoring, reporting and trading schemes can also be implemented in other countries of our operation. Another important emerging regulation is the EU Carbon Border Adjustment (CBA), which is simply an extension of intra EU-ETS on the global scale. The EU, which so far focuses on intra-EU emissions, will extend its carbon pricing system to its partners through the CBA mechanism to level off the cost disadvantage (created by the EU carbon regulations) of intra-EU producers and to secure emissions reductions globally. Implementation of a Turkish ETS scheme and EU CBA, will directly impact our operational expenses. Risk 1 under section 2.3a of this report shows in detail how this risk is assessed and managed.
Technology	Relevant, always included	RELEVANCE: In order to stay competitive and meet our clients demands we almost always rely on technology and our R&D activities. Technological developments are always included in our risk assessments both as a risk and an opportunity. As a risk, if we fail to meet our clients' demands on producing lightweight, technologically advanced and environmentally friendly fibers, we may lose a considerable amount of our clients. As an opportunity however, we rely on technology and our R&D projects to be one-step ahead of our competition. EXAMPLE: For example, in the reporting period, 2% of the revenue was dedicated to R&D projects. These R&D projects help us stay ahead of our competition. One of the risks that were identified under technology is the increasing demand of reducing the rolling resistance (RR) of tires. As our customers constantly work to reduce the RR, producing one of the main components of a tire if we don't work to make our product technologically better, we may lose our customers. Although this is a risk we see this issue as an opportunity as well, because the more technologically advanced our products, the more chance we have to increase our sales. Opportunity 3 under section 2.4a shows in detail how this opportunity is realized.
Legal	Not relevant, explanation provided	RELEVANCE: Our processes are not extremely carbon intensive like cement industry, fossil fuel power plants or oil and gas industry. Therefore, currently our possibility of facing climate-related litigation claims is very low. Legal impacts are one of the 6 impact categories that are identified under Kordsa's SOP for Enterprise Risk Management. 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. However, these risks are evaluated under current and emerging regulation risk-types.
Market	Relevant, always included	RELEVANCE: Kordsa and its subsidiaries 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 main risk types. EXAMPLE: Market risks mainly includes risks affecting Kordsa's market share and customer relationship management. The Market drives the economic indicators of a company and the competition. Any change occurring as a result of changing trends or changing customer preference, may have a significant impact if we are unable to meet enhanced expectations on low carbon products. Changes in the market can also be sources of opportunity, for example, as the electric-powered cars become more common, it is a necessity to produce lighter batteries. Kordsa's light-weight and durable carbon-fiber fabrics, which are used as a necessary component while producing battery enclosures, are already in high demand. We are expecting the composite business to grow more in the not-so distant future.
Reputation	Relevant, always included	RELEVANCE: Company reputation is one of the 6 main impact categories assessed under Kordsa's SOP for Enterprise Risk Management. 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 company reputation risks. EXAMPLE: As Kordsa is a global industry leader, offering products to a wide range of sectors, we are 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 Department is working towards meeting expectations of investors and other stakeholders with regards to climate change. As explained in Risk 2 under section 2.3a, our tire-reinforcement clients have ambitions emission reduction targets, some of them have even announced their Net-Zero targets, which means they have already committed to reduce their supply chain emissions as well as their Scope 1 and 2 emissions. Having ambitious targets, our clients tend to get more ambitious with their expectations from suppliers and their products, if we fail to meet their demands, we may lose a significant amount of business. This risk is both a market risk and a reputational risk which is managed by investing in sustainability of our company and also investing in R&D projects to meet the customer expectations.
Acute physical	Relevant, always included	RELEVANCE: 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. EXAMPLE: 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 that may be 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 riverbed. 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. Kordsa also has facilities in Indonesia and Thailand which are under the risk of extreme precipitation and massive floods. Our facility in Brazil faces the risk of electricity shortages due to the grid's dependency on hydropower in years of extreme drought. On the supply-chain side acute-physical impacts of climate change can disrupt the operations of our critical suppliers which as a result may increase our direct costs as we will be forced to find other suppliers. Details of this risk can be found under section 2.3a of this report. (Risk 3)
Chronic physical	Relevant, always included	RELEVANCE: If not well managed, climate change is expected to cause drastic chronic physical impacts. 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, hence the profitability could be directly affected by these changes. EXAMPLE: At fabric 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.

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 & Primary climate-related risk driver

Emerging regulation	Carbon pricing mechanisms

Primary potential financial impact
Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Our plant in Izmit, Turkey is under the scope of Turkish MRV regulation. 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 very high probability that additional requirements will be implemented in the short to medium term. A draft climate regulation was also published in the end of 2020 under the Partnership for Market Readiness Program of The World Bank, and this document also signals an upcoming ETS system in Turkey. Another emerging regulation that poses a great risk for us is the EU-Carbon Border Adjustment (CBA). As we export some of our production to EU Countries, a taxation on our products based on carbon content will definitely increase the cost of our products thus reducing either our profitability or our competitive advantages.

Time horizon
Medium-term

Likelihood
Very likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
2148520

Potential financial impact figure – maximum (currency)
4126655

Explanation of financial impact figure
The potential financial impact figure was estimated based on several different scenarios and price projections, details of which are given below: For the implementation of an ETS system in Turkey, based on recent simulation studies performed under the World Bank's PMR program, the scenarios cap the emissions at 80% and include a free allocation of 50% of this capped amount. Which means we would either have to purchase or reduce approximately 60% of our GHG emissions under the scope of a potential Turkish ETS. In 2020 our verified GHG emissions under Turkish MRV program was 40,727 tCO2e. 60% of which equals to 24,437 tons of CO2e. The min. price we use for Turkish ETS is 25 TL (3.57 USD), which is taken from the base-price published in the same simulation study. And the max. price we use is 28.28 USD which is taken from a recent report on EU-ETS market. Using these prices, the min impact is 87,160 USD and the max. impact is calculated as 691,055 USD. However, the biggest financial impact lies on the EU-CBA mechanism. According to the report published by the Turkish Industry and Business Association (TUSIAD) textile industry is facing a min 0.84% and max. 1.4% tax on revenues from products sold to EU within the scope of this emerging regulation. Considering 77% of our production in Turkey and 2% of our production in Indonesia is exported to the EU (total export revenue of 245.4 million USD), we are facing a min. risk of 2,061,360 USD and a max risk of 3,435,600 USD. Hence the total min. financial impact is calculated as: 2,061,360+87,160=2,148,520 USD And the total max. financial impact is calculated as: 3,435,600 +691,055=4,126,655 USD

Cost of response to risk
360000

Description of response and explanation of cost calculation
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 2019 we have also invested in compressors and drier machines to reduce natural gas consumption which consequently reduces GHG emissions. The cost of response includes the cost of this investment made in 2019 and the total fees paid for consultancy and verification services during the reporting year. 2020 was an extraordinary year due to Covid-19 pandemic, that's why we didn't implement any other projects to reduce our Scope 1 GHG emissions in our Izmit Plant. As we have ambitious targets in reducing our GHG emissions, every project we implement to reduce our Scope 1 GHG emissions, will also be a measure to reduce the impact of this risk.

Comment

Identifier
Risk 2

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

Risk type & Primary climate-related risk driver

Reputation	Shifts in consumer preferences

Primary potential financial impact
Decreased revenues due to reduced demand for products and services

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Tire reinforcement products make up 85% of our business and our clients in this line of work are the leading tire manufacturers which have very ambitious emission reduction targets. Some of our clients have even announced their Net-Zero targets, which means they have already committed to reduce their supply chain emissions as well as their Scope 1 and 2 emissions. Having ambitious targets, our clients 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
High

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
12944263

Potential financial impact figure – maximum (currency)
32360657

Explanation of financial impact figure
As the defined type of financial impact is defined as decreased revenue due to changing consumer preferences, non-compliance with changing consumer preferences, may result in a loss in revenue between 2% to 5%. The estimated figure is calculated based on Kordsa's 2020 revenue (647.2 million USD). Minimum financial impact is calculated as 0.02 x 647.2 = 12.94 million USD Maximum financial impact is calculated as 0.05 x 647.2 = 32.36 million USD As 2020 was an extraordinary year, our revenue has also dropped considerably, therefore the impact of this risk can even be higher when we return to our normal operating conditions.

Cost of response to risk
273888

Description of response and explanation of cost calculation
In worst case scenario, this risk is defined as having potential to cause substantive financial impact for Kordsa. However, Kordsa implements vigorous 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 represents the total cost of reporting, advisory and membership fees paid in 2020 as part of Kordsa's effort to monitor, enhance and communicate its effort to remain as a responsible company.

Comment

Identifier
Risk 3

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

Risk type & Primary climate-related risk driver

Acute physical	Increased severity and frequency of extreme weather events such as cyclones and floods

Primary potential financial impact
Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
We have many critical suppliers in our supply chain, which are located in areas where there are severe winter storms or some which are located in hurricane zones. As the frequency and severity of extreme weather events increase, our supply chain operations may be disrupted. We may not be able to reach critical raw materials, or we may need to source from alternative suppliers which may implement a drastic increase in our raw material prices due to the scarcity of the raw material. In such a case our direct costs will increase considerably. In 2020 we have faced such a situation, where some of our very critical suppliers had to cease their operations due to a severe winter storm.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
100000000

Potential financial impact figure – maximum (currency)
200000000

Explanation of financial impact figure
In 2020 we have faced a situation where due to severe climate events some of our very critical suppliers had to cease their operations. As a result the raw material prices have doubled and tripled after a while. The potential financial impact is estimated assuming such an incident will impact more of our critical raw material suppliers. The minimum financial impact is calculated assuming the raw material prices will double, which has an impact of 100 million USD. The maximum financial impact is calculated assuming that the raw material prices will triple, which has an impact of 200 million USD.

Cost of response to risk

0

Description of response and explanation of cost calculation
This risk is very hard to manage as it is unpredictable and there are some raw materials that are produced by only very few companies all over the world. These are classified as critical suppliers/raw materials. In order to reduce the impact of this risk, we try to keep stocks high for the critical raw materials. However, if the change in prices last longer than 1 month, we don't have any chance but accept this risk. Keeping high stocks is not an extra cost item for us, because with high stocks we become resilient to market fluctuations and this is a business as usual practice for Kordsa to reduce the impact of market volatility. Diversifying the product portfolio is also another option, in order to reduce the impact on the revenue. We already have a diverse product portfolio, which helped us manage the impact of the 2020 incident on our revenue. The final response for this risk is a gradual increase on our prices (transferring the risk), which our clients understand, because the possible scarcity of raw materials is a well-known issue in our sector. Overall, all of these responses, does not cost any extra expense to Kordsa. This is the reason why, the cost of response to this risk is given as zero.

