Welcome to your CDP Climate Change Questionnaire 2019

C0. Introduction

C0.1

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

Çimsa is an international cement and construction materials company with global and local experience and know-how of 45 years; along with R&D-based production power, wide product range, environment and human friendly approach and innovative employees. It is constantly growing by creating difference in its sector.
Çimsa is focused on meeting the product and solution needs of its customers timely and accurately with its market-focused approach and wide distribution network. As a reliable business partner of its stakeholders, Çimsa provides living environments for future generations, as well as materials needed for their infrastructures.
Çimsa is the leading innovative company in the cement industry and construction materials industry in Turkey with special products like white cement and calcium aluminate cement, in addition to grey cement.
One of the leading brands of white cement in the world, Çimsa increases its brand recognition on international platforms by exporting value added products that Cimsa develops while contributing to its sector and to Turkish economy. Çimsa exports white cement and special products to more than 65 countries, mainly to the Middle East, Europe, North Africa and the United States. Çimsa understands that a strong financial performance alone does not ensure sustainable success. Çimsa's strategy is to serve as a leader for all operations carried out in national and international markets.Under the company strategy defined priorities referred as "main value creation elements" which are;

- Economic Performance
- New Product and market development through R&D and innovation
- Energy Efficiency
- Economical value creation through environmental investments
- People Development
- Management of risks and opportunities

All value creation elements are in line with capital management model of company. Six capitals defined and every project under value creation items evaluated upon six capitals which are financial capital, produced capital, intellectual capital, people capital, social and relational capital, natural capital. Risk assessment is based on those capitals and for each and every risk, company defines the capital type. Natural capital covers climate change, environment management, environmental effect and biodiversity and ecosystem. If financial effect of the risk is above the company benchmark it is discussed at the board meeting and the board decides on the required action and next steps.

The company also have sustainability committee which supports the risk assessment in terms of climate change and the climate change strategy of the company is to perform annual greenhouse gas emission calculations in accordance with greenhouse gas inventory studies, to designate goals for future projections and to develop solution methods to reduce emissions. Çimsa implemented 'Strategy Framework' aiming to sustain and accelerate the growth by maintaining its competitive production power for 2018 and beyond. The compass which Çimsa will be wielding to reach its goals is sustainability, which is also the leverage of all of its activities. Reviewing the benefits of the broad awareness and ownership of the integrated approach within the company, the business model and the main targets related to it, Çimsa strongly believes that Cimsa will pursue its leadership in the industry, on the basis of these themes.

The company is also one of the industrial companies of Sabancı Group. Hacı Ömer Sabancı Holding A.Ş., one of Turkey's leading conglomerates, is the parent company and manages the Sabancı Group's companies with a strategic portfolio approach. Turkey's rapidly growing sectors including banking, insurance, energy, cement, retail and industrial are the main business areas of Sabancı Group. Sabancı Group companies are market leaders in their respective sectors.

In 2018 Afyon Cimento one of the group company also started to operate under Cimsa umbrella and Cimsa's high level management is adopting climate change management also for Afyon Cimento.

Sabancı Group companies currently operate in 13 countries and market their products in regions across Europe, Middle East, Asia, North Africa, North and South America. Sabancı Group, thanks to its reputation, brand image, strong joint ventures, extensive experience and know-how about the Turkish market, has fostered its core businesses that also become an important force contributing to the development of Turkish economy.

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
Row 1	January 1, 2018	December 31, 2018	No

C0.3

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

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 consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Operational control

C-CE0.7

(C-CE0.7) Which part of the concrete value chain does your organization operate in?

Limestone quarrying
Clinker production
Portland cement manufacturing
Blended cement
Alternative 'low CO2' cementitious materials production
Concrete production

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 Chair	Board Chair has responsibility for climate-related issues as of the integrated risk management system of the company all action plans and the budgets of the high risks which can be also about climate change is approved by the executive board and board chair. In 2018 R&D budgets for less carbon consumption, energy efficiency projects and alternative fuel studies approved by the board chair.
Other C-Suite Officer	Chief Technical Officer (CTO) is leading the sustainability committee which has responsibilities about climate-related issues. CTO is also a member of the executive board. In the cement industry, there are limited alternatives to fight with climate change and for energy efficiency, alternative fuel and alternative raw material use are also under control of CTO. CTO is also representing the company during the relations of NGO's especially working for sustainability, climate change. This wider perspective supports Cimsa development in terms of Climate Change.

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	Climate Change policy and strategies, performance and the targets are particularly managed by a Sustainability Committee which reports to the Board of Directors. The committee led by Chief Technical Officer who is also a member of Board meets quarterly. They are also responsible for supporting projects as per climate change. Management Committee is also responsible about climate-related issues because the company applies integrated risk assessment and they issue the risk procedures and monitor the risks. If natural capital risk comes from climate change than it is a management committee 's responsibility to define and monitor the cost of risk management and progress of the action plans. The management committee meets every month and reports to the board of directors. Within 2018 highest climate change risks defined as regulative risk and customer behavior change and it is presented to the board of directors and the mitigation of risk is decided by the board. The action decided was the accelerate R&D and investment in low carbon products. The budget for R&D in 2018 was more than 3 million TL. The objectives of the company related to climate come from the link with the operational objectives. All technical data verified by the third party and managing the climate change in the daily operation is one of the company priorities.

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)	Managing climate-related risks and opportunities	Quarterly
Other C-Suite Officer, please specify Chief Technical Officer	Both assessing and managing climate-related risks and opportunities	Quarterly
Sustainability committee	Assessing climate-related risks and opportunities	Quarterly
Other committee, please specify Management Committee	Managing climate-related risks and opportunities	Quarterly

C1.2a

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

There are special committees which are managed by board members under Çimsa management model. Two committees that have direct responsibilities about climate-related issues. One of the Sustainability Committee is led by CTO. Being led by a Chief Technical Officer is a strategic decision since the company is in the cement sector, it is important to develop new products with less emissions and it is operationally under the control of CTO. Latest regulations on sustainability and climate issues, developments in low carbon products and manufacturing methods and global reports information flow to the company via sustainability committee. In 2018 the sustainability committee gives brief about "IPCC Special Report Global Warming of 1.5 Degree ". The members of the sustainability committee have responsibilities about relations with policymakers and climate change and sectoral NGO's. This also keeps the committee updated about sustainability and climate change. The committee reports to the Board of Directors. The second committee is "Management Committee" which is responsible to manage all risks defined in the company. A risk coming from climate change is added to the risk assessment table of the company and the level of the risk defined as per risk procedure. The cost of the risk and the cost of management of the risk is also defined and presented to the board of directors. The final decision about risk management is under the control of the board of directors. They approve the budget of mitigation of climate-related risks and invest in climate-related opportunities. If the board decides mitigation of the risk than the progress of the action plan, it is also reviewed by the management committee. The CEO is the chair of the board and releases about climate change is her responsibility with the guidance of the board of directors, sustainability committee and the management committee.

C1.3

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

Yes

C1.3a

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

Who is entitled to benefit from these incentives?

Board/Executive board

Types of incentives

Monetary reward

Activity incentivized

Energy reduction target

Comment

In the cement industry; emissions could be particularly reduced by three ways;
-Increase the ratio of additives to clinker,
-Increase energy efficiency
-Increasing the use of alternative fuels.
These issues are defined as KPIs for CTO and facility managers. The Board is the main responsible of the performance driven by ÇİMSA and defined KPIs. KPIs are defined as energy reduction per ton of clinker, reducing the use of fossil fuels by increasing the use of alternative fuels, decrease clinker / cement ratio which directly affects the GHG emission because of the clinker incorporation rate, increase the use of alternative raw materials instead of natural additives. Risk management is in the basis of our company management and "Risk Assessment Table" is a living document. It has both strategy side and the operational units side. High risks are assessed by our Management Committee and action plans are approved by the Executive Board. The investment decision of climate related risks and opportunities is the responsibility of Board.

Who is entitled to benefit from these incentives?

Other, please specify

CTO - Chief Technical Officer

Types of incentives

Monetary reward

Activity incentivized

Energy reduction target

Comment

Chief Technical Officer leads the sustainability committee in ÇİMSA and has responsibilities for identifying and assessing sustainability risks and opportunities. The main KPIs are defined as energy reduction per ton of clinker, reducing the use of fossil fuels by increasing the use of alternative fuels, decrease clinker/cement ratio which

directly affects the GHG emission because of the clinker incorporation rate. Bonus is delivered as a monetary reward once a year according to the KPIs, therefore there are monetary rewards for climate-related issues for CTO.

Who is entitled to benefit from these incentives?

