

Welcome to your CDP Climate Change Questionnaire 2022

C0. Introduction

C0.1

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

Celebrating its 56th anniversary this year in the Turkish automotive industry, Karsan has been manufacturing at its modern facilities its own vehicles, as well as parts for the world's prominent brands in the commercial vehicles sector. The company has been engaged in commercial vehicle production since 1966, and its factory in Hasanağa in Bursa has the capacity to manufacture up to 19,870 vehicles a year on a single shift. The Hasanağa factory is a flexible installation that can manufacture all kinds of vehicles in the same facilities from passenger cars and heavy trucks to minivans and buses. It is located 30 km from the Bursa city center and has been established on an area of 200,000 sqm, 90,000 sqm of which is closed space.

Karsan has been the only independent multi-brand light commercial vehicles manufacturer in Turkey for more than 50 years and the next phase for the company, powered and enabled by its business partners and licensors, is to develop bespoke versions of new and existing vehicles in order to extend its presence to all segments of cargo and passenger transportation. Working to “develop innovative products and services from the idea to the market” and to cater to every market segment, Karsan primarily aims to strengthen its Main Manufacturer/OEM business line. Karsan manages its whole automotive value chain from R&D and manufacturing to marketing, sales, and after-sales activities.

Currently, the company manufactures the new H350 light commercial vehicles for Hyundai Motor Company (HMC), 10-12-18 m buses for Menarinibus, and its own Jest, Atak, and Star models. It also produces fully electric vehicles, its much-celebrated Jest Electric and Atak Electric line, in partnership with the world giant BMW. Besides vehicle manufacturing, Karsan also provides a range of industrial services in its Organized Industrial Zone factory.

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
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Reporting year	January 1, 2021	December 31, 2021	Yes	3 years
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C0.3

(C0.3) Select the countries/areas in which you operate.

Turkey

C0.4

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

TRY

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

C-T00.7/C-TS0.7

(C-T00.7/C-TS0.7) For which transport modes will you be providing data?

Light Duty Vehicles (LDV)

Heavy Duty Vehicles (HDV)

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
No	

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
Board-level committee	Karsan Board of Directors is responsible for sustainability management on a strategic scale, as in all matters related to the company. Operating under the Board of Directors, the Corporate Governance Committee is officially responsible for supervision of the compliance with the sustainability principles on both policy and practice level which are included in the Capital Market Board (CMB) regulations, overseeing compliance issues and making recommendations to the Board of Directors to improve company's sustainability priorities and program. Since climate change and environment, smart and green mobility aspects are officially defined as company's sustainability priorities which have direct impact on climate related performance including CO2 emissions arising from operations, impacts of fuel vehicles on the climate as well as positive contributions autonomous electrical vehicles, climate related issues are direct responsibility of the Corporate Governance Committee (For Ref.: Sustainability Report - 2021, p. 12).
Chief Executive Officer (CEO)	Transforming the strategic orientations drawn by the Board of Directors into operations is the responsibility of all business units under the leadership of the CEO. This also applies to climate-related issues. The CEO also chairs Sustainability Committee which is senior level executive body responsible for sustainability issues including the climate changed. As the most senior responsible for the corporate performance, CEO is also engaged in climate related performance areas such as energy use, CO2 emissions, legal compliance, climate friendly vehicle R&D studies. For instance, manufacturing electric vehicles is a top priority in terms of corporate strategy. Thus, adopting holistic climate strategy and developing climate performance are among the top CEO priorities. Company objectives such as manufacturing electric vehicles increasing their share, increasing productivity through energy efficiency, material efficiency, water management, diversification of electric vehicle product range are found in the CEO's scorecard (For Ref.: Sustainability Report - 2021, p. 12).

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
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Scheduled – all meetings	<p>Reviewing and guiding major plans of action</p> <p>Monitoring implementation and performance of objectives</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p>	<p>Board of Directors meets in monthly basis. Sustainability issues including the climate risks are discussed in the Board agenda in various intervals depending on the aspect. Climate related aspects including energy, material, water consumption are discussed in an aggregated manner in all meetings as they are part of the cost structure; all Electric Vehicle projects, R&D activities and progress against objectives, mega trends, risks, opportunities and forward-looking aspects such as possible regulations regarding electric vehicles, carbon taxes, green financial instruments are discussed in all Board meetings.</p>
Scheduled – some meetings	<p>Reviewing and guiding risk management policies</p> <p>Other, please specify</p> <p>Reviewing compliance against climate related regulations. Reviewing climate related annual public disclosures and sustainability report.</p>	<p>Some of the aspects are discussed by the Board in a scheduled time frame but not in all meetings. These aspects are mostly time specific. For instance, compliance studies regarding Sustainability Principles Framework of the Capital Markets Board are conducted once a year. In March meetings Board discusses level of compliance to the Sustainability Principles Framework which also contains climate related principles from policy to practice. In June, Karsan publishes its annual sustainability report. Thus, Corporate Governance Committee of the Board reviews the report to be published in its June meeting. Early Detection of Risk Committee of the Board discusses climate and environment related risks (including product risks) in their meetings once a year.</p>

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	

C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Sustainability committee	Both assessing and managing climate-related risks and opportunities	Quarterly
Other, please specify WCM Manager	Managing climate-related risks and opportunities	Not reported to the board
Other, please specify Sustainability Working Group	Both assessing and managing climate-related risks and opportunities	Not reported to the board

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).

CEO is the highest-level executive within the organization responsible for climate related issues. He is both responsible for assessment and management processes of the climate-risks as well as generating performance upon the Board of Directors. In all Board meetings CEO reports progress in various fields including aspects related to the climate-risks.

CEO also chairs the Sustainability Committee. The Sustainability Committee is a senior level, strategic decision-making body regarding both assessing and managing climate related risks. Sustainability Committee meets in quarterly basis and the CEO reports quarterly outcomes to the Board afterwards.

Sustainability Working Group is a multifunctional body which are responsible for the execution of the strategic plans regarding climate related risks and opportunities defined by the Sustainability Committee. They do not have a direct reporting line to the Board, but their outcomes are assessed within the Sustainability Committee and reported to the Board afterwards by the CEO.

WCM manager is responsible for coordination of the sustainability program, ensuring efficiency of activities of sustainability related governance bodies as well as coordinating projects and practices regarding sustainability aspects. S/He does not have a direct line of reporting to the Board but her/his activities are reported to do Board by the CEO.

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	We provide both monetary and non-monetary incentives to both managers and all employees for their initiatives which support the company's progress in terms of in managing climate related risks and opportunities.