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 recycling

Primary potential financial impact
Reduced direct costs

Company-specific description
As part of yarn production we have a by-product called "Nylon 6.6" (NY66) chips, in the previous years, we were selling this waste product as a raw material for the engineering industry. Which posed an opportunity for us to find ways to further process this material to become a raw material for the industry. Recently however, our research and development team is working on how to use this by-product in our own production, to produce nylon yarn and fabric, 20% of which is composed of recycled material. We have tested this new product with recycled content, and the test results are very promising. As the tire industry has very high standards due to safety reasons, we have also submitted samples of this product to our customers and we had positive feedback from them. 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 using the side-product of our production process as a raw material to produce nylon yarn with recycled content. This will in turn reduce our direct operating costs as we would need to purchase less raw materials. The recycled nylon yarns that were produced by Kordsa, has also been certified by Global Recycled Standard. Currently the recycled content in a tire is around 200 grams, if this product is approved by the industry, this product will add 20 grams more to this recycled content, increasing the recycled content in a tire by 10%.

Time horizon
Short-term

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)
12000000

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

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

Explanation of financial impact figure
The potential financial impact figure is difficult to assume as there are many variables and many assumptions involved. Assuming that 20% of the nylon yarn we produce is produced using 20% recycled, 80% virgin chips, we would need to purchase 4% less virgin chips. (0.2x0.2=0.04). Which would have an impact of about 12,000,000 USD. This new, innovative and sustainable product will also present us with the opportunity to apply premium prices, as sustainability and climate change is one of the main focus areas of our customers, but this impact is not factored in our financial impact calculations yet.

Cost to realize opportunity
80000

Strategy to realize opportunity and explanation of cost calculation
During the reporting period we have invested 80,000 USD on this R&D project. This investment includes trial production batches and necessary tests. This product is still being developed, and we are still investing in this project in order to bring it to perfection.

Comment

Identifier
Opp2

Where in the value chain does the opportunity occur?
Downstream

Opportunity type
Products and services

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

Primary potential financial impact
Increased revenues resulting from increased demand for products and services

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. At Kordsa we are constantly working on R&D projects to advance our existing products and to create new products for emerging markets. One of our main areas of research is to reduce the weight of our products for tire manufacturers, which will in turn reduce the rolling resistance of their products. In order to do this, we invest in R&D projects that research reducing the weight without compromising the durability of our products. The tire cords are usually covered with rubber underlay and overlay during manufacturing of tires. If we are able to produce a product that doesn't require one of these rubber coatings, this will also reduce the total weight of the tire. If we are able to produce an innovative product that in turn helps reduce the weight (and rolling resistance) of a tire, this product will be in high demand in all the tire industry. This will present us with an opportunity to increase our revenues through increased demand for our products.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
6472000

Potential financial impact figure – maximum (currency)
32360000

Explanation of financial impact figure
Potential financial impact figure represents the revenue generated in 2020 from sales of innovative products developed through R&D projects and commercialized by Kordsa namely TWIXTRA and CAPMAX. This figure is around 1% of Kordsa's global revenue (647.2 million USD) in 2020, therefore the magnitude of impact is considered to be medium-high. As 2020 was an extraordinary year, our revenue has also dropped considerably, therefore the potential financial impact of this opportunity will even be higher when we return to our normal operating conditions. 1% impact (6,472,000 USD) is already realized impact in 2020, therefore it is given as the minimum financial impact, and in the medium-term this impact can go up to 5%. Hence, the maximum potential financial impact is identified as 5% of Kordsa global revenue in 2020 which equals to 32,360,000.

Cost to realize opportunity
828648

Strategy to realize opportunity and explanation of cost calculation
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. As a strategy to realize the above-mentioned opportunity, Kordsa has dedicated a budget for all of its R&D projects. In the reporting period, a budget of around 828.648 USD was dedicated for reducing rolling resistance projects.

Comment

Identifier
Opp3

Where in the value chain does the opportunity occur?
Downstream

Opportunity type
Products and services

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

Primary potential financial impact
Increased revenues through access to new and emerging markets

Company-specific description
At Kordsa we are constantly working on R&D projects to advance our existing products and to create new products for emerging markets. Our Composite Technologies Center Of Excellence serves as one of the very few integrated manufacturing centers of the world. At Composite Technologies Center of Excellence, we develop innovative intermediary products primarily for aerospace and automotive as well as sports, maritime industries and industrial applications. These R&D activities mainly focus on reducing the weight of the final product, which in turn reduces the fuel consumption and GHG emissions. As the GHG emission regulations are becoming stricter throughout

the world, these new products will be more attractive for the buyers. The innovative and unique intermediate products and applications for composites technologies developed by Kordsa, presents an opportunity to increase our revenues through access to new and emerging markets. Some of our innovative projects include: • Developing a Prepreg to be used in composite trunk lids for public transport vehicles, which will reduce the weight of the vehicle, which in turn will reduce the fuel consumption • Developing a Hot-Melt Prepreg with self-bonding properties with metals for the production of metal composite hybrid components through compression molding. Since the prepreg material under development cures outside the autoclave, the energy consumption will be reduced, and thanks to the use of low-density prepreg instead of metal parts, carbon emissions will be lower in parallel to the reduced fuel consumption. • We are producing carbon fiber fabrics that are used in the battery enclosures of electric vehicles. This fabric reduces the final weight of the EV batteries, while increasing the durability of the enclosure. In parallel with its strategy of increasing its global market share and expanding its product range, Kordsa acquired two major players of the composite industry in the US, Fabric Development Inc. and Textile Products Inc. as well as San Diego-based Advanced Honeycomb Technologies in 2018, and in 2019 we have also acquired AXIOM. With these new acquisitions, Kordsa took a major step towards reinforcing its position in the North America.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
4974500

Potential financial impact figure – maximum (currency)
9949000

Explanation of financial impact figure
As a result of these investments and R&D activities, in the long-term we are expecting a 5% to 10% increase in our revenues coming from the sales of our composite products. In 2020 Kordsa's revenue from the sales of our composite products was 99.49million USD. Therefore, the min potential financial impact figure represents the 5% of the Composite Sales revenue, whereas the max. Financial impact figure represents 10% of the revenue that was generated in 2020 through sales of our innovative composite products. As 2020 was an extraordinary year due to Covid-19 related restrictions, our revenue has also dropped. Therefore, the impact of this opportunity will be much higher when we return to normal operating conditions.

Cost to realize opportunity
7100000

Strategy to realize opportunity and explanation of cost calculation
In order to realize this opportunity, we are constantly investing on R&D. Our R&D budget for composite products in the year 2020 was 7.1 million USD. In 2020 there were 14 new projects related to composite products.

Comment

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?
Yes

C3.1b

(C3.1b) Does your organization intend to publish a low-carbon transition plan in the next two years?

	Intention to publish a low-carbon transition plan	Intention to include the transition plan as a scheduled resolution item at Annual General Meetings (AGMs)	Comment
Row 1	Yes, in the next two years	Yes, we intend to include it as a scheduled AGM resolution item	We have already decided to commit to becoming net-zero by 2050. We are also developing a low-carbon transition plan to guide us on our path to net-zero.