Other, please specify

Environmental Executive

Types of incentives

Monetary reward

Activity incentivized

Other, please specify

Environmental Compliance

Comment

It is the responsibility of the Environmental Executive to ensure compliance with legislation, including the Regulation on Monitoring of Greenhouse Gas Emissions. The Environmental Executive supports Environmental Leaders located at each facility. Integrated Reporting, Climate Change Management (including CDP- Climate Change and CDP-Water Reporting), environment and waste management legal compliance on the environment are main KPIs.

Who is entitled to benefit from these incentives?

Other, please specify

Sustainability, Process Control Manager

Types of incentives

Monetary reward

Activity incentivized

Behavior change related indicator

Comment

ÇİMSA puts great importance to Sustainable Business Model, therefore behavioral change on Climate Change is one of the topics to be integrated both to core business and to corporate culture. The Sustainability and Process Control Manager is responsible for defining company strategies and road map on sustainability. She enables the sustainability strategy to be extended and internalized within the company through internal training and communications with stakeholders. The Integrated Sustainability and Process Control Manager ensures the collection of data and internal coordination for the preparation of integrated sustainability report. The main KPI is releasing Integrated Sustainability Report successfully. By the achievement of the relevant responsibilities, a certain amount of incentive delivered as a monetary reward.

Who is entitled to benefit from these incentives?

Facilities manager

Types of incentives

Monetary reward

Activity incentivized

Energy reduction target

Comment

ÇİMSA has six cement facilities and one grinding plant. In each facility; Facility Managers are the main responsible contacts for energy efficiency, emission reduction, waste management processes. The main KPIs defined as energy reduction per ton of clinker, reducing the use of fossil fuels by increasing the use of alternative fuels, decrease clinker/cement ratio which directly affects the GHG emission because of the clinker incorporation rate, increase the use of alternative raw materials instead of natural additives. Bonus is delivered as a monetary reward once a year according to the KPIs, therefore there is a monetary reward for the performances of Facility Managers.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Monetary reward

Activity incentivized

Other, please specify

Continuous Improvement

Comment

ÇİMSA has a suggestion system for employee engagement and continuous improvement. Not only employees who have Environmental KPIs, but also all employees are included and encouraged to provide suggestions for improvements in Climate Change Management. The system is called "Idea Factory" and the suggestions are assessed by relevant experts on each topic. As a conclusion; ideas are assessed and the ones evaluated as suitable or applicable are rewarded with cheques according to the value creation of their ideas.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Recognition (non-monetary)

Activity incentivized

Other, please specify

Continuous Improvement

Comment

ÇİMSA has a suggestion system for employee engagement and continuous improvement. Not only employees who have Environmental KPIs, but also all employees are included and encouraged to provide suggestions for improvements in Climate Change Management. The system is called "Idea Factory" and the suggestions are assessed by relevant experts on each topic. As a conclusion; ideas are assessed and the ones evaluated as suitable or applicable are rewarded both by cheques and "Certificate of Appreciation". The certificate of appreciation is given in a meeting with the participation of Management, therefore it also gives recognition to the rewarded employee.

Who is entitled to benefit from these incentives?

Other, please specify

Environment & Resource Recovery Director

Types of incentives

Monetary reward

Activity incentivized

Energy reduction target

Comment

Environment and Resource Recovery Director is responsible for;
-Increasing the usage of alternative fuel in cement plants,
-Integrated Reporting,
-Climate Change Management (including CDP- Climate Change and CDP-Water Reporting),
-Environment and waste management.

The KPI of alternative fuels increases results in decreasing of fossil fuels and CO2 emissions. He also represents the company in the cement sector, sustainability NGO's and he is one of the members of the sustainability committee of Çimsa. This critical position to brings the external know-how to the company.

C2. Risks and opportunities

C2.1

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

	From (years)	To (years)	Comment
Short-term	1	3	Projections were done based on short term risk and opportunities which expected not to have wide variation. Short terms projections based on climate change is mostly about expected extreme weather conditions like storm, droughts, and floods.
Medium-term	3	5	Medium-term horizon projections are mostly based on the trends that may occur between 3 to 5 years. Risk and opportunities about climate change are regulatory changes that may affect the revenue of the company.
Long-term	5	20	Long term horizon projection is mostly strategic planning to give guidance to our company about customer behavior or production model changes. It is also linked with our asset management, new investment plans in terms of geography and product development. Most of the climate change effects are expected to occur in this time horizon.

C2.2

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

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

C2.2a

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

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	The board of directors appointed 2 committees which are directly responsible about climate-related issues. One of them is the Sustainability Committee(SC) which meets every 3 months and the second one is the Management Committee(MC) responsible for risk management which meets every month. They both report to the board of directors.SC provides sustainability and climate-related knowledge to the company like the latest regulations, developments in low carbon products and manufacturing methods and global reports.The members of the committee have responsibilities about relations with policymakers and climate change and sectoral NGO's.This also keeps the

			committee updated about climate change and gives advantage to the company to identify a wider range of risks in terms of climate change.Beside SC outputs, MC is informed about the operational risks through ISO 9001&14001 standards. Board of Directors is informed about high risks for the action plans and budget approval to mitigate the risk.

C2.2b

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

The board of directors gives responsibility to two committees about climate-related issues. One of them is a sustainability committee(SC) which has the responsibility to follow the expected regulations, developments in low carbon products/manufacturing and global reports like the IPCC published in 2018 about 1,5 degree. The members of SC have responsibilities about relations with policymakers and the NGO's who work about climate change for the cement industry and they are also the head of each department and the committee led by Chief Technical Officer. Those responsibilities create the vision and give a clear picture of the changes that will occur because of climate change. SC with these responsibilities identify and assess the climate-related risks at the company level. As per risk procedure of the company, there are 6 risk capitals which are financial capital, produced capital, intellectual capital, people capital, social and relational capital, natural capital. Risk assessment is based on those capitals and for each risk, the company defines the capital type to define the scope of the risk. Natural capital covers climate change, environmental management, environmental effect and biodiversity, and ecosystem. In the risk assessment procedure also cost of the risk and cost of the risk management has to be identified to understand the potential size of the risk.
Once the risk is identified as high, the management committee(MC) is responsible to manage the risk. MC present it to be discussed at the board meeting. The needed action and the budget should be approved by the board.
High-risk scales are identified as follows for the company;

- The cost of the risk is equal or more than 1% of revenue in the relevant year.
- 1-day production loss due to the critical system or process damage.
- Effect 50% of Cimsa clients
- Loss of critical supplier
- Effect 50% of Cimsa employees
- Bad reputation in traditional and digital platforms
- Operation shut down by official authorities.

On the other hand, the company applies ISO 9001&14001 management systems which refer to ISO 31000 risk management standard. As per management systems of the company, under leadership requirement, it is also each department's responsibility to define the risks at process and asset level which include climate-related risks. The awareness of climate-related issues in the company is the sustainability committee's responsibility. Through periodical training, climate change awareness expantion to each process team is ensured.

Either from sustainability committee or from the management systems, if once high risk is identified, it is MC responsibility to manage the risk, to present it to the executive board for the approval of the action plan and its budget. In the light of the integrated risk management significance of all risks determined based on our risk procedure including climate related risks. During assessment part of the risk and opportunity we are using our own procedures/ methodology which is based on likelihood, impact, past events, legal requirements, cost of the risk and cost of the action. The cost of the risk which is also financial impact on our business calculated based on the risk. For some risks it is the impact on business unit, for some it is the potential of customer concern. But as methodology it is clear that all potential impacts are added to define the financial impact. Regarding to the degree of this methodology the action plans and their budgets for the high risks are approved by the executive committee.

C2.2c

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	In our risk procedure, defined risks have to be assessed under natural capital as per capital management model that Cimsa apply. Climate change risk is assessed as per the current regulation. Since Turkey is not ratified Kyoto Protocol and Paris Agreement is not approved by the parliament however by the funding of World Bank, PMR project is developed and only direct regulation related to climate change is "GHG Monitoring Reporting Verification" regulation which is in force since 2015. As Cimsa we are always committed to being in line with the current regulations and also we do the needs and all our reports since the beginning is verified and uploaded into the system of the Ministry of Environment and Urbanization. Since we are in-line with the current regulation and there is no financial sanction of this regulation, we did not define this under our risks. As per our risk procedure, the financial effect of the risk must be defined.
Emerging regulation	Relevant, always included	In our risk procedure, defined risks have to be assessed under the related capital of Cimsa's capital management model. Climate change risk is assessed under natural capital as per emerging regulation. Turkey is not ratified Kyoto Protocol and Paris Agreement is not approved by the parliament however with the funding of World Bank, PMR project is developed and only direct regulation related to climate change is "GHG Monitoring Reporting Verification" regulation which is in force in 2015. The expected next phase in 2020 of the project is the local emission trading or carbon tax scheme. The official announcement is not done however it is defined as one of the climate-related risks. Since the cement industry is the second energy-intensive sector globally after steel and iron when cap and trade or carbon tax will be in force, it is very likely that it will affect us.