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 incentivized	Comment
Chief Executive Officer (CEO)	Monetary reward	Energy reduction target Efficiency target Other (please specify) Target for reducing climate related impacts of products. And target for increasing market share of electric vehicles.	Targets regarding reduction of energy use, increasing efficiency and reduction climate related impact of vehicles such as GHG emissions, fuel consumption, electrification and increasing market share of electric vehicles are found in the score card of the CEO. Performance against these targets result in monetary incentive.
Chief Operating Officer (COO)	Monetary reward	Energy reduction target Efficiency target	Targets regarding reduction of energy use, increasing efficiency are found in the score card of the COO. Performance against these targets result in monetary incentive.
Other C-Suite Officer	Monetary reward	Other (please specify) Target for increasing market share of electric vehicles.	Targets regarding increasing market share of electric vehicles are found in the score card of the all C-suite executive. Performance against these targets result in monetary incentive.
Other, please specify R&D Director	Monetary reward	Other (please specify) Target for reducing climate related impacts of products.	Targets regarding reduction climate related impact of vehicles such as GHG emissions, fuel consumption, electrification of vehicles are found in the score card of the R&D Director. Performance against these targets result in monetary incentive.

Facilities manager	Monetary reward	Emissions reduction project Energy reduction project Energy reduction target Efficiency project	In line with World Class Manufacturing - Energy, Cost Deployment and Environment Pillar activities and scoring system, energy efficiency and consequent GHG emission reduction targets and projects are found in the personal scorecard of facilities manager. Performance against these targets result in monetary incentive.
All employees	Monetary reward	Emissions reduction project Energy reduction project Efficiency project Behavior change related indicator	All employees can submit their suggestions and improvement actions (Kaizen) related with energy efficiency and GHG reduction within Karsan Suggestion/Kaizen System. Each positive suggestion and all best Kaizens are rewarded separately with monetary incentives.
All employees	Non-monetary reward	Emissions reduction project Energy reduction project Efficiency project	All employees can submit their suggestions and improvement actions (Kaizen) related with energy efficiency and GHG reduction within Karsan Suggestion/Kaizen System. All best Kaizens are rewarded with non-monetary incentives such as recognition in monthly corporate magazine, personal appreciation of senior management.

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	Terms are defined in line with strategic plan principles.
Medium-term	1	3	Terms are defined in line with strategic plan principles.
Long-term	3	7	Terms are defined in line with strategic plan principles.

C2.1b

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

The main purpose of Karsan's governance activities is to perform Risk Management and internal audit activities. Karsan risk management and internal audit activities are under the roof of all business divisions and the Board of Directors. Our risk management activities are carried out in a coordinated manner in all departments under the leadership of the Corporate Risk Management and Internal Audit Department. The Early Detection of Risk Committee, formed as a sub-committee of our Board of Directors, is responsible for Karsan's risk management system and activities; The Audit Committee is responsible for the control and evaluation of internal audit systems and activities. Our Risk Management and Internal Audit Department performs the functional management of these processes and reports the results to the CEO and relevant Committees. In line with our risk management activities, while aiming to realize our strategies and targets, to define the risk correctly and to take action in this direction, and to minimize the risks; We use a dynamic risk management program structured with COSO Enterprise Risk Management systematic, ISO 31000 Standard and CMB Corporate Governance Principles. As Karsan, we recognize the importance of the concept of internal control, as risk management is at the core of corporate governance and internal audit. During our internal audit activities, which constitute one of the building blocks of our risk management model; We carry out company activities in compliance with corporate values and commitments, policy, procedure, management standards and legal regulations. In this context, we aim to ensure that financial, managerial and business information is recorded in an accurate, timely and reliable manner, that the awareness and implementation level of management directives are monitored throughout the company, and that company assets are protected against abuses.

We implement internal audit activities for risk factors that are determined and targeted to be reduced as a result of risk assessment studies. We carry out our internal audit work, which we design in accordance with the principles of the COSO Model and IIA Standards, on a process and risk-based basis. The COSO internal control model we apply within the scope of risk management is the most internationally accepted, constantly developed and updated, and the most comprehensive risk management model. Like the COSO model, we evaluate the risks that arise in the internal audit studies we apply to protect the assets of our institution, with their financial dimensions, and ensure the follow-up of the actions we take (Ref. Sustainability Report 2021 p.22).

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

Risk management process

A specific climate-related risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Short-term

Medium-term

Long-term

Description of process

Karsan conducts a multidimensional process to identify climate related risk and opportunities accordance with the Environment pillar of World Class Manufacturing. Primary step for the identification process is Environmental Management Audit and Training (EMAT) System. During EMAT process, we conduct a risk and opportunity identification survey across the company by EMAT auditors who are randomly selected from managerial staff. During the EMAT process we identify both minor and major risks to be mitigated in short term and opportunities to be seize as quick wins. This process is conducted on a monthly basis mitigation success is controlled through smart KPIs and outcomes are reported to senior management bodies. Specialty risks which can not be identified during EMAT process, are evaluated during the annual environmental risk assessment process which includes climate related risks and opportunities. According to Karsan's corporate risk management methodology, outcomes of this study are evaluated by senior management review process and appropriate mitigation actions defined. Necessary budgets are allocated during catchball meetings for each improvement project.

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	Our company is all in comply with the current related regulations like European Green Deal. This topic closely monitored for the current and possible future regulations. Current regulations directly related with the company operations.
Emerging regulation	Relevant, always included	Emerging regulations directly related with the company operations.
Technology	Relevant, always included	Transition to low carbon technologies is a core focus for Karsan for this reason technology risks are always including in our risk assessment.

Legal	Not relevant, included	Legal risks are included in our corporate risk management system as a core pillar. For this reason we always including legal risk to our assessments however we did not defined any relevant legal risk within current risk evaluation.
Market	Relevant, always included	We are working in a vibrant, customer oriented and dynamic industry. For this reason, we always evaluate market risk in our business model.
Reputation	Relevant, always included	As a publicly traded company, reputation is directly connected to our market value thus we always relevant include reputation risks to our evaluations.
Acute physical	Relevant, always included	Extreme weather events may cause hazards and product losses. Thus it is a relevant risk for our operations and always include to our evaluations.
Chronic physical	Relevant, always included	Droughts may cause underground water shortages. Thus it is a relevant risk for our operations and always include to our evaluations.

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

Current regulation

Mandates on and regulation of existing products and services

Primary potential financial impact

Increased direct costs

Company-specific description

Climate changed has a negative impact on energy and water resources which eventually affects energy and water prices. Increase in energy and water prices would increase production costs.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

400,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Considering the indirect impact of any future restrictive legislation on energy purchases or GHG emissions, these are mainly related to a general increase in the cost of energy and water supply for Karsan. We assume that the direct impact of energy and water cost is approximately 5%. Risk and potential financial impact is expected to remain medium-low.

Cost of response to risk

250,000

Description of response and explanation of cost calculation

Karsan identifies energy risks and takes action to minimize energy consumption. We reduced our energy consumption by 3,584 GJ in 2020 with our energy efficiency efforts, which we increased by 47% compared to the previous year. We use SCADA System to follow up and evaluate our energy consumption. We anticipate that the momentum in efficiency studies will increase with the introduction of the ISO 50001 (Energy Management System) Standard (Sustainability Report - 2020, p.38).