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?
Yes, qualitative

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenarios and models applied	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. On another level, although we don't have any production facilities in Europe and Japan, we have very important customers in those regions, and therefore the NDCs of those regions are also included in our climate-related scenario analysis. As we identify our risks and opportunities in short-medium and long-term time horizons, we apply the same time horizons when assessing the climate-related scenarios. In 2020 we have also started working on getting a Science Based Target, therefore we will also include IEA B2DS scenario in the upcoming years to determine our climate related strategies. As a matter of fact, we have already adopted an emission reduction target which is in line with IEA B2DS Scenario. We aim to reduce our Gross Global Scope 1 and Scope 2 GHG emissions by 17.5% by the year 2025. This target was set in 2019 and our base year for this target is 2018. 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. In 2020 we have applied for 51 patents, 12 of which are low carbon product or process related applications.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	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. As a strategic decision influenced by climate-related risks & opportunities, we are constantly working on R&D projects to advance our existing products and to create new products for emerging markets. Our Composite Technologies Center of Excellence (CTCE) serves as one of the very few integrated manufacturing centers in the world. At CTCE, we develop innovative intermediary products primarily for aerospace and automotive as well as sports, maritime industries and industrial applications. These R&D activities mainly focus on reducing the weight of the final product, which in turn reduces the fuel consumption and GHG emissions. As the GHG emission regulations are becoming stricter throughout the world, these new products will be more attractive for the costumers Time horizons covered: Short-medium and long term CASE STUDY: Climate-related expectations of our customers has influenced our strategy and encouraged us develop more innovative and sustainable products, which reduce GHG emissions Some of these products are; Nylon Yarn with 20% nylon recycled content: 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. Our R&D team is working on how to use this by-product in our own production, to produce nylon yarn, 20% of which is composed of recycled material. We have tested this new product with recycled content, and the test results are very promising. We are producing carbon fiber fabrics that are used in the battery enclosures of electric vehicles. This fabric reduces the final weight of the EV batteries, while increasing the durability of the enclosure. E-GLASS PREPREG: In an ongoing collaboration with Ford Otosan, we are working to reduce the weight of the steel spring system that is present in HGVs. E-GLASS PREPREG was developed as a result of this project in 2019. This innovative sheet spring reduces the weight of the vehicle, hence reducing fuel consumption & GHG emissions.
Supply chain and/or value chain	Yes	Description of influence: Our whole value chain is always included in our climate-related risk analysis and the results of the risk analysis are always reflected to our short-medium and long-term strategies. As a result of our continuous risk assessment covering our supply chain, we have identified risks with a probable impact that can lead 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 if we don't maintain a sustainable supply chain, we are faced with a risk to our business continuity. Time horizons covered: Short-medium and long term A case-study of most important strategic decisions (medium & long-term): For example, one of our raw material is plastic which is derived 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. Our supply chain department prepared a Kralij Matrix through which, we assess suppliers with purchasing volume over 500,000 USD and these suppliers are classified using this matrix. In 2020, 94 suppliers from various sectors (i.e. raw materials, service, transport, energy, packaging) were included in this assessment. We assess these suppliers on a global scale based on economic, social and environmental aspects such as energy and emissions management. The magnitude of this strategic impact is considered to be high as sustainable supply chain is a critical element of our business success.
Investment in R&D	Yes	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. Time horizons covered: Short-medium and long term A case-study of most important strategic decisions (short-term): In the reporting period, Kordsa invested around 9.13 million USD 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	Yes	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 assets and resulted in a production disruption for over a month. Similar event with much lower magnitude took place in our Izmit- Turkey production facility in 2018, causing a temporary disruption to our production. Physical climate risks not only pose damage to our assets and result in additional CAPEX, but also they increase our OPEX through maintenance and testing costs. Time horizons covered: Short-medium and long term A case-study of most important strategic decisions (short-term): 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 As a strategic decision influenced by this risk we are giving utmost importance to effective operation of the existing climate control system through periodic maintenance. In the reporting period the maintenance costs were 34,527 USD.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Indirect costs Capital expenditures Capital allocation Assets Liabilities	REVENUES: Our financial planning process recognizes the climate-related risks and opportunities. In terms of risks, our net revenue is expected to decrease as a result of increasing operational as well as capital expenses due to increasing raw material and energy prices. This has a direct impact on our profitability. In terms of opportunities, however, there are many new and innovative products that we are working on developing, which will in turn give us access to new markets and increase our revenues. Time horizon covered: Short-Medium and Long-term A case study of how climate-related opportunities have influenced our financial planning (short-term): Our R&D team are constantly working on development of new innovative and environmentally friendly products to achieve low-carbon performance both during production and end-usage phases. According to a recent report, the electric vehicle market is expected to grow with a compound annual growth rate of 29% from 2021 to 2026. This presents Kordsa with a new opportunity for our composites business. Lightweight composites are a key element for the development of electric vehicles and sustainable transport solutions. Our carbon fiber fabrics can be used in battery enclosures of EVs, making the EV batteries lighter and more durable. This opportunity has also impacted our medium- and long-term financial planning as we are constantly investing on R&D to improve our low-carbon product portfolio. DIRECT COSTS: Our direct costs planning takes the climate-related risks into account as we are already experiencing price increase on especially fossil fuel derived raw materials. As there is a consistent and increasing trend to divest from fossil fuel intensive sectors, we expect the prices of raw materials to become higher. The risks of acute and chronic physical impacts of climate change are also factored in our financial planning, as it may impact our supply chain operations. Time horizon covered: Medium to long-term INDIRECT COSTS: Our indirect cost planning process takes the climate-related risks into account as we are already experiencing energy price increase due to climate-change related taxes and trading obligations. As there is a consistent and increasing trend to divest from fossil fuel intensive sectors, we expect the prices will become higher. Time horizon covered: Medium to long-term A case study of how climate-related risks and opportunities have influenced our financial planning (medium-term): In order to introduce climate change mitigation and adaptation efforts, many countries have introduced CO2 emissions trading or pricing systems. In one of the countries we operate in (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, and simulations on an Emission Trading System similar to EU-ETS are currently being performed under World Bank funded Partnership for Market Readiness Program. As we are already included in Turkish MRV, implementation of an ETS will have a considerable impact on our Turkish operations in the mid-term. This impact is foreseen to be around 1.74 million USD. CAPITAL EXPENDITURES: 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. Time horizon covered: Short-medium and long-term. A case study of how climate-related risks and opportunities have influenced our financial planning (short-term): Our CEO has approved an investment on Solar PV panels in our Thailand facility. This investment decision is influenced by climate-related risks and included in our short-term capex planning. The investment decision was finalized in 2020, and the investment will be finalized in 2021. CAPITAL ALLOCATION: Capital allocation has also been influenced by climate related risks and opportunities. As a result of our risk assessment, we have a dedicated R&D and energy efficiency budget. Time horizons covered: Short and Mid-term A case study of how climate-related risks and opportunities have influenced our financial planning (short-term):We have allocated a fair amount of capital on a project in which we have worked on the efficiency of production processes using an AI based technology. In the reporting year, Kordsa Izmit plant has spent around 496,932USD for the implementation of this project which resulted in major energy efficiency. ASSETS: 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. Also, acute and chronic physical effects of climate change may result in damaging our assets which influenced our long-term financial planning. Time horizons covered: Medium to long-term LIABILITIES: 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 Urbanization'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 most of the other mandatory reporters under the same Regulation, this will still be an addition of another low magnitude impact in the future. Time horizons covered: Medium to long-term

C3.4a

(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

At Kordsa our performance within the scope of our material sustainability issues is owned at the level of the Board of Directors, which is our top management body. Corporate Brand, Communication and Sustainability Manager who reports directly to CEO, leads the Sustainability Management Team and ensures coordination between departments and senior management team to achieve relevant goals while reviewing sustainability performance and reporting.

The sustainability management team is responsible for implementing Kordsa's sustainability strategy.

As the primary climate-related commitment we make, we set a target to reduce our GHG emissions intensity per unit of production by 1% annually.

In 2020, Kordsa Executive Leadership appointed our Chief Operational Officer EMEA as our global Kordsa Sustainability Sponsor in charge of following up sustainability related performance and strategies. This appointment will be effective from 2021.

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. We also invest in digitalization projects which enable us to save energy.

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 Supplier Sustainability Assessment Program, in order to ensure the resilience of our supply chain against sustainability related issues. The Assessment consists of economic, social and environmental aspects. Our assessment 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 program, we not only identify the "as is" situation of our strategic raw materials and be able to identify areas where we can support our suppliers sustain their operations and particularly become resilient to climate-related risks.

C4. Targets and performance

C4.1

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

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number
Abs 1

Year target was set
2019

Target coverage
Company-wide

Scope(s) (or Scope 3 category)
Scope 1+2 (market-based)

Base year
2018

Covered emissions in base year (metric tons CO2e)
435281.77

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)
100

Target year
2025

Targeted reduction from base year (%)
17.5

Covered emissions in target year (metric tons CO2e) [auto-calculated]
359107.46025

Covered emissions in reporting year (metric tons CO2e)
357050.41

% of target achieved [auto-calculated]
102.70045144715

Target status in reporting year
Achieved

Is this a science-based target?
Yes, we consider this a science-based target, but it has not been approved by the Science-Based Targets initiative

Target ambition
Well-below 2°C aligned

Please explain (including target coverage)
The target covers all our gross-global Scope1 and Scope 2 GHG emissions. We have submitted our commitment to SBTi, and we will also submit this target. This target is in set to be in line with the well below 2 degrees scenario. We target a reduction of 17.5 % from our gross-global Scope1 and Scope 2 GHG emissions, over a period of 7 years, which translates to 2.50 % reduction per year on average. The target is also checked using the target setting tool of SBTi, which resulted in the same reduction figure to be in line with the IEA WB2C using the absolute contraction approach. Although it seems like we have achieved this target, we will keep monitoring this target until the target year, as some of our GHG emissions have reduced due to Covid-19 pandemic in 2020, and the emission figure in 2020 does not represent our normal level of operations.

Target reference number
Abs 2

Year target was set
2019

Target coverage
Company-wide

Scope(s) (or Scope 3 category)
Scope 1+2 (market-based)

Base year
2018

Covered emissions in base year (metric tons CO2e)
435281.77

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)
100

Target year

2034

Targeted reduction from base year (%)
33.6

Covered emissions in target year (metric tons CO2e) [auto-calculated]
289027.09528

Covered emissions in reporting year (metric tons CO2e)
357050.41

% of target achieved [auto-calculated]
53.489818462057

Target status in reporting year
Underway

Is this a science-based target?
No, but we are reporting another target that is science-based

Target ambition
<Not Applicable>

Please explain (including target coverage)
The target covers all our gross-global Scope1 and Scope 2 GHG emissions. We target a reduction of 33.6% from our gross-global Scope1 and Scope 2 GHG emissions, over a period of 16 years, which translates to 2.10 % reduction per year on average. Although it seems that we have achieved 53.49% of this target, the total GHG emission figure of 2020 is not representative of our real production capacity, as we were impacted from Covid-19 related restrictions.

Target reference number
Abs 3

Year target was set
2020

Target coverage
Company-wide

Scope(s) (or Scope 3 category)
Scope 3 (upstream & downstream)

Base year
2020

Covered emissions in base year (metric tons CO2e)
1154044.01

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)
99.48

Target year
2030

Targeted reduction from base year (%)
25

Covered emissions in target year (metric tons CO2e) [auto-calculated]
865533.0075

Covered emissions in reporting year (metric tons CO2e)
1154044.01

% of target achieved [auto-calculated]
0

Target status in reporting year
New

Is this a science-based target?
Yes, we consider this a science-based target, but it has not been approved by the Science-Based Targets initiative

Target ambition
Well-below 2°C aligned

Please explain (including target coverage)
This is our first year in calculating our Scope 3 GHG emissions. According to our calculations 90.44 % of our impact lies in our Scope 3 category 1 GHG emissions, but we have also included Category 3 (Fuel and Energy Related Activities) and all our transportation related GHG emissions (Categories 4 and 9). All of these categories make up 99.48% of our total Scope 3 GHG emissions. We are targeting a 25% reduction on our Scope 3 GHG emissions until 2030, we have used the SBTi Target setting tool to create this target and the target is aligned with a Well-below 2°C pathway.

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?
Target(s) to increase low-carbon energy consumption or production
Net-zero target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number
Low 1

Year target was set
2019

Target coverage
Company-wide

Target type: absolute or intensity
Absolute

Target type: energy carrier
Electricity

Target type: activity
Consumption

Target type: energy source
Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)
Percentage

Target denominator (intensity targets only)
<Not Applicable>

Base year
2019

Figure or percentage in base year
0

Target year
2021

Figure or percentage in target year
5

Figure or percentage in reporting year
2.5

% of target achieved [auto-calculated]
50

Target status in reporting year
Underway

Is this target part of an emissions target?
Yes, it is part of our Abs1 and Abs2 emission reduction targets

Is this target part of an overarching initiative?
No, it's not part of an overarching initiative

Please explain (including target coverage)
This target covers all of our operations. We have a target of purchasing 5% of the electricity used in our facilities from renewable sources by the year 2021. This target is also part of our emission reduction targets Abs 1 and Abs 2 because we see it as a way to achieve our targets. In 2020 we have sourced 12,255 MWh of our electricity use in Turkey Izmit plant from renewable sources, this amount equals to %2.5 of our global electricity consumption and 7.63% of our electricity consumption in our Izmit plant.

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number
NZ1

Target coverage
Company-wide

Absolute/intensity emission target(s) linked to this net-zero target
Abs1
Abs2
Abs3

Target year for achieving net zero
2050

Is this a science-based target?
Yes, and we have committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

Please explain (including target coverage)
This target covers all of our operations. In 2020, our BoD together with our CEO and ELT, have approved the commitment to a net-zero target. We have a target of reaching net-zero emissions by 2050. In 2021, we have started working on preparing a low-carbon transition plan to help us on our road to Net-Zero, and we are committed to seek validation of this target as soon as Net-Zero criteria are developed by Science Based Targets Initiative.