Technology	Relevant, always included	When we focus on technological developments in cement industry in terms of climate change its clear that the industry does not focus on technology change to fight with climate change. To support industry Cimsa prepares sectoral reports and inform municipalities about alternative fuel technologies. Technological investment feasibilities managed by investment department. The main focus is to minimize the GHG's through energy efficiency, alternative fuel usage, increasing additives in the cement. In 2018 we invested pre-calcination system and provide energy efficiency and installed vertical raw and cement mills which decrease energy use. As carbon capture and storage is underway in the sector we continue to search for this technology.
Legal	Relevant, always included	Climate change is not defined in any law in Turkey. We are also not ratified the Kyoto Protocol and Paris Agreement is not approved by the parliament. There is only one regulation about GHG Monitoring, Reporting and Verification but it has no enforcement. In our risk procedures, laws and regulations shall be considered, however in terms of climate change it is not defined as a risk to have a legal problem.
Market	Relevant, always included	Beside other materials, cement is very important building material in the construction industry. It is popular in the market because there is no other building material that could compete with cement also it provides strength and durability to constructions. With this point of view, we don't see the market as a risk but as an opportunity. As per researches and market reports dd. 23.02.2018 the global cement demand will increase at a rate of 7.3% between 2017 and 2025. * Another issue about the market is customer behavior change and increased awareness about climate change. The company expects increased demand for low-carbon products. To manage this risk with inline the strategy; 1 - We get EPD certificate for some of our products. It makes us determine environmental aspects in a wider perspective and create the opportunity to show our sensitivity about the environment and climate change. 2- New product developments under the guidance of R&D Department and with the support of strategical, sales and marketing, technical support line, sustainability, and alternative fuels departments. * Last issue we considered under market is higher energy prices due to international agreements. To fight with climate change it is expected to add some taxes and limitations to fossil fuels. Since our production is energy-intensive, we see higher energy prices as a market risk which will cause higher operational cost."
Reputation	Relevant, always included	Climate change is not defined in any law in Turkey however public consciousness is much more important for our reputation. We are one of the biggest group company of Sabancı Holding. Turkey’s rapidly growing sectors including banking, insurance, energy, cement, retail,

		and industrials are the main business areas of Sabancı Group. Sabancı Group companies are market leaders in their respective sectors. Another issue is Cimsa's objective is to become the market leader on white cement internationally thus reputation is always included to risk management.
Acute physical	Relevant, always included	As per IPCC 5. assessment report, extreme changes are expected in the next decades. Acute events like cyclones and floods are risks that can damage our production sites and also may affect the supply of the raw materials and also transport to costumers. We also have insurance for this type of weather extremes to prevent the damage that we can face.
Chronic physical	Relevant, always included	As per IPCC 5. assessment report projected changes in near term defined as likely with medium confidence. In IPCC Special Report on Climate Change issued in 2018 declares that Mediterranean Basin where our Mersin facility is located, the expectation is higher degrees which can be defined as an opportunity because we are heating our raw materials and since we have open storage areas, higher weather degrees will dry our raw materials so our fuel consumption will decrease. It has also a negative impact on the dough and it is also under control of Cimsa.
Upstream	Relevant, always included	Cement production is based on natural resources as raw materials. As a strategy, we are working with different suppliers for the supply of each raw material and when we analyze their locations they are all spread in different regions of Turkey. However, due to the logistic cost and the amount of raw material needed it won't be feasible to supply needed raw materials from long distances. To manage the worst-case scenario which is not finding the raw materials we need, we have mining quarries near the factory that are not in use and ready for production however we don't do mining activities just keep them to manage supplier risks.
Downstream	Relevant, always included	Downstream of cement production is the construction companies. As per our risk management procedure, downstream is considered as an opportunity in terms of climate change effect. Extreme weather conditions can damage the buildings and also sea-level rise may bring some new construction needs. So it is defined as an opportunity. Our investment in R&D also can be considered as downstream because we are playing a role to change the market prefers in terms of low carbon products.

C2.2d

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

Çimsa board of directors identified two committees which have a direct responsibility on climate-related issues. One of them is the sustainability committee and the second one is the management committee. As described in section C2.2b sustainability committee's major responsibility is to identify and assess the risks. Once the risk is identified then the management committee is informed about the risk. The management of the risks and the opportunities are under the responsibility of the management committee.
The risks from the operation are managed through ISO 9001:2015 Management System Standard and ISO 14001:2015 Environmental Management System standards which are based on ISO 31000 Risk Management Guidance. Each department (operation, environment, finance, legal, sales, etc.) defines its risks and as per risk management procedure. With the data are taken from the sustainability committee or the risk added to the "List of risks&opportunities" from the operation through management systems applied in the company, management committee presents the high risks to the board of directors. It's risk owner responsibility to define the risk, the solution, the cost of the risk and the cost of management of the risk but the management committee makes all those information in line with company risk management procedure. The final decision to mitigate, accept or transfer the risk is under the responsibility of the board of directors. With the decision to manage the risk or the opportunity, they also approve the budget for the action.
The risk management procedure is based on likelihood, impact, past events, legal requirements. Regarding the degree of this methodology, the action plans for the high risks are approved by the executive board.
Besides the risk and opportunities defined by our employees, we are getting service for risk analysis for all our company from a third party. This analysis is also done annually by risk engineers with meeting all departments.
As per our risk management procedure, risk types are categorized based on our capital management system and the six capitals are financial capital, produced capital, intellectual capital, people capital, social and relational capital, natural capital. As per impact and the frequency of the risk the risks are categorized on a heat map. All benefit/cost ratios are identified for the risks and defined action plans for high risks are shared with the executive board for the approval. High benefit/cost ratio ratings are prioritized. The climate-related risks and opportunities for 2018 are customer behavior change and emerging regulation at the transition phase of climate change and low carbon economy. Physical risks and opportunities are about damages due to extreme weather events due to possible limitations on raw materials and reconstruction of damaged infrastructures.
These progress in risk management are followed by the risk committee accordingly. Results are sharing with the executive board. The main action to mitigate climate change risks decided in 2018 was to accelerate investments on R&D for low carbon production. The products especially have lower carbon emissions than other cement types are CSA and UPCEM. The total investment in 2018 for those products was more than 1.200.000 TL.

C2.3

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

Yes

C2.3a

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

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Mandates on and regulation of existing products and services

Type of financial impact

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

Company- specific description

Paris Agreement has not been signed by the Turkish Parliament. However, like many other countries, country-based solutions to fight with climate change are under progress. Local MRV Regulation is in force since 2015 and it is developed with the fund from World Bank organized by PMR. The expected next phase is Local ETS (Emission Trading Scheme) or Carbon Tax and it is planned to be in force in 2023 however it is not officially announced. It is certain that cement industry will be affected by this kind of regulation because it is the third-largest consumer of energy and the second-largest industrial emitter after the steel industry with 6% of global emissions (IEA, 2017). As a conclusion, the effect of the possible cap and trade or tax systems are considered as risk When the Local ETS or Tax starts to be in place, our operational costs will increase as of the emission reduction unit (ERU) costs should be in line with the defined cap. Higher operational costs will be reflected in sales prices and this might create market advantages for our neighbouring countries and competatives.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

1,151,031

Potential financial impact figure – maximum (currency)

4,316,368

Explanation of financial impact figure

Risk financial impact is calculated for grey cement. Defined ETS cap for EU countries is 766 kg CO2 ton/grey clinker however as per sectoral experts it is not a suitable cap for Turkey due to missing historical data. It is adviced a new cap for Turkey to be determined. But only to define the financial risk, the EU ETS cap is assumed to be used. Our emission value is 878 kg CO2 ton/ grey clinker. It means the difference between actual emission and cap values is 112 kg CO2/ton clinker. We multiplied our grey clinker production volume which is 4.539.341 ton clinker with the cap difference 112 kg CO2/ton clinker.

For the price of the carbon, we used the voluntary emission reduction (VER) prices of the projects developed in Turkey. As per the markit (www.markit.com) the price of VER is btw 0,4 Euro/ton-1,5 Euro/ton and those values used to define the min. and max. financial impacts. Average Euro currency for 2018 accepted as 5,66 TL.

Management method

To manage risks from policy and legal points of views, we periodically visit policymakers directly or through NGO's we support. The relations between policymakers are managed by the ÇİMSA Chief Technical Officer who is also in the director of the sustainability committee and chairman at the Environment and Climate Change Committee in TCMA (Turkish Cement Manufacturers Association). The Environment and Resource Recovery Director attend the periodical meetings of PMR on GHG emissions organized by the Turkish Ministry of Environment Urbanization to give the technical information and comments about the cement sector. On behalf of the sector, the ÇİMSA director made a presentation at COP23 in Bonn on the two best practices of ÇİMSA to decrease GHG emissions. In 2018 relations with policymakers continued through TUSIAD (Turkish Industry and Business Association) and Turkish Position Report for Climate Change has been prepared by Cimsa. It contain possible emission reduction activities for the industries including cement industry.