Comment

In order to reduce energy cost we continue our improvement energy projects.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Emerging regulation

Mandates on and regulation of existing products and services

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

Since our business model is mostly on exports. We have to comply with ever developing EU and USA market legislation for our diesel segment products. Especially, EU Commission's Green Deal Framework requires us to take necessary steps for transition to lower carbon technologies both in terms of products and manufacturing processes for 2030 - 2050 time horizon. In this time frame we expect that new regulation will also arise which will be binding for us.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

81,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

We calculated the cost of not being able to sell a vehicle for one year.

Cost of response to risk

12,000,000

Description of response and explanation of cost calculation

Financial impact figure comes from the required investment for engine and related component development; carbon taxes costs due to emissions from production above the limitations.

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Chronic physical

Changing precipitation patterns and types (rain, hail, snow/ice)

Primary potential financial impact

Increased direct costs

Company-specific description

We use underground water as resource during our production time. Therefore we have to consider the impact of climate change on water resources. We are working on recycle and reuse alternatives to avoid running out of water resources.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

81,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

There is a direct relationship between not being able to reach water resources and not being able to produce for long term. So risk and potential financial impact is expected to remain medium-high.

Cost of response to risk

800,000

Description of response and explanation of cost calculation

The cost of a recovery plant to reuse treated water and production losses.

Comment

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Technology
Transitioning to lower emissions technology

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

Currently, we use electricity and natural gas for energy during our production activities. We aim to meet some of this energy (nearly 50%) with renewable energy and reduce our carbon emissions.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

81,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

We calculated the cost of not being able to sell a vehicle for one year.

Cost of response to risk

15,000,000

Description of response and explanation of cost calculation

We calculated the cost of renewable energy technologies.

Comment

Identifier

Risk 5

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Market

Changing customer behavior

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

Market expectations are directed towards low-carbon products. Therefore, our electric vehicle investments have increased.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

81,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

We calculated the cost of not being able to sell a vehicle for one year.

Cost of response to risk

0

Description of response and explanation of cost calculation

The investment cost of producing a 50% electric vehicle

Comment

Identifier

Risk 6

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Flood (coastal, fluvial, pluvial, groundwater)

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

Extreme weather events prevent us from producing some days per year. Also it will damage our production lines and our technologies.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,768,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Loss of production and losses due to damage to our production lines

Cost of response to risk

238,000

Description of response and explanation of cost calculation

Insurance and policy costs.

Comment

Identifier

Risk 7

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation

Mandates on and regulation of existing products and services

Primary potential financial impact

Increased direct costs

Company-specific description

Since our business model is mostly on exports. We have to comply with ever developing EU and USA market legislation for our diesel segment products. Especially, Adapting to circular economy conditions will bring us new risks for the EU and the USA. In this time frame we expect that new regulation will also arise which will be binding for us.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

We calculated the cost of not being able to sell a vehicle for one year.

Cost of response to risk

Description of response and explanation of cost calculation

Financial impact figure comes from the required investment for engine and related component development; carbon taxes costs due to emissions from production above the limitations.

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

Energy source

Primary climate-related opportunity driver

Use of supportive policy incentives

Primary potential financial impact

Returns on investment in low-emission technology

Company-specific description

We increase our use of recycled materials on the vehicle by complying End of Life Vehicle Directive (ELV). In this way we produce low carbon vehicles.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

We see it as an important opportunity to sell our vehicles, especially in the EU market.

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

We anticipate a 10% increase for vehicle costs.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Upstream

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

The fact that electric vehicles have a much more compact structure compared to hydrocarbon fueled vehicles allows many vehicles to be produced on the same platform thanks to their modular platform structures. This creates a huge advantage in the automotive industry in terms of diversity, quality and production efficiency which helps to reduce GHG emissions.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

We see it as an important opportunity to sell our vehicles, especially in the EU market.

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

The transition to electric vehicles especially requires the addition of new batteries and equipment to the vehicle. For this reason, we predict that our vehicle costs will increase by 30-50%. So we don't predict to net costs.

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of supportive policy incentives

Primary potential financial impact

Returns on investment in low-emission technology

Company-specific description

We increase recyclability rate for our vehicles by complying End of Life Vehicle Directive (ELV). In this way we produce low carbon vehicles.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

We see it as an important opportunity to sell our vehicles, especially in the EU market.

Comment

We anticipate a 25% increase for vehicle costs.

Identifier

Opp4

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of more efficient production and distribution processes

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

We see renewable technologies as key role for low-emission vehicles. In this context, we prepare feasibility report for solar technologies.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

17,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

We see it as an important opportunity to reduce carbon emission consumption for our production line.

Cost to realize opportunity

68,000,000

Strategy to realize opportunity and explanation of cost calculation

Investment cost for establishing solar system.

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?

Row 1

Transition plan

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a transition plan within two years

Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future

For this, we have participated in UN Global Compact Climate Ambition Accelerator, which is carried out specially for UN Global Compact members. In this context, we are preparing ourselves to be included in SBTi within 5 years.

C3.2

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

Use of climate-related scenario analysis to inform strategy	
Row 1	Yes, qualitative and quantitative

C3.2a

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

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
	Other, please specify Nationally determined contributions (NDCs)		Quantitative parameters: - Sales rate of our sustainable product - Carbon emissions consumption - Carbon emissions per vehicle - Recycled material rate -Recyclable rate for our electricity product -Energy consumption -Water consumption Qualitative parameters; - Legal compliance - Training hours for sustainability -

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

- Which KPIs does our company follow about climate change?
- Do we have a carbon neutral target?
- Do our activities take into account all processes from cradle to grave?

Results of the climate-related scenario analysis with respect to the focal questions

In our strategic planning processes, we employ scenarios based on principles of NDC declared by Republic of Turkey, which also refers to 2 Degrees Scenarios to be implemented between 2021- 2030 time frame. Within this NDC several action plans declared which have direct and indirect relations to our business strategies. For instance, energy pillar of NGC plans for carbon emission reductions refers to an increase in renewable energy production as well as in micro-generation, co-generation and on-site production practices which we also consider in our strategies to reduce emissions and energy consumption and operational costs. In the industry pillar, plans focus mainly on industry wise energy intensity reduction and incentivizing efficiency project.

We already invest in efficiency projects which aim to reduce energy intensity of our production. We include these projects in our strategic plans not only for their emission reduction outcomes but also for their significant impacts on our cost structure and process quality towards a leaner structure. Transport pillar of the NDC generates the most significant support to our business strategy. In this pillar, implementation of more sustainable transportation approaches in urban areas and promotion of alternative fuel and clean vehicles are the amongst the core actions. Since 2018 we increase our effort to develop and produce electric and autonomous vehicles. Our business strategy focuses on success to highlight our corporate identity as a green mobility provider by increasing proportion of electric and alternative fuel vehicles in our total sales. In the other hand, consistency of our focus on green transportation and business model with green financial incentives, sustainable investment initiatives and governmental supports which aims low carbon economy transition, create significant financial opportunities for implementing our business strategy.