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	35	
To be implemented*	5	2886.78
Implementation commenced*	2	1333.51
Implemented*	11	5550.45
Not to be implemented	0	

C4.3b

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

Initiative category & Initiative type

Energy efficiency in production processes	Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)
1377.33

Scope(s)
Scope 1
Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
332000

Investment required (unit currency – as specified in C0.4)
916000

Payback period
1-3 years

Estimated lifetime of the initiative
11-15 years

Comment
A total of 5 emissions reduction initiatives were implemented in Indonesia, US (Axiom) and Brazil as part of the initiative category chosen, achieving annual electricity savings equal to 8,195,000 kWh and Natural gas savings equal to 1,025,504 kWh. The payback period and estimated lifetime are given as average figures.

Initiative category & Initiative type

Energy efficiency in buildings	Lighting

Estimated annual CO2e savings (metric tonnes CO2e)
73.94

Scope(s)
Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
13650

Investment required (unit currency – as specified in C0.4)
6000

Payback period
<1 year

Estimated lifetime of the initiative
16-20 years

Comment
A total of 4 emissions reduction initiatives were implemented in our plant in Izmit, as part of the initiative category chosen, achieving annual electricity savings equal to 160,396 kWh. The payback period and estimated lifetime are given as average figures.

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
4099.18

Scope(s)
Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
800000

Investment required (unit currency – as specified in C0.4)
409000

Payback period
<1 year

Estimated lifetime of the initiative
16-20 years

Comment
A total of 2 emissions reduction initiatives were implemented in Indonesia and Turkey (Izmit Plant) as part of the initiative category chosen, achieving annual electricity savings equal to 8,775,000 kWh.The payback period and estimated lifetime are given as average figures.

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. If the project budget exceeds 5% of the revenue, the project proposal is submitted to the CEO and ELT for approval. In 2020, due to the pandemic, the investment budgets were lower but we still have dedicated a total budget of around 500,000 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, (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,

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
1.8

% of total portfolio value
<Not Applicable>

Asset classes/ product types
<Not Applicable>

Comment
The realized total revenue from these 2 products constituted 1.8% of Kordsa's global revenue in 2020.

Level of aggregation
Product

Description of product/Group of products
E-Glass Prepreg: We have an ongoing collaboration with Ford Otosan where we are working together to reduce the weight of the steel spring system that is present in heavy ground vehicles. As a result of this project we have developed E-GLASS PREPREG in the reporting year. This innovative sheet spring reduces the weight of the vehicle, hence reducing fuel consumption and GHG emissions.

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
0

% of total portfolio value
<Not Applicable>

Asset classes/ product types
<Not Applicable>

Comment
The realized total revenue from this product constituted 0.00001 % of Kordsa's global revenue in 2020. Since the ORS limits the decimal digits the % revenue is given as 0. When this product is commercialized its share in our revenue will be higher.

Level of aggregation
Group of products

Description of product/Group of products
Construction reinforcement: KraTos Micro and Kratos Macro. KraTos™ Synthetic Fiber Reinforcement is widely used in all kinds of infrastructure and superstructure projects as a shrinkage reinforcement material to prevent early-age cracking. These products require much less energy than the traditional alternative during production.

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

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
0.7

% of total portfolio value
<Not Applicable>

Asset classes/ product types
<Not Applicable>

Comment
The realized total revenue from these 2 products constituted 0.7% of Kordsa's global revenue in 2020.

Level of aggregation

Product

Description of product/Group of products
Lightweight composites are a key element for the development of electric vehicles and sustainable transport solutions. Kordsa's carbon fiber fabrics are being used in the manufacture of composite battery enclosures for EVs. Use of our carbon fiber fabrics in EV battery packs, helping reduce their weight without compromising their quality.

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
0

% of total portfolio value
<Not Applicable>

Asset classes/ product types
<Not Applicable>

Comment
The realized total revenue from this product constituted 0.000027% of Kordsa's global revenue in 2020. Since the ORS limits the decimal digits the % revenue is given as 0. When this product is commercialized its share in our revenue will be higher.

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 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
128175.84

Comment

Scope 2 (location-based)

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
307105.93

Comment

Scope 2 (market-based)

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
307105.93

Comment
There are no changes in scope 2 GHG calculations for our base-year. In 2020 we have started purchasing energy attribute certificates (i-Recs) therefore we are also reporting a market-based figure. i-Recs are also available in other countries that we have operations in however, other market-based data like residual mix factors or supplier data are still not available. Therefore, the location-based results are used as a proxy since a market- based result cannot be calculated.

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.
IPCC Guidelines for National Greenhouse Gas Inventories, 2006
ISO 14064-1
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
US EPA Emissions & Generation Resource Integrated Database (eGRID)

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)
113544.12

Start date
January 1 2020

End date
December 31 2020

Comment
The Scope 1 emissions figure includes emissions from 12 sites in 5 countries. The sources of emissions are stationary combustion of fossil fuels, mobile combustion in vehicles that are controlled by our company and fugitive gases from our cooling equipment and fire extinguishers.

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)
128875.99

Start date
January 1 2019

End date
December 31 2019

Comment
There are no changes in our Scope 1 GHG emissions for 2019. This year we have started to purchase energy attribute certificates, therefore we have started reporting market-based Scope 2 emissions. In order to ensure there is consistency between our disclosures, we are also reporting past year emissions for 2019.

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 are reporting a Scope 2, market-based figure

Comment
We are reporting a location-based Scope 2 emissions figure resulting from the use of electricity from the grid. We have also purchased renewable energy from our supplier with i-rec certificates, therefore we are also reporting a market-based figure this year.

C6.3

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

Reporting year

Scope 2, location-based
249155.85

Scope 2, market-based (if applicable)
243506.29

Start date
January 1 2020

End date
December 31 2020

Comment
We are reporting location-based Scope 2 emissions resulting from electricity purchased and consumed from the grid for 12 plants in 5 countries. For all location-based figures we use national grid emission factors. All the amount of electricity purchased is included in the location-based figure. The amount of electricity for which there are i-Rec purchases is also included and calculated using the grid EF. As a part of goal on using renewable electricity, we have purchased 12,255 MWh of i-Rec certificates, therefore we are also reporting a market-based figure, where the emissions for the i-Rec certified amount is calculated with an emission factor of zero. The rest of the market-based figure is calculated using the national grid EFs as we were not able to reach market-based emission factors.

Past year 1

Scope 2, location-based
294806.85

Scope 2, market-based (if applicable)
294806.85

Start date
January 1 2019

End date
December 31 2019

Comment
There are no changes in scope 2 GHG calculations for 2019. In 2020 we have started purchasing energy attribute certificates (i-Recs) therefore we are also reporting a market-based figure. i-Recs are also available in other countries that we have operations in however, other market-based data like residual mix factors or supplier data are still not available. Therefore, the location-based results are used as a proxy since a market- based result cannot be calculated.

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 gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status
Relevant, calculated

Metric tonnes CO2e
1049218.26

Emissions calculation methodology
Emission Factors: The emission factors are taken from Ecoinvent 3.6 database and they include cradle to gate GHG emissions. Activity Data: The GHG emissions resulting from the production of purchased goods and services are calculated using purchasing data for our raw materials. Raw materials that make-up more-than 90% of our procurement spend including packaging materials are included in this calculation. GHG emissions from transportation of these raw materials from our tier 1 suppliers to our facilities are reported under Category 4: Downstream transportation and distribution. The calculation was conducted according to the methodology outlined in the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
The raw material consumption data are taken from our purchasing records, this data is cross-checked by the transportation data obtained from each Kordsa facility. 97.89% of the GHG emissions in this category have been verified by a third party.

Capital goods

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>

Please explain
This category is not relevant because there were no significant capital goods purchases during the reporting period. Emissions from the use of capital goods are accounted for in Scope 1. The calculation was conducted according to the methodology outlined in the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

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

Evaluation status
Relevant, calculated

Metric tonnes CO2e
62659.16

Emissions calculation methodology
Emission Factors: The GHG emissions resulting from the fuel and energy related activities are calculated using Well to tank emission factors published by DEFRA (Conversion Factors 2020 Full Set for Advanced Users). The fossil fuel consumption figures already compiled for Scope 1 calculations are multiplied with WTT emission factors in order to calculate WTT GHG emissions of the fossil fuels used. Electricity consumption figures already collected for Scope 2 calculations have been multiplied by WTT UK& Overseas Electricity emission factors published by DEFRA (Conversion Factors 2020 Full Set for Advanced Users) Activity Data: Activity data compiled includes the fossil fuel and electricity consumption data that is already compiled for Scope 1 and Scope 2 calculations. The calculation was conducted according to the methodology outlined in the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
99.63

Please explain
The electricity and natural gas consumption figures are taken from the invoices of suppliers. GHG emissions resulting from these 2 emission sources make up 99.63% of the emissions from this category. 87.47% of the GHG emissions in this category have been verified by a third party.

Upstream transportation and distribution

Evaluation status
Relevant, calculated

Metric tonnes CO2e
40065.56

Emissions calculation methodology
Emission Factors: For ground transportation we have multiplied the km data with number of shipments and used emission factors that are published by DEFRA (Conversion Factors 2020 Full Set for Advanced Users) to calculate the GHG emissions. All the trucks that have an average load over 10 tons are assumed to be 100% laden, and the ones below 10 tones are assumed to be 50% laden. For rail-air and sea transportation we have used the ton.km data multiplied by number of shipments. We have also used DEFRA EFs for these transportation activities. The emission factors are all taken from DEFRA (Conversion Factors 2020 Full Set for Advanced Users), “Delivery Vehicles” tab. Activity Data: The GHG emissions resulting from the transportation of the products we have purchased and the transportation services that we have purchased during the reporting year, are reported under this category. We collected the average distance, average load and number of shipment data from all of our sites. All the transportation services that are purchased by KORDSA are reported under this category as per the GHG protocol Scope 3 standard. The calculation was conducted according to the methodology outlined in the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
As this category includes the transportation services purchased in the reporting year and transportation of raw materials from suppliers to Kordsa facilities, we have used data from our own purchasing/sales records. 90.61% of the GHG emissions in this category have been verified by a third party.