The cost of external relations for climate change has been defined as the cost of management.

Cost of management

20,000

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Supply chain

Risk type

Physical risk

Primary climate-related risk driver

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

Type of financial impact

Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)

Company- specific description

The cement sector is depended to natural resources (limestone and etc.) Acute weather events may bring some difficulties in terms of raw material supply to cement plants. Çimsa has 6 cement plants including Afyon Cimento which are located in different regions of Turkey and most of our storage areas are open which is under risk of raw material loss due to the weather conditions. Raw material loss or disruptions in supply are defined as risk for our company.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

552,780

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

5 days of production interruption cost in Kayseri Plant is calculated for potential financial impact. The production capacity, number of loss days and the net profit of grey clinker has been multiplied.

Management method

We have insurance for the poverty damage and the business interruption loss. Those risks are managed through our insurance.

Cost of management

26,266,192

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

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

Type of financial impact

Increased capital costs (e.g., damage to facilities)

Company- specific description

Extreme weather conditions expected as per IPCC Special Report on Climate Change Chapter 3 in Mediterranean Basin. The risk scenario based on extreme weather conditions defined for damage to critical equipment's. Critical equipment defined as kiln stack. If it has fallen over due to the cyclone in Mersin Plant. Approximately 5 days of kiln shut down will be occurred. If it occurs, we can face with manufacturing loss and this may create a loss on income.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

2,125,235

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

5 days of kiln shut down estimated. The potential financial impact calculated with net profit loss that will occur from 5 days of production interruption and the new stack investment cost is calculated.

Management method

We have insurance for the poverty damage and the business interruption loss. Those risks are managed through our insurance.

Cost of management

26,266,192

Comment

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Customer

Risk type

Transition risk

Primary climate-related risk driver

Market: Changing customer behavior

Type of financial impact

Reduced demand for goods and/or services due to shift in consumer preferences

Company- specific description

Cimsa has powerful/capable R&D department for product development which can meet the expectation of clients in terms of the low carbon product. In 2018 with this awareness and mitigation studies the company accelerates the new product development and as an action plan of the risk analysis a low carbon cement CSA(Calcium sulfoaluminate) is studied, patent approval request has been started. It has lower emissions than Portland Cement. As per Cimsa strategy to accelerate R&D the company will start to produce CSA in the industry with high volumes however cement kiln parameters are not stable for production and the cost of the low cement production to manage the climate-related risk has a high impact.

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)

37,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The potential financial impact has been calculated based on market capacity. If Cimsa could not complete the development and production with a high amount of volumes of low carbon product (CSA), the market will choice competitors. Low carbon product market capacity has been defined as the potential financial risk impact.

Management method

R&D budget to develop CSA as a low carbon product has been defined as the cost of management.

Cost of management

430,584.4

Comment

Identifier

Risk 5

Where in the value chain does the risk driver occur?

Investment chain

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Other

Type of financial impact

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

Company- specific description

Zero Waste Project is under development by the ministry of Turkey. With the project Scope 3 emissions will be decreased while we will face additional cost because of the application of the regulation. Packing costs will be decreased and its company strategy to sell the cement with pouring to directly to the client dedicated areas. No packing will be used.

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)

719,124

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Paper, plastic and wood packaging panalties according to packaging tonnages in 2018 were calculated to define the impact of the risk.

Management method

To decrease the sell of packing cement our marketing and sales departments will work together to create conscious about climate change and the positive effects on GHG emissions of non packed cement. The budget for marketing teams has been defined as the cost of management.

Cost of management

20,000

Comment

C2.4

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

Yes

C2.4a

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

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of recycling

Type of financial impact

Reduced operating costs (e.g., through efficiency gains and cost reductions)

Company-specific description

Alternative fuels are one of the levers to reduce GHG emissions in the cement industry. The alternative fuel usage rate of cement plants in Turkey is 4.75% in 2017,8 in order to increase this value, Environment and Climate Change and Alternative Fuels, Alternative Raw Materials Committees of TCMA (Turkish Cement Manufacturers Association) are taking the necessary steps to negotiate with Metropolitan Municipalities and the Turkish Ministry of Environment and Urbanization.
In ÇİMSA, in addition to hazardous and non-hazardous industrial alternative fuels, we continue to work on co-incinerating SRF (Solid Recovery Fuel) to increase alternative fuel usage rate which is 38,817% in Eskisehir Plant. Due to the limited amount of SRF in Turkey, the metropolitan municipalities are required to establish the mechanical and biological treatment plants (MBT) on the landfill. However, if these MBT's investments are completed and SRF is produced, we will be able to use SRF in Eskisehir plant to increase the alternative fuel rate and to decrease GHG emissions.

We expect incentives from the Ministry of Environment and Urbanization for the cement plants which increase alternative fuel usage.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

469,650

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

We increased RDF usage from 75264 tonnes to 81526 tonnes in 2018. The incentive from the Ministry of Environment and Urbanization is expected to be given to the increased amount of RDF. 75 TRY of monetary incentive per increased tonnes of RDF co-incinerated is considered. And an increased amount of RDF is multiplied with the expected incentive.

Strategy to realize opportunity

ÇİMSA Environment and Resource Recovery Director is chairman of these committees in TCMA.

To realize this strategy we are working with NGO's who are working about cement industry and sustainability and Metropolitan Municipalities as well as the Turkish Ministry of Environment and Urbanization.

Cost to realize opportunity

40,000

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Type of financial impact

Better competitive position to reflect shifting consumer preferences, resulting in increased revenues

Company-specific description

EPD Regulation is under development by the Ministry of Environment and Urbanization. When the regulation is in force, Çimsa will be in an advantageous position due to its products already certified by EPD. Our EPD certified products are as follows;
CEM IV / B(P)32,5R (in 2012),
ISIDAÇ 40 - Calcium Aluminate Cement (in 2015),
Çimsa Super White - CEM I 52,5 R - White Portland Cement (in 2015) certificated from EPD (Environmental Product Declaration)

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

904,270

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

We have the same product with EPD certified and non-certified. EPD certified products sold with higher prices. The sales price difference comes from EPD certification is multiplied with the volume of the sold amount.

Strategy to realize opportunity

To get the benefits of this opportunity, we did EPD (Environmental Product Declaration) certification for some of our products. After getting the certification has been done. Three certification cost has been added as to realize the opportunity.

Cost to realize opportunity

90,000

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Other

Type of financial impact

Other, please specify

Repairment of climate change effect

Company-specific description

Due to the climate change effect, extreme weather events are expected. This may create a sales increase of cement because of the repairment of the constructions.

Time horizon

Long-term

Likelihood

About as likely as not

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)

1,955,800

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Unexpectedly with Katrina Hurricane, the prices of cement rise steadily after the catastrophe. The increase in prices was around 12,7% due to damage in transportation, loss of power to cement plants and increase demand to rebuild the roads and buildings. We assume that 10% of our total cement sales will be effected with this price increase. Net profit in 2018 was 154.000.000 TRY and 10% of the profit multiplied with 1,127 to calculate the total income from the price increase. And we subtracted increased price from the daily price .

Strategy to realize opportunity

We have four different production plants and it provides us to gain sales income from different sales points. Investment to increase the production capacity sampled with Nigde Plant and it is added as the cost of management.

Cost to realize opportunity

80,300,000

Comment

Identifier

Opp4

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Other

Type of financial impact

Reduced operational costs (e.g., through use of lowest cost abatement)

Company-specific description

The fuel usage due to seasonality is changing around %2 for drying of the natural raw materials. Due to WWF - Tomorrows of Turkey and IPCC 5th assessment report, in the regions of our production plants, the rains will decrease so that it can be defined as an opportunity. Under higher temperatures, our fuel usage for drying our raw materials will decrease.

Time horizon

Long-term

Likelihood

About as likely as not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,606,331

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The fuel usage due to seasonality is changing around %2. We calculated the financial impact based on this seasonality difference to demonstrate the financial impact.

Strategy to realize opportunity

We invest projects which maximize our energy efficiency. In 2018 the cost of energy efficiency projects has been defined as a cost of opportunity.