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 Karsan, our aim is to be a pioneer in the world in electric and autonomous public transportation models, and to develop customer-oriented solutions and services by

		<p>developing collaborations within the mobility ecosystem. In this context, we started to develop electric and autonomous vehicles, which help to reduce GHG emissions, with innovative features, and to expand our activities in the field of mobility services, with the work of our strategic planning and business development, marketing and R&D units. Our efforts for green mobility also correspond with NDC declared by Republic of Turkey and Green Deal scheme declared by European Union.</p> <p>In the short term, our goal is to expand the electric vehicle product range from 6m to 24m, to diversify our public transportation solutions and to offer customers the full product range they may need. In the medium and long term, our aim is to equip our entire product range with autonomous technologies and integrate it with service segments, making Karsan a company that provides sustainable mobility solutions and services as well as being a vehicle manufacturer.</p>
Supply chain and/or value chain	Evaluation in progress	<p>When choosing our direct product suppliers, we audit the our supplier candidates whether they meet the compliance with environmental aspect depend on ISO 14001. According to our WCM strategy, in mid-term our aim to implement Green Logistic Principles and internal carbon pricing principles which help to reduce GHG emissions, to our supplier.</p>
Investment in R&D	Yes	<p>The capacity to produce vehicles with low climate change impacts, especially electric vehicles, represents the point where risk turns into opportunity in our sector. For this reason, the transformation of our vehicle portfolio also constitutes an important part of our R&D and product strategy. However, as an industrial company, we cannot ignore our production operations in terms of their impact on climate change.</p> <p>In line with our understanding of sustainability, we act with the logic of value chain in our R&D and innovation studies, as well as in our other fields of activity, and we implement innovative practices, especially digitization in production processes, in addition to product and service development.</p> <p>Our R&D work is carried out in coordination with the relevant business units by our R&D Center, which was registered by the Ministry of Industry and Trade in 2019. New technology trends, customer demands, innovations arising from existing projects, scientific publications are the main sources that</p>

		<p>feed our R&D projects. In this context, the biggest focus of our R&D Center, which works in various fields with 58 research personnel, is to develop mobility service models based on sustainable, environmentally friendly, electric and autonomous vehicles and disruptive technologies.</p> <p>In the last five years, we have spent over 71 million TL on R&D. As a result of these efforts, 13 of our patent applications were accepted and we made 5 new patent applications. At the end of our research, we developed 5 new products and we generated approximately 355 million TL revenue from these new products.</p> <p>The most important focus of our R&D work is to produce environmentally friendly vehicles. While one part of this focus is to produce electric vehicles, the other part is to reduce the emission values of existing diesel fueled vehicles. During the reporting period, we determined new technical specifications and conducted research on the necessary parameters. In line with the engineering activities we carried out as a result of our research, our suppliers also implemented software updates. After testing the selected engine applications on prototype vehicles, we preformed vehicle implementations. Thus, we significantly reduced the emission level by segment sales figures of our diesel-powered vehicles from 597.73 gr CO₂/kWh in 2021 to 296 gr CO₂/kWh.</p>
Operations	Yes	<p>The fact that electric vehicles have a much more compact structure compared to hydrocarbon fueled vehicles allows many vehicles to be produced on the same platform thanks to their modular platform structures. This creates a huge advantage in the automotive industry in terms of diversity, quality and production efficiency which helps to reduce GHG emissions.</p> <p>The effective management of environmental impacts arising from our activities is one of our main sustainability priorities. Environmental impact management is one of the basic elements of the WCM methodology that we have adopted as the main working model. Therefore, we strive to control and reduce environmental impact at every point of our work. Environmental impacts in our production activities include climate change and greenhouse gases, various air gases, energy management, water consumption, material consumption, waste management and recycling.</p>

		<p>On the other hand, environmental impacts, primarily fuel consumption and greenhouse gas emissions, occur during the use of the vehicles we produce.</p> <p>The capacity to produce vehicles with low climate change impacts, especially electric vehicles, represents the point where risk turns into opportunity in our sector. For this reason, the transformation of our vehicle portfolio also constitutes an important part of our R&D and product strategy. However, as an industrial company, we cannot ignore our production operations in terms of their impact on climate change. At this point, energy efficiency and greenhouse gas emission management are areas that we carefully manage.</p>
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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 Access to capital	<p>As a green mobility provider through are electric vehicles transition of the transport market towards low carbon vehicles, especially by EU Green Deal action plans for European Market, offers a significant opportunities in terms of sales revenue generation.</p> <p>While transition to electric vehicle production creates additional direct costs mainly because battery and electronic component costs, efforts to reduce GHG emissions arising from production process have a positive impact on reducing indirect costs arising from energy consumption.</p> <p>R&D and transition projects requires additional capital investments to apply our carbon strategy, green financial products such as green bonds, initiatives such as responsible investment principles, specialty funds such as Green Climate Fund provides significant opportunities to access favorable financial capital.</p>

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

Site/facility

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Location-based

Scope 3 category(ies)

Base year

2019

Base year Scope 1 emissions covered by target (metric tons CO₂e)

2,521

Base year Scope 2 emissions covered by target (metric tons CO₂e)

4,665

Base year Scope 3 emissions covered by target (metric tons CO₂e)

Total base year emissions covered by target in all selected Scopes (metric tons CO₂e)

7,186

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

35

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

65

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2021

Targeted reduction from base year (%)

15

Total emissions in target year covered by target in all selected Scopes (metric tons CO₂e) [auto-calculated]

6,108.1

Scope 1 emissions in reporting year covered by target (metric tons CO₂e)

1,454.88

Scope 2 emissions in reporting year covered by target (metric tons CO₂e)

4,015

Scope 3 emissions in reporting year covered by target (metric tons CO₂e)

Total emissions in reporting year covered by target in all selected scopes (metric tons CO₂e)

5,469.96

% of target achieved relative to base year [auto-calculated]

159.2021523332

Target status in reporting year

Achieved

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Target ambition

Please explain target coverage and identify any exclusions

Since 2019 we set annual absolute emission reduction target (Scope 1 + Scope 2), based on the year 2019 requiring 15% annual reduction. For the year 2021 we achieved the requirements of this target by additional 23.8% (5,469.96/7,186).

Plan for achieving target, and progress made to the end of the reporting year

List the emissions reduction initiatives which contributed most to achieving this target

We established ISO 50001 Energy Management System.
We created Loss Analyses System for Energy Losses.
We created Kaizen Categories about Climate Change and Sustainability.
We created policies about Climate Change.
We performed Kaizen Project for Energy Efficiency and we saved 611 MWh/year for electricity and 552 MWh/year natural gas consumption (Karsan Sustainability Report, page 40) .