Waste generated in operations

Evaluation status
Relevant, calculated

Metric tonnes CO2e
2075.05

Emissions calculation methodology
Emission factors: The GHG emissions resulting from the waste produced in all Kordsa facilities are calculated using the “Waste Disposal” emission factors published by DEFRA (Conversion Factors 2020 Full Set for Advanced Users). Activity data: The total weights of the waste disposed are collected according to the disposal method for each Kordsa facility. This data is then multiplied by corresponding GHG emission factors. The calculation was conducted according to the methodology outlined in the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
GHG emissions related to treatment of wastewater in third-party installations is also reported under this category. 60.42% of the GHG emissions in this category have been verified by a third party.

Business travel

Evaluation status
Relevant, calculated

Metric tonnes CO2e
363.93

Emissions calculation methodology
Emission Factors: The emission factors for calculation of emissions from business travel are taken from DEFRA's "Conversion Factors 2020 Full Set for Advanced Users" Business Travel-air tab. The EFs with radiative forcing are used for the calculations. Activity Data: We obtain flight information from our travel agency. (Departure and destination ports, flight class, number of trips). We then use International Civil Aviation Organisation (ICAO) website to calculate flight distance. This category includes business flight data of Kordsa employees and sometimes the data for their families as well if the flight ticket is paid for by Kordsa. No other means of transport is used for business travel. Some employees use company cars for travel and these figures are reported under Scope 1 emissions. The calculation was conducted according to the methodology outlined in the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Flight route and class data are taken from our travel agency. 57.67% of the GHG emissions in this category have been verified by a third party.

Employee commuting

Evaluation status
Relevant, calculated

Metric tonnes CO2e
1161.32

Emissions calculation methodology
Emission Factors: The GHG emission factors for employee commuting are taken from DEFRA (Conversion Factors 2020 Full Set for Advanced Users) both for personnel shuttles and employees' own vehicles. Activity Data: We have collected the km and fuel consumption data for personnel shuttles from the service provider companies. We have also prepared a questionnaire to identify the fuel consumption figures of employees commuting with their own vehicles.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
50.5

Please explain
All of the activity data required for employee shuttles are taken from the shuttle service providers. The data related to the own consumption figures of the employees are extrapolated according to the questionnaire results. As a result 50.5% of the emissions are calculated using data obtained from suppliers and employees. The calculation was conducted according to the methodology outlined in the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. 52.69% of the GHG emissions in this category have been verified by a third party.

Upstream 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>

Please explain
We don't have any upstream leased assets that needs to be reported under this category. All of the GHG emissions from our leased assets are reported under Scope 1 and Scope 2 GHG emissions as we use operational control approach to compile our activity data.

Downstream transportation and distribution

Evaluation status
Relevant, calculated

Metric tonnes CO2e
2101.03

Emissions calculation methodology
Activity data: The GHG emissions resulting from the transportation of our products are reported under this category. We collected the average distance, average load and number of shipment data from most of our sites for the goods that are delivered to our customers. Assumptions & Emission Factors: For ground transportation we have multiplied the km data with number of shipments and used emission factors that are published by DEFRA (Conversion factors 2020 Full Set for Advanced Users) "Freighting goods" tab to calculate the GHG emissions. All the trucks that have an average load over 10 tons are assumed to be 100% laden, and the ones below 10 tones are assumed to be 50% laden. For rail-air and sea transportation we have used the ton.km data multiplied by number of shipments. We have also used DEFRA EFs for these transportation activities. All the transportation services that are purchased by our customers are reported under this category as per the GHG protocol Scope 3 standard. The calculation was conducted according to the methodology outlined in the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
This category includes the transportation services that are purchased by our main tire customers, in the coming years we will revise these calculations to include all our transportation activities.

Processing 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>

Please explain
Processing of sold products is not a relevant source of Scope 3 GHG emissions because although we produce intermediate products, we are not able to monitor or collect data for the eventual use of the products that we produce. As an example, our main product is tire-cord, and although we know that it is used to produce tires, due to the complex manufacturing and diverse product range of tires, we are unable to determine how much of our product is used to produce 1 tire (which can be a tire for a truck, bus, car, airplane, etc. all of which have very different sizes, weights and specifications). Therefore, this scope 3 category is assessed to be not relevant.

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>

Please explain
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
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>

Please explain
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.

Downstream leased assets

Evaluation status
Relevant, calculated

Metric tonnes CO2e
1434.6

Emissions calculation methodology
Emission Factors: To calculate the GHG emissions from downstream leased assets we use the electricity emission factors published by IEA, which we use for our Scope 2 calculations as well. For the natural gas and diesel oil used in downstream leased assets we use GHG emission factors published by DEFRA (Conversion Factors 2020 Full Set for advanced users) “Fuels” tab. Activity data: We only have downstream leased assets in our Turkish sites. In these facilities, the electricity, natural gas and diesel oil (consumed in generators) are paid for by Kordsa and then invoiced to Companies that use Kordsa facilities. Where we have separate meters we use the meter readings for the data, where we don’t have separate meters, we allocate the consumption figure according to area. Either way for electricity and natural gas consumption the data are taken from the invoices. The calculation was conducted according to the methodology outlined in the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
99.83

Please explain
The electricity and natural gas consumption figures are taken from the invoices of suppliers. GHG emissions resulting from these 2 emission sources make up 99.83% of the emissions from this category.

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>

Please explain
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>

Please explain
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>

Please explain
No additional Scope 3 emission sources are 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>

Please explain
No additional Scope 3 emission sources are identified.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic 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
0.000552

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
357050.41

Metric denominator
unit total revenue

Metric denominator: Unit total
647213143

Scope 2 figure used
Market-based

% change from previous year
17.96

Direction of change
Increased

Reason for change
Kordsa global revenue has decreased by 28,56% between 2019 and 2020 while the gross Scope 1 and 2 emissions have decreased by 15.73%. One of the reasons for the gross emissions decrease is the Covid-19 pandemic, where we had to shut-down our operations for a while. Therefore, our production has decreased and our sales have decreased. In 2020 we also had emission reduction projects, that were implemented which resulted in GHG Emission reductions of 5,550.45 tCO2e. We have also purchased I-rec certificates in 2020, which helped us reduce our Scope 2 GHG emissions by 5,649.55 tCO2e Overall, as the decrease in the global revenue is higher than the decrease in GHG emissions, emissions/revenue figure has increased.

Intensity figure
77.96

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
357050.41

Metric denominator
full time equivalent (FTE) employee

Metric denominator: Unit total
4580

Scope 2 figure used
Market-based

% change from previous year
17.25

Direction of change
Decreased

Reason for change
Kordsa full time employees increased by 1.85% between 2019 and 2020 while the gross Scope 1 and 2 emissions have decreased by 15.73%. One of the reasons for the gross emissions decrease is the Covid-19 pandemic, where we had to shut-down our operations for a while. Therefore, our production has decreased and our sales have decreased. Another reason is the emission reduction initiatives implemented during the reporting period, which resulted in 5,550.45 tCO2e emissions reduction. We have also purchased I-rec certificates in 2020, which helped us reduce our Scope 2 GHG emissions by 5,649.55 tCO2e

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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	108837.54	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	110.31	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	67.41	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	4528.86	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)
Turkey	43395.13
Indonesia	15040.53
Thailand	7182.53
Brazil	6926.72
United States of America	40999.21

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
CH / USA	36026.13	35.1128	-85.2476
LH / USA	3851.64	34.81	-79.5231
KBR / Brasil	6926.72	-12.66	-38.3101
IK / Indonesia	15040.53	-6.5019	106.8716
TIK / Thailand	7182.53	14.3321	100.6421
KTR / Turkey	43035.49	40.7665	29.9976
CTCE/ Turkey	359.64	40.9188	29.3153
AXIOM/USA	764.88	33.721894	-117.840237
FDI/USA	134.97	40.444607	-75.350456
TPI/USA	13.6	33.84857	-117.972284
AHT/USA	207.99	33.137597	-117.186076

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 for in Scope 2 market-based approach (MWh)
Turkey	75.121	69471.87	162953.2	12255
Indonesia	116861.69	116861.69	151965.79	0
Thailand	17188.12	17188.12	36338.53	0
Brazil	7270.79	7270.79	62143.54	0
United States of America	32713.82	32713.82	76755.92	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 (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
CH / USA	25197.49	25197.49
LH / USA	6405.72	6405.72
KBR / Brazil	7270.79	7270.79
IK / Indonesia	116861.69	116861.69
TIK / Thailand	17188.12	17188.12
KTR / Turkey	74050.26	68400.7
CTCE / Turkey	1071.17	1071.17
AXIOM / USA	462.13	462.13
FDI / USA	392.34	392.34
TPI / USA	194.08	194.08
AHT / USA	62.06	62.06

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?

Decreased

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	5637.05	Decreased	1.33	Our previous year gross global Scope 1&2 emissions were 423,682.84 t CO2. Renewable energy is only generated in the solar PV system in our CTCE building in Istanbul. In the reporting year we have generated 27.22 MWh (GHG emissions equivalent: 27.22 MWh x 0.461 tonCO2e/MWh = 12.55 tons CO2e) of renewable energy in this Solar PV system. In 2020 we have also purchased 12,255 MWh of renewable energy, which resulted in a decrease of 5,649.56 tCO2e in our market-based Scope 2 GHG emissions. In 2019, we had no purchase of i-Rec certificates, however, we have generated 54.35 MWh of solar electricity which equals to 25.06 tCO2e. The resulting change in GHG emissions due to renewable energy purchases and change in generated and consumed renewable energy = (5,649.56+12,55)– 25.06 = 5,637.05 tons CO2e The decrease of emissions value (%) is calculated as follows: (5,637.05 tons CO2e/ 423,682.84 tons CO2e) x 100 = 1.33 %
Other emissions reduction activities	5550.45	Decreased	1.31	Our previous year gross global Scope 1&2 emissions were 423,682.84 t CO2. As a result of the emissions reduction initiatives implemented in 2020, we achieved 5,550.45 tCO2 emissions reductions. The stated emissions value (percentage) was calculated with the following formula: 5,550.45tCO2 / 423,682.84 t CO2*100 = 1.31%
Divestment	0	No change	0	We didn't have any divestments during the reporting period.
Acquisitions	0	No change	0	We didn't have any acquisitions during the reporting period.
Mergers	0	No change	0	We didn't have any mergers during the reporting period.
Change in output	55444.93	Decreased	13.94	Our previous year gross global Scope 1&2 emissions were 423,682.84 t CO2. Apart from the above-mentioned changes in the reporting period, due to Covid-19 related restrictions, we had to shut down our operations several times, and this resulted in a decrease in our sales and production figures. Our GHG emissions reduced by 55,444.93 tCO2e when compared to the previous year due to Covid-19 related measures. The stated emissions value (percentage) was calculated with the following formula: 55,444.93 tCO2 / 423,682.84 t CO2*100 = 13.94%
Change in methodology	0	No change	0	There were no changes in methodology
Change in boundary	0	No change	0	There were no changes in boundary.
Change in physical operating conditions	0	No change	0	There were no changes in physical operating conditions that can be attributed to the change in GHG emissions.
Unidentified	0	No change	0	There are no unidentified changes.
Other	0	No change	0	There are no other changes.