Cost to realize opportunity

80,300,000

Comment

C2.5

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

	Impact	Description
Products and services	Impacted for some suppliers, facilities, or product lines	We are producing cement and we expect climate change will effect our business in terms of finance and the way we operate. Customer behavior change and regulatory limitations will bring financial impact on our operation in the medium term. We accelerate our R&D studies and energy efficiency budgets to reduce the possible future impact of climate change on our products. Our R&D investements reached to 4 millions. The high volume of CSA production is the major project Cimsa works on with one of the highest financial risk. We have also EPD certified products to manage the possible effect on our products. We have Upcem, Innovacem, Beysade, and Upcure products which all support sustainability and efficiency as described in 4.3 c.
Supply chain and/or value chain	Impacted	Since Turkey has not ratified Kyoto Protocol and Paris Agreement has not been approved by the parliament, our business is not impacted by risks or opportunities that are coming from our local supply chain and/or value chain. However based on zero waste project managed by ministry, scope 3 emissions will be reduced through waste management. We as Cimsa will start to sell our products with out packing. We will directly pour cement to the client dedicated areas. Also with the development of low carbon product CSA, we will support market and our cutomers to prefer the low carbon products and we aim to support the transformation to low carbon indusrty.

Adaptation and mitigation activities	Impacted	Regulatory risks and customer behaviour change defined for our company about the adaptation and mitigation of climate change . Investment for R&D to develop low carbon product impacted our business in terms of allocation of Capex and stable cement kiln parameters studies effected our operation.
Investment in R&D	Impacted	Investment in R&D is the main strategy to fight with climate change. Based on risks we define the executive board approves to accelerate investment in R&D to develop low carbon emission products. In 2018 our total budget for R&D was 4 millions TL. The main products which can be defined as low carbon products are CSA and UPCEM.
Operations	Impacted for some suppliers, facilities, or product lines	Our operation started to be affected by climate change risks and opportunities due to customer behavior change and low carbon economy transition globally. We accelerate our R&D studies and develop less natural resource-consuming products and this provides less emission and less water consumption. The cost of GHG emissions did not affect our operations yet because Turkey did not sign any international agreement about climate change. But in mid-term it will affect with a low magnitude of impact.
Other, please specify	Not yet impacted	No other parameter defined for the risk assessment.

C2.6

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

	Relevance	Description
Revenues	Not yet impacted	Our revenue is not impacted due to climate-related risks and opportunities. Due to customer behavior change, the product we developed will affect our revenue positive however it is not affected yet. Due to chronic temperature rise and extreme weather events, our revenue might be affected in the long term.
Operating costs	Impacted for some suppliers, facilities, or product lines	We defined increased operational costs as risks in our risk assessment however it is not impacted yet. Due to higher energy prices and expected GHG costs, the magnitude of the impact calculated around 4 millions and 2 millions TRY respectively. The time horizon defined as short term. Customer behaviour change and the global transition to low carbon economy considered in Cimsa's strategy and investment in R&D is accelerated. The company started to demonstrate a small volume of low carbon product production in the manufacturing plants. Patent for special products continues in the company.

Capital expenditures / capital allocation	Impacted	For the operation phase, the company strategically invest to decrease GHG emissions through energy efficiency projects and low carbon product development. Investment budget for R&D reached 4 millions in 2018 and allocation of CAPEX impacted our financial planning processes.
Acquisitions and divestments	Not yet impacted	In 2018, Afyon Cimento acquisition has done. The company was Sabancı Holding company like Cimsa. It only operates in Turkey and produces grey cement. The sustainable management model that we operate reflected Afyon also. Emission calculation of Afyon Cimento has been added to Cimsa. However climate-related risks of Afyon Cimento did not affect the financials during acquisition.
Access to capital	Not yet impacted	Our climate-related risks and opportunities have not factored our access to capitals yet.
Assets	Not yet impacted	Extreme weather events defined as risks in a long term. It is not impacted our financials yet however, 460,836 TRY potential financial impact has been calculated.
Liabilities	Not yet impacted	As per our climate-related risks and opportunities, we did not define risks that liabilities will impact our financial planings. High potential financial impacts are expected in a long term horizon.
Other	Not yet impacted	There is no other parameter defined for financial planning based on climate change.

C3. Business Strategy

C3.1

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

Yes

C3.1a

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

Yes, qualitative

C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b

(C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b) Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy.

Yes

C3.1c

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

Climate change is integrated into our company's overall business strategy because its company vision to be a global player in the cement sector. Apart from Turkey's politics on international agreements about climate change, Cimsa has strong R&D to reduce GHG emissions. Due to customer behavior changes, we promote UPCEM which is 20% less environmental impact including GHG emissions andCSA. Our marketing and sales department works to promote and R&D works for the improvement of the product.

R&D defined as one of the main value creating elements based on sustainability strategy of the company. Climate Change Strategy updated in 2017 and it is still valid. Climate Change Management performance is followed as a part of this objective.

We do evaluate Climate Change Management Risks & Opportunities and integrate them into our core business activities. We develop our strategies, systems, processes, and products in-line with this. Beyond that, we perform R&D activities on that purpose. As described above, we developed less natural resource used products which are cause low GHG emissions and less water consume like UPCEM. ÇİMSA is one of the pioneering companies, who have the Environmental Product Declaration (EPD) in Turkey. Our product named CEM IV / B(P)32,5R. In addition to this product, Çimsa got two more EPDs to its products named ISIDAÇ 40 - Calcium Aluminate Cement and Çimsa Super White - CEM I 52,5 R - White Portland Cement in 2015. Environmental Product Declaration attached below could be examples.

Our Key Performance Indicators (KPIs) to follow up the climate change performance are alternative fuel rate, electricity consumption, clinker/cement ratio, kiln heat consumption, tCO2e/ton clinker, tCO2e/ton cementitious and absolute gross CO2e values.

They are followed at plant level individually and consolidated for annual reporting at Çimsa Group level. These KPIs are keys to input in modeling for future scenarios as well as these indicators are uploaded to GNR (Getting the Numbers Right) database of CSI (Cement Sustainability Initiative).

Our strategy for climate change-related initiatives are:

- Accelerate R&D investments for low carbon products. In 2018 UPCEM and CSA were promoted in the sector which use 20% less natural resouce and has less emissions. The budget for R&D in 2018 was more than 4 millions TRY.
- Waste Heat Recuperation (WHR) investments (the waste heat recovery system put into use in April 2012 and the generation of electricity has been started. With the help

of the project, the waste gas coming from 1 st and 2 nd rotary kilns are transformed to electricity and WHR generates 20% of its electricity consumed in these two lines) With this project, every year CO2 saving is carried out in Scope-2.

- Increasing the use of alternative fuels by HOTDISC System (The HOTDISC is a safe, simple and effective combustion device – a large, moving hearth furnace – integrated with the preheater and calciner systems. It has proven to be the best available technology for substituting calciner fuel with coarse alternative fuels. The HOTDISC combustion device provides the flexibility to burn all kinds of solid waste in sizes up to 1.2 meters in diameter, from sludge or grains to huge whole truck tires. This eliminates the need for expensive shredding of lumpy waste material.) It is a unique technologic system, only used by Çimsa in Turkey. Every year, the alternative fuel ratio increases.
- Improving energy efficiency and process technology
- Reduction in clinker/cement factor
- In our SNCR (Selective Non-Catalytic Reduction) systems, we are using ammonium hydroxide NH4OH (<25% of NH3) instead of urea solution in order not to generate CO2 emission.

The climate change strategy is developed based on company's risk and opportunities as an action plan. The company set its vision as a global player in cement sector so risks due to customer behaviour change , emerging regulations and extreme weather conditions created the need of sustainability vision and integration of climate related issues into the business plans.

C3.1d

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

Climate-related scenarios	Details
Nationally determined contributions (NDCs)	We used scenario analysis for our risk and opportunity assessment. We used company-specific data where available and publicly available data for the assumptions. AS per INDC Report of Turkey our country is going to apply 21% reduction from business as usual scenario by 2030. Sectoral allocation is not defined in Turkey that's why we accepted EU ETS caps for the cement industry to define the financial impact of the risk. It is used for all facilities of Çimsa and the data used to calculate potential impact for one year. For the price of the carbon, we used the voluntary emission reduction (VER) prices of the projects developed in Turkey. As per markit (www.markit.com) the price of VER is btw 0,4 Euro -1,5 Euro. As per the conservativeness principle of our risk procedure, we used the 1,5 Euro as the price of the carbon.
2DS	We used scenario analysis for our risk and opportunity assessment. We used company-specific data where available and publicly available data for the assumptions. As per IPCC 5. assessment report projected changes in near term defined as likely with medium confidence. Drough creates opportunity because we are heating our raw materials because of the increase in temperatures our fuel consumption will decrease.
2DS	We used scenario analysis for our risk and opportunity assessment. We used company-specific data where available and publicly available data for the assumptions. As per IPCC 5. assessment report extreme changes are expected

	in the next decades. Acute events like cyclones and floods is a risk that can damage our production sites and also may affect the supply of the raw materials and also transport to costumers. We also have insurance for this type of weather extremes to prevent the damage that we can face.