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Other climate-related target(s)

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2019

Target coverage

Site/facility

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Energy consumption or efficiency

GJ

Target denominator (intensity targets only)

Base year

2019

Figure or percentage in base year

73,903

Target year

2021

Figure or percentage in target year

62,817

Figure or percentage in reporting year

59,517

% of target achieved relative to base year [auto-calculated]

129.7672740393

Target status in reporting year

Achieved

Is this target part of an emissions target?

Energy consumption reduction target is part of our Scope 2 emission reduction plan.

Is this target part of an overarching initiative?

Other, please specify

Our internal targets for WCM Management System

Please explain target coverage and identify any exclusions

Since 2020 we set annual absolute energy consumption reduction target, based on the year 2019 requiring 15% annual reduction. For the year 2021 we achieved the requirements of this target by additional 19.4%.

Plan for achieving target, and progress made to the end of the reporting year

List the actions which contributed most to achieving this target

We established ISO 50001 Energy Management System.

We created Loss Analyses System for Energy Losses.

We performed Kaizen Project for Energy Efficiency and we saved 611 MWh/year for electricity and 552 MWh/year natural gas consumption (Karsan Sustainability Report, page 40) .

Target reference number

Oth 2

Year target was set

2019

Target coverage

Site/facility

Target type: absolute or intensity

Intensity

Target type: category & Metric (target numerator if reporting an intensity target)

Waste management
metric tons of waste generated

Target denominator (intensity targets only)

unit of production

Base year

2019

Figure or percentage in base year

420.6

Target year

2021

Figure or percentage in target year

378.54

Figure or percentage in reporting year

381.3

% of target achieved relative to base year [auto-calculated]

93.4379457917

Target status in reporting year

Underway

Is this target part of an emissions target?

Decrease in waste amount results in decrease of Scope 3 emissions because of reduced disposal emissions.

Is this target part of an overarching initiative?

Please explain target coverage and identify any exclusions

Since 2020 we set annual targets to decrease waste generated per vehicle produced, based on the year 2019 requiring 10% annual decrease. For the year 2021 we achieved that target (Karsan Sustainability Report, 2021; page 43) .

Plan for achieving target, and progress made to the end of the reporting year

We implemented WCM Management System.
We created Loss Analyses System for Waste Losses.
We performed EMAT Audits for environmental management
We carried out environmental training

List the actions which contributed most to achieving this target

Target reference number

Oth 3

Year target was set

2020

Target coverage

Site/facility

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Low-carbon vehicles

Percentage of low-carbon vehicles sold

Target denominator (intensity targets only)

Base year

2019

Figure or percentage in base year

23

Target year

2021

Figure or percentage in target year

30

Figure or percentage in reporting year

43

% of target achieved relative to base year [auto-calculated]

285.7142857143

Target status in reporting year

Is this target part of an emissions target?

Increase in percentage of electric vehicles in total production results in decrease of Scope 3 emissions because of reduced emissions of sold products.

Is this target part of an overarching initiative?

Please explain target coverage and identify any exclusions

We launched our first electric vehicle in late 2018. We aim to increase our percentage of electric vehicle production to the level 13% by the year 2021. Currently as of 2021 year end we achieved 7%.

Plan for achieving target, and progress made to the end of the reporting year

List the actions which contributed most to achieving this target

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	1	
To be implemented*	1	210
Implementation commenced*		
Implemented*	8	365
Not to be implemented		

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
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

160

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

677,360

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

28,000

Payback period

<1 year

Estimated lifetime of the initiative

6-10 years

Comment

An inverter has been added for cataphoresis circulation pump. Therefore, during non-production; the speed of the pumps has been reduced and more energy has been saved.

Initiative category & Initiative type

Energy efficiency in production processes
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

17

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

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

202,898

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

12,000

Payback period

<1 year

Estimated lifetime of the initiative

11-15 years

Comment

Some equipment has been added for preventing operations at 22 Celcius degree and above temperature.

Initiative category & Initiative type

Energy efficiency in production processes
Cooling technology

Estimated annual CO2e savings (metric tonnes CO2e)

5.2

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Mandatory

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

24,640

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

0

Payback period

<1 year

Estimated lifetime of the initiative

6-10 years

Comment

The circulation pump has been cancelled.

Initiative category & Initiative type

Waste reduction and material circularity
Product/component/material recycling

Estimated annual CO2e savings (metric tonnes CO2e)

36

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 3 category 5: Waste generated in operations

Voluntary/Mandatory

Mandatory

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

50,000

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

0

Payback period

<1 year

Estimated lifetime of the initiative

16-20 years

Comment

Within the scope of the project, use of cardboard boxes for driver's seat, disabled ramp and sunroof has been changed into metal boxes in the distribution of Jest line materials. This has saved 580 kg of cardboard per year along with paper and cardboard packaging materials. Thanks to elimination of cardboard boxes in the inner ceiling parts of the OSB TTF line, 420 kg of cardboard per year has been saved.

Initiative category & Initiative type

Energy efficiency in production processes
Other, please specify
4 other kaizen projects

Estimated annual CO2e savings (metric tonnes CO2e)

146.8

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1
Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

695,538

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

100,000

Payback period

<1 year

Estimated lifetime of the initiative

<1 year

Comment

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	In line with our corporate principles compliance with all applicable law and regulation is a minimum working standards for Karsan. For this reason compliance with emission reduction requiring regulatory activities is a core motivation for investments.
Dedicated budget for energy efficiency	Energy consumption is one of the main cost items in our operations. Energy efficiency projects not only reduce carbon emissions but also support financial performance. For this reason we allocate dedicated budget annually for energy efficiency projects.
Dedicated budget for low-carbon product R&D	Producing low carbon product such as electric or alternatives fuel vehicles is the core focus of our business strategy. For this reason we allocate a substantial percentage of R&D budget for low carbon products.
Dedicated budget for other emissions reduction activities	We allocate a dedicated budget to reduce indirect emissions arising from water consumption, wastewater treatment and solid wastes.
Employee engagement	We engage with our employees to encourage them to generate kaizen projects which result in emission reduction. For this reason we invest in activities to increase employee engagement level such as training programs.
Internal incentives/recognition programs	To incentivize employees' efforts towards GHG emission reductions and suggestions for climate friendly business practices we conduct recognition and reward programs.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Road

Lithium-ion batteries

Description of product(s) or service(s)

6 meters low floor LDV Electric vehicles "Jest EV" for public passenger transportation

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Other, please specify
we calculated internal methodology

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Cradle-to-gate + end-of-life stage

Functional unit used

We calculated for 100.000 km.

Reference product/service or baseline scenario used

we used internal calculated methodology.