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?

Market-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 undertook this energy-related activity in the reporting year
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 (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	542726.04	542726.04
Consumption of purchased or acquired electricity	<Not Applicable>	12255	477921.97	490176.97
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>	27.22	<Not Applicable>	27.22
Total energy consumption	<Not Applicable>	12282.22	1020648.01	1032930.23

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
539144.91

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
404357.82

MWh fuel consumed for self-generation of steam
134787.09

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

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

Emission factor
2.03017

Unit
kg CO2e per m3

Emissions factor source
DEFRA Conversion Factors 2020-Fuels

Comment
Natural gas is used in our facilities for heating and steam generation. For the facilities that are located in USA, we are using the GHG emission factors that are published by the US-EPA. All other facilities are calculated using DEFRA emission factors.

Fuels (excluding feedstocks)
Diesel

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
2143.36

MWh fuel consumed for self-generation of electricity
391.47

MWh fuel consumed for self-generation of heat
1751.89

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>

Emission factor
2.68787

Unit
kg CO2e per liter

Emissions factor source
DEFRA Conversion Factors 2020-Fuels

Comment
Diesel oil is used for electricity generation in generators and it is also used in mobile combustion in our company vehicles.

Fuels (excluding feedstocks)
Motor Gasoline

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
1001.68

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
1001.68

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>

Emission factor
2.31467

Unit
kg CO2e per liter

Emissions factor source
DEFRA Conversion Factors 2020-Fuels

Comment
Motor gasoline is used in company vehicles (mobile consumption)

Fuels (excluding feedstocks)
Liquefied Petroleum Gas (LPG)

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
436.09

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
436.09

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>

Emission factor
2938.81

Unit
kg CO2e per metric ton

Emissions factor source
DEFRA Conversion Factors 2020-Fuels

Comment
LPG is used in LPG powered forklifts (mobile combustion).

C8.2d

(C8.2d) 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	418.69	418.69	27.22	27.22
Heat	404357.82	404357.82	0	0
Steam	134787.09	134787.09	0	0
Cooling	0	0	0	0

C8.2e

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

Sourcing method
Unbundled energy attribute certificates, International REC Standard (I-RECs)

Low-carbon technology type
Hydropower

Country/area of consumption of low-carbon electricity, heat, steam or cooling
Turkey

MWh consumed accounted for at a zero emission factor
12255

Comment
In 2020 we have purchased I-Rec certificate from a hydropower plant. The certificate is attached in Question C-FI of this report.

C9. Additional metrics

C9.1

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

Description
Energy usage

Metric value
490176.97

Metric numerator
Total electricity consumption in MWh

Metric denominator (intensity metric only)
No denominator

% change from previous year
14.9

Direction of change
Decreased

Please explain
Our gross electricity consumption in 2019 was 576,012.39 MWh, in 2020 this value dropped to 490,176.97 MWh. This reduction translates into a decrease of 14.90 %. Some of this decrease is due to Covid-19 related restrictions, and the rest is due to internal GHG emission reduction activities. When calculating this amount the i-Rec certificates are not taken into account.

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)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

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

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
Kordsa CDP CC Assurance Report 2020.pdf

Page/ section reference
Page 3, 1st Paragraph-Verification Standard Page 7-Emission Data

Relevant standard
ISAE 3410

Proportion of reported emissions verified (%)
83

C10.1b

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

Scope 2 approach
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
Kordsa CDP CC Assurance Report 2020.pdf

Page/ section reference
Page 3, 1st Paragraph-Verification Standard Page 7-Emission Data

Relevant standard
ISAE 3410

Proportion of reported emissions verified (%)
87

Scope 2 approach
Scope 2 market-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
Kordsa CDP CC Assurance Report 2020.pdf

Page/ section reference
Page 3, 1st Paragraph-Verification Standard Page 7-Emission Data

Relevant standard
ISAE 3410

Proportion of reported emissions verified (%)
86

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category
Scope 3 (upstream & downstream)

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
KORDSA CDP Scope-3 Verification.pdf
KORDSA Verification Report.pdf

Page/section reference
Page 5 on the Verification Report Verification Statement in CDP format is also attached.

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
97

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 you are regulated by or anticipate being regulated by?

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. In US, there are emission trading schemes, however none of our facilities are regulated under these systems.

Recently as a part of the World Bank funded “Partnership for Market Readiness” project, simulations of an ETS system were studied. The results of this study were also published on Turkish Ministry of Environment and Urbanisation website. We anticipate being regulated under the Turkish ETS system until 2023.

Our strategy for complying with this system is following up our regular monitoring and reporting obligations until this system is operational, and also trying to calculate the impact of this regulation by applying an internal carbon price, so that we can include the impacts of this regulation on our financial planning.

Case study of how this strategy is applied:

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 (Turkish MRV). We prepare our monitoring reports annually and these reports are verified by a 3rd party verification company which is accredited under Turkish MRV and also authorized by Ministry of Environment and Urbanization.

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 and possible financial burden for us. Therefore, we have identified an internal price on carbon and included this price on our risk assessments.

Each year we revisit our risk assessments, taking into consideration the recent developments in Turkey.

With the use of an internal carbon price, we are able to calculate the financial burden of this emerging regulation on our business. We are also constantly working on energy efficiency and reducing the GHG emissions that are under the scope of Turkish MRV.

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?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price
Navigate GHG regulations
Change internal behavior
Drive energy efficiency
Drive low-carbon investment
Identify and seize low-carbon opportunities

GHG Scope
Scope 1

Application
Kordsa Turkey Izmit Facility, intended to be extended to other facilities

Actual price(s) used (Currency /metric ton)
28.28

Variance of price(s) used
A recent report, published by International Carbon Action Partnership, states the average price of an EUA was around 28.28 USD in 2020. But we are aware that with the current EURO-TL rates this price may be an over-estimation for Turkish markets. In our Turkish operations, we are using a variance of prices in order to calculate our exposure to emerging regulations, and the minimum price we use (25 TRY=3.57 USD) is taken from an ETS simulation study performed under the World Bank Partnership for Market Readiness project . The max. price we use is taken from the above-mentioned study on EU-ETS. We may also be exposed to carbon border adjustment, and for calculation of our risks of exposure we use the projections given on a study published by Turkish Business Council (TUSIAD). This study projects a max price of 50 Euro, which equals to 57.11 USD.

Type of internal carbon price
Shadow price

Impact & implication
In our Izmit facility, our total Scope 1 GHG emissions that are under the scope of Turkish MRV is 40,727 tons CO2e in 2020. In a recent ETS simulation study published under the PMR Project, scenarios included capping the emissions at 80%. The simulation also included a free allocation of 50% of the allowances. This results in a liability of about 60% which is equal to 24,436 tons CO2e. Based on the min. price published on the same simulation study (3.57 USD) the min. impact of Turkish ETS is calculated as 87,160 USD. Using EU-ETS average EUA price for 2020, the impact of the risk increases to 691,055 USD. We also calculated the impact of EU Carbon Border Adjustment on our operations, using our sales figures and the max. impact is calculated to be 654,339 USD. The amount of our max. total liability is approximately 1,345,395 USD. This impact figure has been presented to our Board and is included in our risk assessments. The internal price on carbon is updated every year from published data.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?
Yes, our suppliers
Yes, our customers
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
100

% total procurement spend (direct and indirect)
60

% of supplier-related Scope 3 emissions as reported in C6.5
0

Rationale for the coverage of your engagement
In the reporting year, we have started calculating our Scope 3 GHG emissions. We have identified Scope 3-Category 1 as our major source of Scope 3 emissions; therefore, we have decided to request climate-change related information from 100 % of our global raw material suppliers, which make up 60% of our total procurement spend. We have prepared a data collection excel sheet, requesting data about their GHG emissions that are allocated to the goods that we have purchased. In order to educate our suppliers about this data collection excel, we have prepared a video on how to fill in the excel sheet. We have also prepared an internal training to our purchasing team that is responsible for collecting the data from our suppliers.

Impact of engagement, including measures of success
As this was our first year for both Scope 3 calculations and data collection from our supply chain partners, receiving data from even one supplier would be a measure of success. In fact; 5 of our suppliers sent their data, however we weren't able to use the data as they were inconsistent. In our point of view this attempt on data collection from our suppliers, was very successful in many ways. First of all, we have received data with reliable references from a few of our suppliers, however as most of the suppliers couldn't respond to our requests, we have decided not to include their responses to be consistent within the inventory. But most importantly we had a chance to see the challenges we have in data collection from suppliers. This data collection study, made us realize that we need to support our suppliers on the type of data that we request with trainings. This way they can better understand the methodology we use and we can better understand their challenges and help them overcome those challenges so that we can grow together.

Comment

Type of engagement
Compliance & onboarding

Details of engagement
Climate change is integrated into supplier evaluation processes

% of suppliers by number
73

% total procurement spend (direct and indirect)
79.5

% of supplier-related Scope 3 emissions as reported in C6.5
91.89

Rationale for the coverage of your engagement
Suppliers with more than or equal to 500.000 USD purchasing volume is included in our Supplier Sustainability Assessment Program. We also assess our suppliers using a Kraljic Matrix and according to this assessment, the suppliers that are critical and strategically risky are also selected to be covered by our supplier sustainability assessment program. Starting from 2021, the raw material suppliers that are selected to be a part of this sustainability assessment program, will be requested to supply data over Ecovadis. Other classified suppliers will be requested to reply our supplier sustainability assessment survey. We have a target to reach 100% of our critical suppliers which make 86% of our total procurement spent. In 2020, we invited more than 400 global and local suppliers from five countries in which we operate to participate in the Supplier Sustainability Assessment Survey. The survey evaluates the performances of our suppliers on topics of Reporting, Ethics Policies and Practices, Occupational Health and Safety, Human Rights, Supplier Screening Topics, Labor and Environmental Management (including climate-related issues). We incentivize our suppliers to answer this questionnaire by explaining them how this cooperation will have positive impact on their business, and we also inform them that it is important for our suppliers to contribute to the sustainability goals of Kordsa. Also, their scores on the sustainability survey, can help them to get included in our 'Approved Supplier List'.