C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e

(C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e) Disclose details of your organization's low-carbon transition plan.

Based on sustainability strategy of Cimsa, low carbon transition plan has been developed by sustainability committee. This plan was the out put of the risk anaylsis of the company who wants to be the global player in cement sector. The transition plan is based on R&D and development of low-carbon products. The budget of R&D in 2018 was 4 millions TRY.

R&D

Work on the Horizon 2020 European Union Project for the Advanced Material and Process Development to Increase Geothermal Systems' Underground Thermal Stocking and Cost Efficiency started in May 2017. In the framework of the project, 100% funded by the European Union, studies for carrying out flexible, environmentally sensitive, fluid mortar design with high thermal conductivity were initiated jointly with our partner, Sabancı University. With this project, which will last 42 months, Çimsa's R&D Center will have completed its first Horizon project. Within the context of Horizon 2020, an application was placed for the ICEBERG project, which aims to create innovative, circular economy solutions for the use of end-of-life building materials. If the application for this project is accepted, Çimsa's responsibility will be to develop and produce pilot Portland Cement with the CSA. Within the context of Horizon 2020 - Era-net an application was placed for the FlexCCS project in a consortium, where studies will be carried out to develop retention and disposal. methods for CO2. The 2nd round project proposal was given for the project for quick repair methods of runways, to be developed for the Defense Industry Undersecretariat Air Force within the scope of the TUBITAK 1007 Public Institutions Research and Development Projects Support Program. Having been initiated in 2017, six projects, which were approved by the Republic of Turkey Ministry of Industry and Technology, were successfully completed in January 2018. Six new projects were launched in February 2018. Summary information on these projects is summarized below:

Inovacem

Studies were carried out for the product, which brings the features of hardening and binding through being cured with carbon dioxide in order to reduce carbon dioxide emissions.

Pool +

Featuring water isolation, a white cement based pool plaster has been developed with colored natural aggregates, recycling glass aggregates and colored glass pebbles designs.

Rapcure

To reduce the total amount of cement consumption in the gas concrete sector and increase capacity in the production process, studies were conducted to locate special product Inspira in the gas concrete sector.

UpCem

This project was carried out to analyze and improve the production process of grey cement in the Mersin Plant in order to obtain more added value products for the ready-mixed concrete sector. Work on the project will continue in 2019 as well.

BeySade

Structurally exposed white concrete with heat insulation properties has been developed with different lightweight aggregates.

Duro

This product provides purification specific for the iron and steel sector. Having completed the commercialization phase, the product is now in the sale process.

Rego

A synthetic aggregate resistant to chemical wastes and temperature extremes, which has been developed and adapted to the concrete system.

C4. Targets and performance

C4.1

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

Both absolute and intensity targets

C4.1a

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

Target reference number

Abs 1

Scope

Scope 1

% emissions in Scope

72

Targeted % reduction from base year

5

Base year

2017

Start year

2018

Base year emissions covered by target (metric tons CO2e)

4,148,165

Target year

2025

Is this a science-based target?

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

% of target achieved

78.46

Target status

New

Please explain

We produce three types of (Grey, White, and CAC) cement and ready-mixed concrete. Our total emissions occurred from all types of our products. The target is set for the gross Scope 1 emissions of grey cement production which covers 76% of our total gross Scope 1 emissions. We aim to reduce our total gross emissions to follow production processes with energy efficiency measurements, yo improve process efficiency and to use alternative energy resources. In order to increase the supply of alternative fuel, we have started to conduct waste inventory. We are also in negotiations with the Ministry of Environment and Urbanization for the establishment of Municipal MBT (Mechanical Biological Treatment) plants containing municipal solid wastes by biological desiccants and for the production of RDF (Refuse-derived fuel) in cement factories.
Our gross grey cement Scope 1 emissions for 2017 is 4,148,165 tCO2 and we aim to decrease it to 3,940,757 tCO2. Our grey cement Scope 1 emissions are 3,985,442 for the year 2018. We achieved 78.46% of the assigned target by the reporting year.

C4.1b

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

Target reference number

Int 3

Scope

Scope 1

% emissions in Scope

76

Targeted % reduction from base year

1.95

Metric

Other, please specify

Metric tons CO2e per ton of clinker

Base year

2015

Start year

2018

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

872

Target year

2025

Is this a science-based target?

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

% of target achieved

0

Target status

Revised

Please explain

The Afyon Cement Industry Turkish Joint Stock Company (Afyon Çimento Sanayi Türk Anonim Şirketi), 51% of the shares in which were purchased by Çimsa on 31 May 2012, has continued its activities as a subsidiary of Çimsa since this date. The Afyon Cement Plant has a new production facility equipped with modern technology and established in the village of Halımoru outside the city of Afyon. The plant started production and sales activities in April 2017. After the new plant was brought into operation, the old plant was decommissioned. Çimsa included the Afyon Plant in the 2018 assessment through consolidation with Çimsa's Integrated Factories. The reporting boundary was updated in 2018 with the integration of Afyon Cement Plant, therefore the baseline emissions were recalculated and the target was revised.

The target cover Scope 1 emissions of grey cement production which covers 76% of our total Scope 1 emissions.

Local Regulation on Monitoring of Greenhouse Gas Emissions is in force since 2015. The companies were able to calculate their emissions as per the Tier 1 (default factor) approach during the first three years. Starting from the reporting year, 2018, Tier 3 approach is applied as per the regulation. We calculated our 2018 emissions as per Tier 3 which is company specific factors based on the analysis. In Mersin and Kayseri plants, upon the demand of the customer, high-resistance products were produced and this led to an increase in our emissions from fuel. As a result, our emissions per ton of clinker has increased to 878 from 872 compared to the base year.

% change anticipated in absolute Scope 1+2 emissions

1.83

% change anticipated in absolute Scope 3 emissions

0

C4.2

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

C4.3

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

Yes

C4.3a

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

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	0	0
Implemented*	2	28,995
Not to be implemented	0	0

C4.3b

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

Initiative type

Energy efficiency: Processes

Description of initiative

Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

15,922

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

12,170,000

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

109,500,000

Payback period

4 - 10 years

Estimated lifetime of the initiative

>30 years

Comment

The Eskişehir Plant's modification project which had been announced in 2015 has been finalized and the first line of products has been transformed so as to produce both grey and white clinker. The transformation investment includes raw material transfer lines, new vertical raw mill, new preheater building, clinker cooling improvement, new vertical cement mill, silos, and a new packaging facility. As a result of this investment, it is aimed to decrease heat consumption and electricity consumption per tonne of clinker.
The 1st line of the Eskişehir Plant which used to produce only grey clinker and cement was transformed into a design to produce both grey and white clinker and cement. The plant started to produce white clinker and cement in January 2018, and grey clinker and cement in May 2018.
The transition to white cement production at the Eskişehir Plant was completed. Industrial trial production of high early strength white cement was performed. However, the white cement production has not started yet due to market demand.
The estimated annual CO2e savings cover both Scope 1 and Scope 2 (location-based) emissions. Scope 2 emissions consist of 17% of the total Scope 1 and Scope 2 emissions.

Initiative type

Energy efficiency: Processes

Description of initiative

Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

13,073

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

8,950,000

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

80,300,000

Payback period

4 - 10 years

Estimated lifetime of the initiative

>30 years

Comment

The capacity increase investment at the Niğde Plant was completed. With this investment that is 22 million USD, the cooling tower modernization, transforming the electrofiltration into bag filter, mantle change and building of new five-stage pre-heater, calcinator and tertiary line, the installation of a new vertical mill in pace of the raw meal ball mill and a clinker cooling capacity increase were realized at the plant. As a result of this investment, it is aimed to decrease heat consumption and electricity consumption per tonne of clinker.
The estimated annual CO2e savings cover both Scope 1 and Scope 2 (location-based) emissions. Scope 2 emissions consist of 11% of the total Scope 1 and Scope 2 emissions.