Life cycle stage(s) covered for the reference product/service or baseline scenario

End-of-life stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

5.1

Explain your calculation of avoided emissions, including any assumptions

We have used different data (electricity batteries and diesel motors) of same vehicle for 100.000 km.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

30

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Road
Lithium-ion batteries

Description of product(s) or service(s)

8 meters low floor HDV Electric vehicles "Atak EV" and Atak Autonomous EV for public passenger transportation

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Other, please specify
we calculated internal methodology

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Cradle-to-gate + end-of-life stage

Functional unit used

We calculated for 100.000 km.

Reference product/service or baseline scenario used

we used internal calculated methodology.

Life cycle stage(s) covered for the reference product/service or baseline scenario

End-of-life stage

Estimated avoided emissions (metric tons CO₂e per functional unit) compared to reference product/service or baseline scenario

2.6

Explain your calculation of avoided emissions, including any assumptions

We have used different data (electricity batteries and diesel motors) of same vehicle for 100.000 km.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

33

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Road
Lithium-ion batteries

Description of product(s) or service(s)

12-18 meters low floor HDV Electric vehicles "e-ATA" for public passenger transportation.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

No

Methodology used to calculate avoided emissions

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Functional unit used

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Estimated avoided emissions (metric tons CO₂e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

36

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

No

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

Change(s) in methodology, boundary, and/or reporting year definition?	
Row 1	No

C5.2

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

Scope 1

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO₂e)

3,619

Comment

Scope 2 (location-based)

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO₂e)

4,910

Comment

Scope 2 (market-based)

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO₂e)

0

Comment

Scope 3 category 1: Purchased goods and services

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO₂e)

25.13

Comment

Profile warehouse supplier voyage and km information are taken into account.

Scope 3 category 2: Capital goods

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO₂e)

45.01

Comment

We calculated energy related emissions of our suppliers.

Scope 3 category 4: Upstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 5: Waste generated in operations

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 6: Business travel

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 11: Use of sold products

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

122

Comment

Scope 3 category 12: End of life treatment of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

ISO 14064-1

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)

1,454.88

Start date

January 1, 2021

End date

December 31, 2021

Comment

Karsan Sustainability Report, page 41

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)

1,815

Start date

January 1, 2020

End date

December 31, 2020

Comment

Karsan Sustainability Report, page 41

Past year 2

Gross global Scope 1 emissions (metric tons CO2e)

2,521

Start date

January 1, 2019

End date

December 31, 2019

Comment

Karsan Sustainability Report, page 41

Past year 3

Gross global Scope 1 emissions (metric tons CO2e)

3,619

Start date

January 1, 2018

End date

December 31, 2018

Comment

Karsan Sustainability Report, page 41

C6.2

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

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

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

Comment

C6.3

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

Reporting year

Scope 2, location-based

4,015.08

Start date

January 1, 2021

End date

December 31, 2021

Comment

Karsan Sustainability Report, page 41

Past year 1

Scope 2, location-based

3,772

Start date

January 1, 2020

End date

December 31, 2020

Comment

Karsan Sustainability Report, page 41

Past year 2

Scope 2, location-based

4,665

Start date

January 1, 2019

End date

December 31, 2019

Comment

Karsan Sustainability Report, page 41

Past year 3

Scope 2, location-based

4,910

Start date

January 1, 2018

End date

December 31, 2018

Comment

Karsan Sustainability Report, page 41

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

Emissions in reporting year (metric tons CO₂e)

25.14

Emissions calculation methodology

Supplier-specific method

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

2

Please explain

We calculated Scope 3 emissions as pilot project.

Capital goods

Evaluation status

Please explain

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

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

45.01

Emissions calculation methodology

Supplier-specific method

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

33

Please explain

Upstream transportation and distribution

Evaluation status

Please explain

Waste generated in operations

Evaluation status

Please explain

Business travel

Evaluation status

Please explain

Employee commuting

Evaluation status

Please explain

Upstream leased assets

Evaluation status

Please explain

Downstream transportation and distribution

Evaluation status

Please explain

Processing of sold products

Evaluation status

Please explain

Use of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

122

Emissions calculation methodology

Average product method

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

66

Please explain

We calculated for Atak EV and Jest EV

End of life treatment of sold products

Evaluation status

Please explain

Downstream leased assets

Evaluation status

Please explain

Franchises

Evaluation status

Please explain

Investments

Evaluation status

Please explain

Other (upstream)

Evaluation status

Please explain

Other (downstream)

Evaluation status

Please explain

C6.5a

(C6.5a) Disclose or restate your Scope 3 emissions data for previous years.

Past year 1

Start date

January 1, 2020

End date

December 31, 2020

Scope 3: Purchased goods and services (metric tons CO2e)

Scope 3: Capital goods (metric tons CO2e)

**Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
(metric tons CO2e)**

880

Scope 3: Upstream transportation and distribution (metric tons CO2e)

Scope 3: Waste generated in operations (metric tons CO2e)

Scope 3: Business travel (metric tons CO2e)

Scope 3: Employee commuting (metric tons CO2e)

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

Scope 3: End of life treatment of sold products (metric tons CO2e)

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

Past year 2

Start date

January 1, 2019

End date

December 31, 2019

Scope 3: Purchased goods and services (metric tons CO2e)

Scope 3: Capital goods (metric tons CO2e)

**Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
(metric tons CO2e)**

890

Scope 3: Upstream transportation and distribution (metric tons CO2e)

Scope 3: Waste generated in operations (metric tons CO2e)

Scope 3: Business travel (metric tons CO2e)

Scope 3: Employee commuting (metric tons CO2e)

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

Scope 3: End of life treatment of sold products (metric tons CO2e)

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

Past year 3

Start date

January 1, 2018

End date

December 31, 2018

Scope 3: Purchased goods and services (metric tons CO2e)

Scope 3: Capital goods (metric tons CO2e)

**Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
(metric tons CO2e)**

887

Scope 3: Upstream transportation and distribution (metric tons CO2e)

Scope 3: Waste generated in operations (metric tons CO2e)

Scope 3: Business travel (metric tons CO2e)

Scope 3: Employee commuting (metric tons CO2e)

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

Scope 3: End of life treatment of sold products (metric tons CO2e)

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

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

2.59

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

5,469.96

Metric denominator

unit total revenue

Metric denominator: Unit total

2,111

Scope 2 figure used

Location-based

% change from previous year

25.1

Direction of change

Decreased

Reason for change

Energy efficiency projects are important part of this decrease but most significant impact arises from the shift of sold products to the electrical vehicle segment. During 2021, production values decreased which also reduced our emissions. However number of electrical vehicle sold, which are more added value products, increased during the reporting period which also increased our revenue although total number of production decreased.

C7. Emissions breakdowns

C7.1

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

No

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	1,454.88

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 CO ₂ e)	Latitude	Longitude
Hasanaga Facilities	1,454.88	40.174038	28.77497

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO₂e.