Impact of engagement, including measures of success
In terms of climate related information, we require data on how they monitor and manage their emissions, whether they have energy & carbon management approach and targets to reduce their emissions. The supplier gets points in the assessment if they monitor their emissions and have targets to reduce their emissions. We use the results of this survey to classify the suppliers according to the points they get, as follows: 85-100: A Grade Supplier – Performance to be maintained. The letter of thanks will be sent end of the year. 70-84: B Grade Supplier - New product and project work can be done. Improvement is expected within six months. 60-69: C Grade Supplier - Immediate improvement is expected from the C-grade suppliers during the yearly evaluation period. It is taken as a priority in the audit plan. A development plan is requested. <60: D grade Supplier: The supplier, who is scored as D-grade during the quarterly evaluation period, does not work for 1 year. VQR is sent for status notification. We request that they improve their practices in 1 year. After they complete their improvement, they are audited for compliance, if the audit result is confirmed business relationship starts again. Also, a yearly supplier audit plan is being implemented. Supplier audit process consists of both quality and sustainability pillars. In 2020 73% of our global suppliers participated in this survey. The share of the suppliers we could reach in our global raw materials procurement is 79.5%, which excludes the suppliers we get packing, transportation and similar services from. Our global procurement team carries out the purchasing of 90% of the raw materials that all of our plants require. 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. We also see the completion rate of this survey as a measure of success, because we have targeted a 65% return rate for the reporting period and we have exceeded our target by reaching 79.5% of our global suppliers.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement
Collaboration & innovation

Details of engagement
Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number
5

% of customer - related Scope 3 emissions as reported in C6.5
65

Portfolio coverage (total or outstanding)
<Not Applicable>

Please explain the rationale for selecting this group of customers and scope of engagement
Tire reinforcement products make up about 85% of our total sales. Any activity we perform to reduce the climate change impacts of our products, impacts the climate-performance of our clients. For this engagement activity we focused on our biggest tire-reinforcement clients, which make up around 5% of our total tire-reinforcement clients by number, but they make up 65% of our tire-reinforcement business revenue. This is why we focus on this group of customers. Scope of engagement: We have developed a new fabric with 20% recycled content and sent this fabric for testing to our major tire-reinforcement clients. 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. Our research and development team is working on how to use this by-product in our own production, to produce nylon yarn & fabric, 20% of which is composed of recycled material. We have tested this new product with recycled content, and the test results are very promising. As the tire industry has very high standards due to safety reasons, we have also submitted samples of this product to our customers and we had positive feedback from them. This innovative product 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 using the side-product of our production process as a raw material to produce nylon yarn with recycled content. The recycled nylon yarns that were produced by Kordsa, has also been certified by Global Recycled Standard, and if also approved by the industry, they will increase the recycled content in a tire by 10%. Customer related Scope 3 emissions % are estimated according to share of these 6 clients in our production volumes.

Impact of engagement, including measures of success
Safety of a tire requires many qualities to be met. The new technology needs to be tested to prove that it does not restrain any of the safety requirements. In 2020 we have sent this fabric (real size sample for production testing) to one of our tire-reinforcement clients for testing. We have also sent lab-sized samples for lab testing to 5 more clients. As a measure of success, we take the percentage of primary customers engagement. With this project we have reached 80% of our primary customers.

Type of engagement
Collaboration & innovation

Details of engagement
Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number
85

% of customer - related Scope 3 emissions as reported in C6.5
85

Portfolio coverage (total or outstanding)
<Not Applicable>

Please explain the rationale for selecting this group of customers and scope of engagement
85% of our customers by sales volume are tire manufacturers with targets to reduce the rolling resistance of their products, which in turn will reduce the fossil fuel consumption of vehicles and reduce their GHG emissions. Our products are one of the three main components of tires, and in order to reduce the rolling resistance of the final product, our customers also need to have lighter fabrics in their tires. We constantly invest on R&D projects to contribute to the targets of our customers, with the aim of developing products that will reduce the rolling resistance of the final product. We organize innovation days with our customers in order to discuss these R&D projects and to collaborate on development of these innovative products. Customer related Scope 3 emissions % are estimated according to share of tire-reinforcement clients in our production volumes.

Impact of engagement, including measures of success
These engagement activities are seen as a major success, as we are able to reach our main tire customers and share the technologies and developments with them. We are also receiving positive feedback from our customers regarding these innovation and R&D projects. Every year we run innovation meetings to discuss about emission reduction technologies, with approximately % 85 of our customers; both tire manufacturers and composite customers.

C12.1d

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

While striving for sustainable growth at Kordsa, we aim to render the benefits we create for all of our 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; employees, customers, investors, shareholders.

The engagement activities during 2020 is listed below.
- Kordsa Executive Lead Team / Sustainable Development Goals and Focused Targets Determination Meetings
- Employees / Sustainability Performance Evaluation and Materiality Survey
- Customers / Online Sustainability Materiality Survey

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.

International Collaborations

Kordsa became part of a new project named PolynSPIRE: Demonstration of Innovative Technologies Towards A More Efficient and Sustainable Plastic Recycling, under the European Union's "Horizon 2020" R&D and innovation program along with twenty-two partners. The project is initiated to strengthen research and technology-development capabilities in Europe while encouraging university-industry collaboration.

In the 48-month period of the PolynSPIRE project, three innovation pillars covering the TRL7 level will initiate and it is expected to recycle/reuse 60 kilotons of plastic waste, to reduce 300 kilotons equivalent CO2 emissions, and to save 70 kilotons oil equivalent fossil resources. Targeted impacts in 20 years are treating annually 4.5 million tons of residue, 45 million tons of CO2 emissions reduction per year and 10 million tons of oil equivalent of fossil fuel recovery per year.

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 Regulation. 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?

All communication activities to be carried out with individuals, organizations and state institutions outside the company are determined by Kordsa's company rules. According to these rules, all of the information that will be presented outside of the company is subject to approval of Corporate Communication Department.

From Management levels to our Board Members, whenever someone is going to represent Kordsa in any kind of event or meeting, their presentations are either prepared or approved by the corporate communications department.

This Department is led by our Corporate Brand, Communication and Sustainability Manager who is also responsible for all our sustainability, climate-change and water related studies, from developing strategies to preparation of our CDP report. As all of these communication activities go through her, there is very little risk that there will be any kind of activity that conflicts with our overall climate-change strategies.

However, if such a conflict occurs, the event is taken to our ethics board, and the employee receives a warning from our CEO. Also a suitable corrective action is implemented immediately upon recognition of such a conflict.

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 voluntary sustainability report

Status
Underway – previous year attached

Attach the document
KORDSA_2019_Sustainability_Report_EN.pdf

Page/Section reference
23-32 and 50-53

Content elements
Governance
Strategy
Emissions figures
Other metrics

Comment

Publication
In voluntary communications

Status
Complete

Attach the document
Kordsa Emissions Management-Website.png

Page/Section reference
We publish our CDP report together with other sustainability related metrics on our website. We also publish our verification reports on our website. Screenshot of the website is attached. The link of the related page is: https://www.kordsa.com/en/sustainability/detail/emissions-management/103/84/0

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

Comment

C15. 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.

Our I-REC certificate is attached.
Kordsa i-Rec Certificate.pdf

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	CEO	Chief Executive Officer (CEO)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	647213143

SC0.2

(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?

Yes

SC0.2a

(SC0.2a) Please use the table below to share your ISIN.

	ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)
Row 1	TR	AKORDS91B2

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Requesting member
Michelin

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
13294.8

Uncertainty (±%)

Major sources of emissions
- Natural gas consumption for heat and steam production - Diesel consumption for heat and electricity production (in generators) - Diesel and LPG consumption in forklifts

Verified
Yes

Allocation method
Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
We have included the GHG sources that we use in our processes. In order to achieve a reasonable allocation, we have used mass of products sold from each facility and mass of products sold from that facility to Michelin. We applied the same ratio to our GHG emissions resulting from production processes. We excluded GHG emissions from company cars and fugitive emissions from fire extinguishers and A/C's. 74.36% of this data is verified. The uncertainty has not been calculated.

Requesting member
Michelin

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
23395.98

Uncertainty (±%)

Major sources of emissions
Electricity used from the grid in production processes.

Verified

Yes

Allocation method
Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
In order to achieve a reasonable allocation, we have used mass of products sold from each facility and mass of products sold from that facility to Michelin. We applied the same ratio to our GHG emissions resulting from electricity consumption. In 2020 we have purchased renewable energy in our Izmit plant, so the reported figure is a market-based figure. The location-based Scope-2 emissions allocated to Michelin are 24,660.90 tCO2e. 66.35% of this data is verified. The uncertainty has not been calculated.

Requesting member
Michelin

Scope of emissions
Scope 3

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
92454.46

Uncertainty (±%)

Major sources of emissions
C1-Purchased goods and services: Raw material related emissions. GHG emissions from production of raw materials. Only the raw materials used in production processes/plants that supply goods to Michelin is included.

Verified
Yes

Allocation method
Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
GHG emissions are allocated based on mass of products purchased. In order to achieve a reasonable allocation, we have used mass of products sold from each facility and mass of products sold from that facility to Michelin. We applied the same ratio to Scope 3 GHG Category 1 emissions. We have identified the raw materials that we use to produce the products that are sold to Michelin and we have included only those raw materials in the calculation. 97.98% of this data is verified. The uncertainty has not been calculated.

Requesting member
Michelin

Scope of emissions
Scope 3

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
5520.28

Uncertainty (±%)

Major sources of emissions
C3-Fuel and energy related activities: extraction and transportation of the fuels used in production, WTT emissions for the fuels that are used in electricity production. Mobile sources are not included

Verified
Yes

Allocation method
Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
GHG emissions are allocated based on mass of products purchased. In order to achieve a reasonable allocation, we have used mass of products sold from each facility and mass of products sold from that facility to Michelin. We applied the same ratio to our Scope 3-Category 3 GHG emissions. We have only included the fuels that are used in the stationary units. 67.68% of this data is verified. The uncertainty has not been calculated.