C4.3c

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

Method	Comment
Dedicated budget for low-carbon product R&D	The Cement Research and Application Center located in the Mersin Plant is the 1st Center in the cement industry obtained the status of the Ministry approved R&D center on 28.02.2017. The R&D projects completed in 2018 is given below. 1-INOVACEM: A new cement, which can harden with carbon dioxide, was developed for the first time in Turkey. It was baked at three different temperatures and the product with the desired phase properties was obtained by baking at 1,300˚C, the most optimum value. Due to its nature and structure, the product hardened in a concentrated CO2 environment. Prevention platforms for the carbon dioxide emissions which will occur in the future were prepared in advance. The preliminary preparation phase of the utility model has been completed. 2-Beysade: The project envisages the development of white concrete with insulation properties, and plans to develop the application areas of white

	cement. Structurally exposed white concrete with heat insulation properties has been developed with different lightweight aggregates. Better insulation will reduce carbon emissions due to energy efficiency when using the product. 3-Rapcure: To reduce the total amount of cement consumption in the gas concrete sector and increase capacity in the production process, studies were conducted to locate special product Inspira in the gas concrete sector. With the new cement type used, which has the advantage of reducing the amount of cement used by 20%, reduces the density of the final product and a more insulated. 4-Upcem: A grey cement project that will benefit the ready-mixed concrete sector. In the project, which is planned to reduce the concrete costs and improve the final product performance, both the kiln and mill operations were examined and characterization was made. 5-Advanced Materials and Processes to Improve Performance and Cost-Efficiency of Shallow Geothermal Systems and Underground Thermal Storage – Horizon2020 EU Project: With the joint study conducted with our partner in Turkey, Sabanci University, to be used in geothermal underground heating systems, studies to design mortar with high thermal conductivity, which are elastic, environmentally sensitive and fluid got underway. The financial and technical reporting was completed.
Employee engagement	Employees are one of the most important stakeholders of Çimsa. Employees' role is extremely critical in the achievement of the company's sustainability objectives both in operation and production processes. The behavioral change of employees will both help the integration of sustainability aspects to core business activities and also the achievement of the targets in an effective and efficient way. In 2018, the R&D competencies and the employment of qualified personnel were stepped up, the production studies started to be given weight, and a complete project-based work system has been transitioned into with the development of the R&D center philosophy.
Dedicated budget for other emissions reduction activities	Çimsa is preparing for the low carbon future with its Climate Change Strategy, Alternative Fuel & Raw Materials Strategy and Waste Policy set up within the concept of sustainability activities in 2018. Consumption of Alternative Fuels: In the 2nd kiln of the Eskişehir Cement Plant, the co-incineration rate of RDF (refuse-derived fuel) increased to 38.81%. In order to increase the use of alternative fuels and reduce greenhouse gas emissions, Çimsa included the Afyon Plant in the 2018 assessment through consolidation with Çimsa's Integrated Factories. Çimsa's grey production coincineration rate stood at 6.8% in 2018. The Company submitted a waste incineration license application in 2018 for the Afyon Plant, and the process is continuing.

	Energy Efficiency: Energy management is a priority issue at Çimsa along with its Sustainability strategy. The Company has invested in low carbon technology over the last couple of years in an effort to improve its environmental Sustainability performance at the Afyon, Niğde and Eskişehir plants, with the aim of achieving low energy consumption. The Company's 2018 environmental performance indicators found that efficiency was achieved in Scope 2 specific energies.

C4.5

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

Yes

C4.5a

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

Level of aggregation

Product

Description of product/Group of products

We produced Masonry cement type N-S. Masonry cement products require less energy due to high isolution. Masonry cement meets the requirements of ASTM C 91, The Standard Specification for Masonry Cement, for the type specified.
Masonry construction is energy efficient, providing thermal mass to help moderate temperature in buildings. Lighter weight units are made with lightweight aggregate to help provide added thermal resistance. In addition, masonry walls can be insulated in a wide variety of ways.

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

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

ASTM C91

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

1

Comment

Çimsa is preparing for the low carbon future with its Climate Change Strategy, Alternative Fuel & Raw Materials Strategy and Waste Policy set up within the concept of

sustainability activities in 2018. Çimsa puts forth the sustainable product approach with the environmental products having less GHG emissions due to less clinker amount. On the other hand, our innovative products which have high isolation capability gives rise to energy efficiency which generates low GHG emissions.

C-CE4.9

(C-CE4.9) Disclose your organization's best available techniques as a percentage of Portland cement clinker production capacity.

	Total production capacity coverage (%)
4+ cyclone preheating	18
Pre-calciner	82

C5. Emissions methodology

C5.1

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

Scope 1

Base year start

January 1, 2015

Base year end

December 31, 2015

Base year emissions (metric tons CO2e)

4,844,326

Comment

The Afyon Cement Industry Turkish Joint Stock Company (Afyon Çimento Sanayi Türk Anonim Şirketi), 51% of the shares in which were purchased by Çimsa on 31 May 2012, has continued its activities as a subsidiary of Çimsa since this date.
The Afyon Cement Plant has a new production facility equipped with modern technology and established in the village of Halımoru outside the city of Afyon. The plant started production and sales activities in April 2017. After the new plant was brought into operation, the old plant was decommissioned.
Çimsa included the Afyon Plant in the 2018 assessment through consolidation with Çimsa's Integrated Factories. The reporting boundary was updated in 2018 with the integration of Afyon Cement Plant. Therefore the base year emissions have been recalculated In line with the GHG Protocol Corporate Standard since organizational boundary has been changed.

Scope 2 (location-based)

Base year start

January 1, 2015

Base year end

December 31, 2015

Base year emissions (metric tons CO2e)

314,923

Comment

The Afyon Cement Industry Turkish Joint Stock Company (Afyon Çimento Sanayi Türk Anonim Şirketi), 51% of the shares in which were purchased by Çimsa on 31 May 2012, has continued its activities as a subsidiary of Çimsa since this date.
The Afyon Cement Plant has a new production facility equipped with modern technology and established in the village of Halımoru outside the city of Afyon. The plant started production and sales activities in April 2017. After the new plant was brought into operation, the old plant was decommissioned.
Çimsa included the Afyon Plant in the 2018 assessment through consolidation with Çimsa's Integrated Factories. The reporting boundary was updated in 2018 with the integration of Afyon Cement Plant. Therefore the base year emissions have been recalculated In line with the GHG Protocol Corporate Standard since organizational boundary has been changed.

Scope 2 (market-based)

Base year start

January 1, 2015

Base year end

December 31, 2015

Base year emissions (metric tons CO2e)

0

Comment

CIMSA consumes electricity from the interconnected grid.

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

WBCSD: The Cement CO2 and Energy Protocol

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)

5,219,305

Start date

January 1, 2018

End date

December 31, 2018

Comment

We produce three types of (Grey, White, and CAC) cement and ready-mixed concrete. The given gross global Scope 1 emissions figure represents the emissions of all cement types and ready-mixed concrete facilities.

C6.2

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

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

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

Comment

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

C6.3

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

Reporting year

Scope 2, location-based

298,651

Start date

January 1, 2018

End date

December 31, 2018

Comment

We produce three types of (Grey, White, and CAC) cement. The given gross global Scope 2 emissions figure represents the emissions of all cement types and ready-mixed concrete facilities.

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?

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source

The administrative building facilities and head office

Relevance of Scope 1 emissions from this source

Emissions are relevant but not yet calculated

Relevance of location-based Scope 2 emissions from this source

Emissions are relevant but not yet calculated

Relevance of market-based Scope 2 emissions from this source (if applicable)

No emissions from this source

Explain why this source is excluded

The administrative building of facilities and head office are not included since their emissions are negligible according to the CO2 emissions. The head office is located in the business center. Since there is no separate meter owned by ÇİMSA, consumption quantities are determined by allocation method and invoiced to ÇİMSA by the business center management. The emissions are not calculated since it is very low and estimated based on allocation.

C6.5

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

Purchased goods and services

Evaluation status

Relevant, not yet calculated

Explanation

We focused on establishing a data collection system for scope 3 emissions starting with the most relevant categories. This category is planned to be included in the near future.

Capital goods

Evaluation status

Relevant, not yet calculated

Explanation

We focused on establishing a data collection system for scope 3 emissions starting with the most relevant categories. This category is planned to be included in the near future.

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

Evaluation status

Relevant, calculated

Metric tonnes CO2e

195,153

Emissions calculation methodology

DEFRA Greenhouse Gas Reporting: Conversion Factors 2019

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

100

Explanation

Fuel-and-energy-related activities include Well to Tank (WTT) process emissions of consumed fuels and electricity.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

58,154

Emissions calculation methodology

The 2006 IPCC Guidelines for National Greenhouse Gas Inventories

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

90

Explanation

The emission of raw material transportation is calculated in this scope.

Waste generated in operations

Evaluation status

Relevant, calculated

Metric tonnes CO2e

309

Emissions calculation methodology

DEFRA Greenhouse Gas Reporting: Conversion Factors 2019

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

0

Explanation

We record all kind of waste generated in our activities every year and upload the amount of waste according to their waste code to the online system in line with the local regulation. By this declaration, we calculate emissions inventory according to DEFRA GHG Conversion Factors.

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO2e

358

Emissions calculation methodology

The Greenhouse Gas Protocol -Corporate Value Chain (Scope 3) Accounting and Reporting Standard

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

100

Explanation

We gathered travel information from our travel management company which includes both domestic and international flights. The emissions arising from air travel have been calculated.