	Gross Scope 1 emissions, metric tons CO ₂ e	Comment
Transport OEM activities	1,454.88	

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO ₂ e)	Scope 2, market-based (metric tons CO ₂ e)
Turkey	4,015	

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 CO ₂ e)	Scope 2, market-based (metric tons CO ₂ e)
Hasanaga Facilities	4,015	

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO₂e.

	Scope 2, location-based, metric tons CO ₂ e	Scope 2, market-based (if applicable), metric tons CO ₂ e	Comment
Transport OEM activities	4,015		

C-T07.8

(C-T07.8) Provide primary intensity metrics that are appropriate to your indirect emissions in Scope 3 Category 11: Use of sold products from transport.

Activity

Light Duty Vehicles (LDV)

Emissions intensity figure

0.06

Metric numerator (Scope 3 emissions: use of sold products) in Metric tons CO₂e

122

Metric denominator

p.km

Metric denominator: Unit total

1,000,000

% change from previous year

10

Vehicle unit sales in reporting year

135

Vehicle lifetime in years

20

Annual distance in km or miles (unit specified by column 4)

50,000

Load factor

Please explain the changes, and relevant standards/methodologies used

We used internal methodologies.

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	0	No change		
Other emissions reduction activities	575	Decreased	2	Energy efficiency projects.
Divestment				
Acquisitions				
Mergers				
Change in output				
Change in methodology				
Change in boundary				
Change in physical operating conditions				
Unidentified				
Other				

C7.9b

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

Location-based

C8. Energy

C8.1

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

More than 0% but less than or equal to 5%

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	No

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	7,829	7,829
Consumption of purchased or acquired electricity		0	8,903	8,903
Total energy consumption		0	16,732	16,732

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	No
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
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.

Sustainable biomass

Heating value

Total fuel MWh consumed by the organization

Comment

Other biomass

Heating value

Total fuel MWh consumed by the organization

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value

Total fuel MWh consumed by the organization

Comment

Coal

Heating value

Total fuel MWh consumed by the organization

Comment

Oil

Heating value

Total fuel MWh consumed by the organization

Comment

Gas

Heating value

LHV

Total fuel MWh consumed by the organization

7,829,536

Comment

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

Total fuel MWh consumed by the organization

Comment

Total fuel

Heating value

LHV

Total fuel MWh consumed by the organization

86.81

Comment

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area

Turkey

Consumption of electricity (MWh)

8,903

Consumption of heat, steam, and cooling (MWh)

7,829

Total non-fuel energy consumption (MWh) [Auto-calculated]

16,732

C-TO8.5

(C-TO8.5) Provide any efficiency metrics that are appropriate for your organization's transport products and/or services.

Activity

Light Duty Vehicles (LDV)

Metric figure

171.7

Metric numerator

gCO₂e

Metric denominator

Production: Vehicle

Metric numerator: Unit total

64

Metric denominator: Unit total

10,988

% change from previous year

25

Please explain

Activity

Heavy Duty Vehicles (HDV)

Metric figure

86

Metric numerator

gCO₂e

Metric denominator

Production: Vehicle

Metric numerator: Unit total

60

Metric denominator: Unit total

% change from previous year

50

Please explain

C9. Additional metrics

C9.1

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

Description

Waste

Metric value

15.6

Metric numerator

contaminated wastes such as by unit produced

Metric denominator (intensity metric only)

kg/unit of vehicle produced

% change from previous year

16.1

Direction of change

Decreased

Please explain

Since we increased the production of electrical vehicles which contain less moving parts requiring treatment, volume of contaminated waste generation decreased significantly. On the other hand we applied various kaizen projects which resulted in reduction of contaminated wastes.

Description

Energy usage

Metric value

17.4

Metric numerator

electric and natural gas such as by unit produced

Metric denominator (intensity metric only)

GJ/vehicle

% change from previous year

13

Direction of change

Decreased

Please explain

In this context, we reduced our energy consumption by 4.187 GJ in 2021 with our energy efficiency efforts, which we increased by 13% compared to the previous year. This value is equivalent to 15% of the total energy consumption (Karsan Sustainability Report - 2021, p.39).

Description

Other, please specify

Water

Metric value

12.55

Metric numerator

water withdrawal

Metric denominator (intensity metric only)

m3 water use per vehicle produced

% change from previous year

1.2

Direction of change

Decreased

Please explain

Reduction achieved through water efficiency projects.

C-TO9.3/C-TS9.3

(C-TO9.3/C-TS9.3) Provide tracking metrics for the implementation of low-carbon transport technology over the reporting year.

Activity

Light Duty Vehicles (LDV)

Metric

Sales

Technology

Battery electric vehicle (BEV)

Metric figure

64

Metric unit

% of total sales

Explanation

Jest electric sales figures constitute 13.8% of total LCV sales including in all versions.
Jest electric sales percentage increase from 14% to 41% compared to 2020.

Activity

Heavy Duty Vehicles (HDV)

Metric

Sales

Technology

Battery electric vehicle (BEV)

Metric figure

60

Metric unit

% of total sales

Explanation

Atak electric sales figures constitute 24% of total HCV sales including in all versions.

Activity

Heavy Duty Vehicles (HDV)

Metric

Production

Technology

Battery electric vehicle (BEV)

Metric figure

11

Metric unit

% of total sales

Explanation

In 2021 we will launch new electric bus (10m-12m-18m) models to increase share of electric vehicles in total HCV sales. e-Ata electric sales figures constitute 4.4% of total HCV sales including in all versions.

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	The most significant portion of our R&D activities is focused on research and development of electric and autonomous vehicles.

C-TO9.6a/C-TS9.6a

(C-TO9.6a/C-TS9.6a) Provide details of your organization's investments in low-carbon R&D for transport-related activities over the last three years.

Activity

Light Duty Vehicles (LDV)

Technology area

Electrification

Stage of development in the reporting year

Large scale commercial deployment

Average % of total R&D investment over the last 3 years

≤20%

R&D investment figure in the reporting year (optional)

7,500,000

Comment

A significant portion of our R&D activities is focused on research and development of LCV electric vehicles.

Activity

Heavy Duty Vehicles (HDV)

Technology area

Electrification

Stage of development in the reporting year

Large scale commercial deployment

Average % of total R&D investment over the last 3 years

≤20%

R&D investment figure in the reporting year (optional)

15,000,000

Comment

A significant portion of our R&D activities is focused on research and development of HCV electric vehicles.

Activity

Heavy Duty Vehicles (HDV)

Technology area

Smart systems

Stage of development in the reporting year

Full/commercial-scale demonstration

Average % of total R&D investment over the last 3 years

≤20%

R&D investment figure in the reporting year (optional)

7,500,000

Comment

A significant portion of our R&D activities is focused on research and development of autonomous electric vehicles.

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	No third-party verification or assurance

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

Underway but not complete for reporting year – previous statement of process attached

Type of verification or assurance

Third party verification/assurance underway

Attach the statement

Page/ section reference

Verification has not yet been made for the specified reporting year. For this reason, the appendix is left blank.