Requesting member
Michelin

Scope of emissions
Scope 3

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
3138.42

Uncertainty (±%)

Major sources of emissions
C4-Upstream Transportation and Distribution: Transportation of the raw materials purchased. Transportation services purchased for the goods transported to Michelin facilities

Verified
Yes

Allocation method
Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
For our products that were transported to Michelin, if the transportation service is purchased by Kordsa, the GHG emissions are reported under Category 4 as per the GHG Protocol Guidelines. Therefore this category includes the transportation emissions for some of the goods that are sent to Michelin, and also the transportation of some of the raw materials from our Tier1 suppliers to Kordsa facilities. Calculations are made using the km data and average ton of goods transported with each shipment. Allocation of GHG emissions: Transportation of the goods that are sold to Michelin (Total: 1,439.32 tCO2e): No allocation necessary as the calculation is made using secondary data Transportation of raw materials: allocation based on mass of products purchased. In order to achieve a reasonable allocation, we have used mass of products sold from each facility and mass of products sold from that facility to Michelin. We applied the same ratio to our Scope 3-Category 4 GHG emissions. We have only included the transportation of the raw materials that are used in production of the goods that are sold to Michelin. 91.06% of these emissions are verified. The uncertainty has not been calculated.

Requesting member
Michelin

Scope of emissions
Scope 3

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
178.06

Uncertainty (±%)

Major sources of emissions
C5-Waste generated in operations

Verified
Yes

Allocation method
Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
GHG emissions are allocated based on mass of products purchased. In order to achieve a reasonable allocation, we have used mass of products sold from each facility and mass of products sold from that facility to Michelin. We applied the same ratio to our Scope 3 GHG-Category 5 emissions. 71.30% of this data is verified. The uncertainty has not been calculated.

Requesting member
Michelin

Scope of emissions
Scope 3

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
129.71

Uncertainty (±%)

Major sources of emissions
C9-Downstream Transportation and Distribution: Transportation of Kordsa products to Michelin. (Transportation services purchased by Michelin)

Verified
Yes

Allocation method
Allocation not necessary as secondary data used

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
We have calculated Scope 3, Category 9 GHG emissions using the km data and average ton of goods transported with each shipment. The major limitation was estimating the routes and km data for deliveries arranged and paid for by the customer. For the goods transported to Michelin, no allocation was necessary as we have used secondary data. 9.89% of this data is verified. The uncertainty has not been calculated.

Requesting member
Pirelli

Scope of emissions

Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
4765.4

Uncertainty (±%)

Major sources of emissions
- Natural gas consumption for heat and steam production - Diesel consumption for heat and electricity production (in generators) - Diesel and LPG consumption in forklifts

Verified
Yes

Allocation method
Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
We have included the GHG sources that we use in our processes. In order to achieve a reasonable allocation, we have used mass of products sold from each facility and mass of products sold from that facility to Pirelli. We applied the same ratio to our GHG emissions resulting from production processes. We excluded GHG emissions from company cars and fugitive emissions from fire extinguishers and A/C's. 67.60% of this data is verified. The uncertainty has not been calculated.

Requesting member
Pirelli

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
10065.94

Uncertainty (±%)

Major sources of emissions
Electricity used from the grid in production processes

Verified
Yes

Allocation method
Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
In order to achieve a reasonable allocation we have used mass of products sold from each facility and mass of products sold from that facility to Pirelli. We applied the same ratio to our GHG emissions resulting from electricity consumption. In 2020 we have purchased renewable energy in our Izmit plant, so the reported figure is a market-based figure. The location-based Scope-2 emissions allocated to Pirelli are 7,834.31 0 tCO2e. 69.43% of this data is verified. The uncertainty has not been calculated.

Requesting member
Pirelli

Scope of emissions
Scope 3

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
36580.06

Uncertainty (±%)

Major sources of emissions
C1-Purchased goods and services: Raw material related emissions. GHG emissions from production of raw materials. Only the raw materials used in production processes/plants that supply goods to Pirelli is included.

Verified
Yes

Allocation method
Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
GHG emissions are allocated based on mass of products purchased. In order to achieve a reasonable allocation, we have used mass of products sold from each facility and mass of products sold from that facility to Pirelli. We applied the same ratio to Scope 3 GHG Category 1 emissions. We have identified the raw materials that we use to produce the products that are sold to Pirelli and we have included only those raw materials in the calculation. 88.06% of this data is verified. The uncertainty has not been calculated.

Requesting member
Pirelli

Scope of emissions
Scope 3

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
1784.52

Uncertainty (±%)

Major sources of emissions
C3-Fuel and energy related activities: extraction and transportation of the fuels used in production, WTT emissions for the fuels that are used in electricity production. Mobile sources are not included

Verified
Yes

Allocation method
Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
GHG emissions are allocated based on mass of products purchased. In order to achieve a reasonable allocation, we have used mass of products sold from each facility and mass of products sold from that facility to Pirelli. We applied the same ratio to our Scope 3-Category 3 GHG emissions. We have only included the fuels that are used in the stationary units. 68.97% of this data is verified. The uncertainty has not been calculated.

Requesting member
Pirelli

Scope of emissions
Scope 3

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
1735.05

Uncertainty (±%)

Major sources of emissions
C4-Upstream Transportation and Distribution: Transportation of the raw materials purchased. Transportation services purchased for the goods transported to Pirelli facilities

Verified
Yes

Allocation method
Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
For our products that were transported to Pirelli, if the transportation service is purchased by Kordsa, the GHG emissions are reported under Category 4 as per the GHG Protocol Guidelines. Therefore, this category includes the transportation emissions for some of the goods that are sent to Pirelli, and also the transportation of some of the raw materials from our Tier1 suppliers to Kordsa facilities. Calculations are made using the km data and average ton of goods transported with each shipment. Allocation of GHG emissions: Transportation of the goods that are sold to Pirelli (Total: 1,030.88 tCO2e): No allocation necessary as the calculation is made using secondary data Transportation of raw materials: allocation based on mass of products purchased. In order to achieve a reasonable allocation, we have used mass of products sold from each facility and mass of products sold from that facility to Pirelli. We applied the same ratio to our Scope 3-Category 4 GHG emissions. We have only included the transportation of the raw materials that are used in production of the goods that are sold to Pirelli. 59.83% of these emissions are verified. The uncertainty has not been calculated.

Requesting member
Pirelli

Scope of emissions
Scope 3

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
62.78

Uncertainty (±%)

Major sources of emissions
C5-Waste generated in operations

Verified

Yes

Allocation method
Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
GHG emissions are allocated based on mass of products purchased. In order to achieve a reasonable allocation, we have used mass of products sold from each facility and mass of products sold from that facility to Pirelli. We applied the same ratio to our Scope 3 GHG-Category 5 emissions. 65.03% of this data is verified. The uncertainty has not been calculated.

Requesting member
Pirelli

Scope of emissions
Scope 3

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
11.45

Uncertainty (±%)

Major sources of emissions
C9-Downstream Transportation and Distribution: Transportation of Kordsa products to Pirelli. (Transportation services purchased by Pirelli)

Verified
Yes

Allocation method
Allocation not necessary as secondary data used

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
We have calculated Scope 3, Category 9 GHG emissions using the km data and average ton of goods transported with each shipment. The major limitation was estimating the routes and km data for deliveries arranged and paid for by the customer. For the goods transported to Pirell,, no allocation was necessary as we have used secondary data. 95.15% of this data is verified. The uncertainty has not been calculated.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

While allocating the GHG emissions in SC1.1, the calculated Scope 1 and 2 GHG emissions are used.

Scope 3 Categories that are included in the calculation are:
1. Category 1: Purchased goods and services
2. Category 3: Fuel and energy related activities not included in Scope 1 or Scope 2
3. Category 4: Upstream Transportation and Distribution
4. Category 5: Waste generated in operations
5. Category 9: Downstream transportation and distribution

The GHG emissions resulting from Category 4 and Category 9 are calculated using the transportation records kept by Kordsa using secondary data (tonne-km data for each transportation method used). In order to calculate Category 9 GHG emissions, we made assumptions about the transport distances for the transportation services that are purchased and arranged by our customer.

The calculations are made using GHG emission factors published by DEFRA. For Category 1: Purchased goods and services, the GHG emission factors are taken from Ecoinvent database.

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Diversity of product lines makes accurately accounting for each product/product line cost ineffective	Over the long term, we consider applying a life cycle management approach per product type. Before doing so, we aim to place meters in specific process locations to obtain data first. Once that process is completed, we will consider the feasibility and timeline for planning the life cycle analysis for our priority product groups.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?
Yes

SC1.4a

(SC1.4a) Describe how you plan to develop your capabilities.

Although it is not possible to disclose or commit a time period, it is our long-term aim to be able to identify the life cycle impact of our priority product range. By doing so, we will be able to develop a capability to allocate emissions to our customers more accurately which also provides us an opportunity to use our findings as inputs for our R&D activities.

This year for the first time we have included a full analysis and calculation of our Scope 3 GHG emissions, and to the best of our ability we have tried to allocate the relevant categories to our data-requesting customers.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

Requesting member
Please select

Group type of project
Please select

Type of project
Please select

Emissions targeted
Please select

Estimated timeframe for carbon reductions to be realized
Please select

Estimated lifetime CO2e savings

Estimated payback
Please select

Details of proposal

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?
Yes

SC2.2a

(SC2.2a) Specify the requesting member(s) that have driven organizational-level emissions reduction initiatives, and provide information on the initiatives.

Requesting member
Michelin

Initiative ID
2020-ID1

Group type of project
Relationship sustainability assessment

Type of project
Aligning goals to feed into customers targets and ambitions

Description of the reduction initiative
As a part of our collaboration with Michelin, we have decided to revise our GHG emission reduction targets. In 2020 we have implemented two long-term targets one of which is in line with Science Based Targets. We have also decided to commit to SBTi. We have already sent the commitment letter to SBTi and we will start the target validation process in the 4th quarter of 2021. In the reporting period we have purchased 12,255 MWh of renewable energy which helped us reduce our Scope 2 GHG emissions by 5,649.56 tCO2e, we have also implemented several GHG emission reduction projects which resulted in a reduction of 5,550.45 tCO2e. The reported emission reductions is the total of these two figures. Our 2020 Scope1+Scope 2 GHG emissions have reduced by a total of 66,602 tCO2 when compared to 2019, but most of this decrease is due to Covid-19 related disruptions in operations. We are also planning to implement a Life Cycle Analysis study for our primary products in order to better assess the climate-related impacts of our products.

Emissions reduction for the reporting year in metric tons of CO2e
11200.01

Did you identify this opportunity as part of the CDP supply chain Action Exchange?
No

Would you be happy for CDP supply chain members to highlight this work in their external communication?
No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?
No, I am not providing data

Submit your response

In which language are you submitting your response?
English

Please confirm how your response should be handled by CDP

	I am submitting to	Public or Non-Public Submission	Are you ready to submit the additional Supply Chain questions?
I am submitting my response	Investors Customers	Public	Yes, I will submit the Supply Chain questions now

Please confirm below
I have read and accept the applicable Terms