Relevant standard

ISO14064-1

Proportion of reported emissions verified (%)

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

Underway but not complete for reporting year – previous statement of process attached

Type of verification or assurance

Attach the statement

Page/ section reference

Verification has not yet been made for the specified reporting year. For this reason, the appendix is left blank.

Relevant standard

ISO14064-1

Proportion of reported emissions verified (%)

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, we do not verify any other climate-related information reported in our CDP disclosure

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, and we do not anticipate being regulated in the next three years

C11.2

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

No

C11.3

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

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

C12. Engagement

C12.1

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

Yes, our suppliers

Yes, our customers/clients

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

57

% total procurement spend (direct and indirect)

50

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

2

Rationale for the coverage of your engagement

As Karsan, we support the transition towards a low carbon mobility environment through electric and autonomous vehicles. For this reason we develop and produce EV vehicles. Developing a cutting edge technology in automotive industry is only possible if we engaged deeply with our suppliers. We work together to innovate new technologies and produced high value added vehicles with our suppliers in order to drive change towards a climate friendly mobility service industry.

Impact of engagement, including measures of success

As we are producing electric vehicles, we use electric batteries of German Automotive Brand - BMW. Jest Electric and Atak Electric are equipped with same batteries and electric motors with BMW i3 and i8 which helps our customers and our brand great advantages while increasing the threshold between our competitors. In the year 2020, we began to produce Autonomous Atak Electric with the contribution of Adastec technology. Autonomous Atak Electric, Europe's first public transport vehicle with 100% electric and Level- 4 autonomous features, has completed the final stage on the assembly line in the year 2020. Numerous suppliers have contributed our electric autonomous vehicle development studies by producing native design parts and components to be implemented on our vehicles. We sold our first electric autonomous vehicle in 2020.

In 2021 we produced 409 electric vehicles and sold. We launched a new R&D study together with our suppliers for developed 3 new electric bus models and sold 11.

Comment

C12.1b

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

Type of engagement & Details of engagement

Collaboration & innovation

Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number

56

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

0

Please explain the rationale for selecting this group of customers and scope of engagement

Most of our production depends on tender is that we won. Clients that open tenders for purchase, also define vehicle requirement. Therefore we engage with prospect clients,

innovate for them, collaborate during the process in order to respond fully to their requirements. 50% of our customers in 2021 required electric vehicles for which we collaborate with them.

Impact of engagement, including measures of success

We produced 409 electric vehicles and sold. We sold our first electric autonomous vehicle in 2020. We launched a new R&D study together with our suppliers for developed 3 new electric bus models and sold 11.

C12.1d

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

We work for transforming our business model supporting low carbon economy, this includes both developing electric or alternative fuel vehicles such as fuel cells and a climate friendly production process which requires extensive investment. In order to receive required investment from financial institutions we engage with them frequently. Especially financial institutions which adopt green finance principles are in our scope. We engage with them to collaborate on responding their product or business model requirements. Green finance institutions have a great know-how on low carbon business models which we benefit from, to transform our practices.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

No, but we plan to introduce climate-related requirements within the next two years

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage indirectly through trade associations

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

 UN Clobal Compact mza (6).pdf

 KARSAN REPORT PAGE 001-236 ENG 2021 Annual.pdf

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy

C12.3b

(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Other, please specify

Automotive Manufacturers Association

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

We engage with Turkish Automotive Manufacturers Association (OSD), Turkish partner of ACEA (The European Automobile Manufacturers Association) represents the interests of Turkish automotive manufacturers. Karsan CEO acts as OSD's Board member, various Karsan managers works in working groups of OSD, such as environment working group, energy efficiency working group and sustainability working group. In these working groups we develop public policy position of the OSD, regarding these climate related aspects which has a significant impact on both national legislation processes and European industry policies. Also In 2021, Turkey Automotive Manufacturers Sustainability Report was prepared as OSD. At the same time, the LCA report on automotive production in Turkey was prepared. As Karsan, we took an active role in the writing process of these reports. We have a favorable stance in line with OSD's public policy position since we actively engage in the development process. OSD's position on climate related issues reflects the combined view of manufacturers. OSD anticipates the leading role of automotive manufacturer for the transition to a low-carbon mobility service. For that end, OSD members works on both green vehicle development and reducing environmental and climate impacts of production such as energy and water efficiency, waste, and effluent management. During 2021, emerging emphasis made on preparing the industry to

comply with EU Green Deal actions. Furthermore, OSD works on an industry wide sustainability analysis, results of which will be published with an industry-wide sustainability report.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify
UN Global Compact

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

We are committed to comply with environmental conditions in our activities with the membership of the UN Global Compact. In order to prepare ourselves for SBTi projects by being included in UN Compact Climate Ambition Accelerator, we continue to receive training support from UN Global Compact. In this context, we are planning to take part in climate projects regularly with the UN Global Compact.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

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

Complete

Attach the document

Page/Section reference

Karsan clarifies its Sustainability Report (2021) for its shareholders. Carbon emission amount is regularly included in the report. Karsan Sustainability Report - 2021 p.32-37 / You can reach electric and autonomous vehicle in this segment of the report. Karsan Sustainability Report - 2021 p. 38-44 / You can reach energy consumption, water consumption, wastes consumption, GHG emissions in this segment of the report.

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Publication

In voluntary communications

Status

Complete

Attach the document

 2021-009-En.pdf

 UN Global Compact mza (6).pdf

 KARSAN REPORT PAGE 001-236 ENG 2021 Annual.pdf

Page/Section reference

For the first time in 2021, Karsan applied Borsa Istanbul Sustainability Index (BIST). Karsan met all the requirements by providing sufficient score, therefore, Karsan was included in BIST, which consists of Environmental, Social and Governance processes, information on carbon emission has been shared.

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Publication

In mainstream reports

Status

Complete

Attach the document

 KARSAN REPORT PAGE 001-236 ENG 2021 Annual.pdf

Page/Section reference

Karsan Annual Report - 2020, p. 34-71 / our activities in 2020. Karsan Annual Report - 2020, p. 98-108 / sustainability principles compliance framework.

Content elements

Governance
Strategy
Emissions figures
Emission targets
Other metrics

Comment

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity
Row 1	Yes, executive management-level responsibility	WCM manager (who is also manager of sustainability management system) reports to CEO directly about sustainability, environment and energy activities for WCM.

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity
Row 1	No, but we plan to do so within the next 2 years

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?
Row 1	No, but we plan to assess biodiversity-related impacts within the next two years

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?
Row 1	No, we are not taking any actions to progress our biodiversity-related commitments, but we plan to within the next two years

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No, we do not use indicators, but plan to within the next two years	Response indicators

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Biodiversity strategy	

C16. 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.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1		

Submit your response

In which language are you submitting your response?

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
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Please select your submission options		Public
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Please confirm below