Employee commuting

Evaluation status

Relevant, calculated

Metric tonnes CO2e

1,076

Emissions calculation methodology

The Greenhouse Gas Protocol -Corporate Value Chain (Scope 3) Accounting and Reporting Standard

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

100

Explanation

Employee commuting is realized by scheduled buses and minibusses. Since employee number carried in each trip is assumed as equal to the full capacity of vehicles, this calculation may include a little overestimation.

Upstream leased assets

Evaluation status

Relevant, not yet calculated

Explanation

We focused on establishing a data collection system for scope 3 emissions starting with the most relevant categories. This category is planned to be included in the near future.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

49,071

Emissions calculation methodology

The 2006 IPCC Guidelines for National Greenhouse Gas Inventories

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

80

Explanation

%50 of sold goods are delivered to the customer as ex-work or FOB which transportation from Çimsa plants to customer locations are controlled by the customer, Only CO2 emissions due to the inland transport are included in that report. For exported goods, overseas activities were kept as out of scope due to the complexity of the supply chain. This year, the downstream emission of ready-mixed concrete are calculated and disclosed.

Processing of sold products

Evaluation status

Relevant, not yet calculated

Explanation

We focused on establishing a data collection system for scope 3 emissions starting with the most relevant categories. This category is planned to be included in the near future.

Use of sold products

Evaluation status

Relevant, not yet calculated

Explanation

We focused on establishing a data collection system for scope 3 emissions starting with the most relevant categories. This category is planned to be included in the near future.

End of life treatment of sold products

Evaluation status

Relevant, not yet calculated

Explanation

We focused on establishing a data collection system for scope 3 emissions starting with the most relevant categories. This category is planned to be included in the near future.

Downstream leased assets

Evaluation status

Relevant, not yet calculated

Explanation

We focused on establishing a data collection system for scope 3 emissions starting with the most relevant categories. This category is planned to be included in the near future.

Franchises

Evaluation status

Not relevant, explanation provided

Explanation

ÇİMSA has no franchises.

Investments

Evaluation status

Relevant, not yet calculated

Explanation

We focused on establishing a data collection system for scope 3 emissions starting with the most relevant categories. This category is planned to be included in the near future.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Explanation

No other upstream emission is evaluated.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Explanation

No other downstream emission is evaluated.

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

C6.10

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

Intensity figure

0.003246

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

5,517,956

Metric denominator

unit total revenue

Metric denominator: Unit total

1,699,958,055

Scope 2 figure used

Location-based

% change from previous year

10.2

Direction of change

Increased

Reason for change

This year reporting boundary has been changed since the Afyon Cement Plant is newly integrated into the reporting system. Therefore, total emissions released in 2018 is increased 25.68% compared to the previous year because of scope extension. The total turnover of 2018 was increased by 14.05%. As a result of this, the intensity was decreased by 10.2% compared to the previous year.

Intensity figure

4,883

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

5,517,956

Metric denominator

full time equivalent (FTE) employee

Metric denominator: Unit total

1,130

Scope 2 figure used

Location-based

% change from previous year

13.89

Direction of change

Increased

Reason for change

This year reporting boundary has been changed since the Afyon Cement Plant is newly integrated into the reporting system. Therefore, total emissions released in 2018 is increased 25.68% compared to the previous year because of scope extension. The number of FTE was increased by 10.35% since ready-mixed concrete employes are included. As a result of this, the intensity was increased by 13.89% compared to the previous year.

C-CE6.11

(C-CE6.11) State your organization's Scope 1 and Scope 2 emissions intensities related to cement production activities.

	Gross Scope 1 emissions intensity, metric tons CO2e per metric ton	Net Scope 1 emissions intensity, metric tons CO2e per metric ton	Scope 2, location-based emissions intensity, metric tons CO2e per metric ton
Clinker	0.878	0.846	0.048
Cement equivalent	0.771	0.742	0.042
Cementitious products	0.782	0.754	0.043
Low-CO2 materials	0	0	0

C7. Emissions breakdowns

C7.1

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

Yes

C7.1a

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	5,212,088	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	2,408	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	4,810	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)

Turkey	5,219,305

C7.3

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

By business division

By facility

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
Grey Cement	3,985,442
White Cement	1,206,828
Calcium Aluminate Cement (CAC)	27,035

C7.3b

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

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Mersin Cement Plant - Grey Cement	1,018,888	36.8	34.633333
Eskişehir Cement Plant - Grey Cement	911,044	39.78	30.520556
Kayseri Cement Plant - Grey Cement	612,879	38.75	35.549791
Niğde Cement Plant - Grey Cement	530,653	37.95	34.686367
Afyon Cement Plant - Grey Cement	911,634	38.66	30.615968
Mersin Cement Plant - White Cement	1,047,841	36.8	34.633333
Eskişehir Cement Plant - White Cement	158,987	39.78	30.520556
Mersin Cement Plant - CAC	27,035	36.8	34.633333
Ankara Clinker Grinding Plant	344	39.97	33.11712

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 CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	5,211,599	5,073,564	Çimsa is the first and only Turkish company joining Cement Sustainability Initiative (CSI). As sustainability committee members, we take part in task forces of CSI since 2013. We calculate our all emissions through the CSI toll (WBCSD Cement Sustainability Initiative (CSI) Cement CO2 and Energy Protocol Version 3.1) which is verified by the authorized third party. The given breakdown figures are based on verified CSI tool.

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Turkey	298,651	0	632,737	0

C7.6

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

By business division

By facility

C7.6a

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

Business division	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Grey Cement	217,130	0
White Cement	77,122	0
Calcium Aluminate Cement (CAC)	2,647	0
Ready Mixed Concrete	1,752	0

C7.6b

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

Facility	Scope 2 location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Mersin Cement Plant - Grey Cement	45,061	0
Eskişehir Cement Plant - Grey Cement	57,395	0
Kayseri Cement Plant - Grey Cement	33,508	0
Niğde Cement Plant - Grey Cement	28,852	0
Afyon Cement Plant - Grey Cement	46,893	0
Mersin Cement Plant - White Cement	68,454	0
Eskişehir Cement Plant - White Cement	8,668	0
Mersin Cement Plant - CAC	2,647	0
Ankara Clinker Grinding Plant	5,421	0
Ready mixed concrete	1,752	0

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 CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	296,899	0	Çimsa is the first and only Turkish company joining Cement Sustainability Initiative (CSI). As sustainability committee members, we take part in task forces of CSI since 2013. We calculate our all emissions through the CSI toll (WBCSD Cement

			Sustainability Initiative (CSI) Cement CO2 and Energy Protocol Version 3.1) which is verified by the authorized third party. The given breakdown figures are based on verified CSI tool.

C7.9

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

Increased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change		
Other emissions reduction activities	802,298	Decreased	18.3	Gross global emissions (scope 1 and scope 2) are increased 26% since boundary is extended. However, if it is compared with the same boundary of previous year, gross global emissions are decreased due to increasing of alternative fuels usage and decreasing clinker production during the investment period. Emission reduction activities decreased 18.3% of our total emissions.
Divestment	0	No change		
Acquisitions	958,527	Increased	21.8	The Afyon Cement Industry Turkish Joint Stock Company (Afyon Çimento Sanayi Türk Anonim Şirketi), 51% of the shares in which were purchased by Çimsa on 31 May 2012, has continued its activities as a subsidiary of Çimsa since this date. The Afyon Cement Plant has a new production facility equipped with modern technology and established in the village

				of Halımoru outside the city of Afyon. The plant started production and sales activities in April 2017. After the new plant was brought into operation, the old plant was decommissioned. Çimsa included the Afyon Plant in the 2018 assessment through consolidation with Çimsa's Integrated Factories. The reporting boundary was updated in 2018 with the integration of Afyon Cement Plant, therefore the baseline emissions were recalculated and the target was revised. The gross total emissions increased 22% due to the inclusion of Afyon Plant to the reporting system.
Mergers	0	No change		
Change in output	971,119	Decreased	22.1	Gross global emissions (scope 1 and scope 2) are increased 26% since Afyon Plant is included to the reporting system. Therefore, equiveleant cement production incresed. Our production of equiveleant cement has increased 27.6% during the reporting year and it is resulted in 22.1% increase in our emissions.
Change in methodology	0	No change		
Change in boundary	0	No change		
Change in physical operating conditions	0	No change		
Unidentified	0	No change		
Other	0	No change		

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 75% but less than or equal to 80%

C8.2

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

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

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	5,877,782	5,877,782
Consumption of purchased or acquired electricity		0	632,737	632,737
Consumption of self-generated non-fuel renewable energy		44,016		44,016
Total energy consumption		44,016	6,510,519	6,554,535

C-CE8.2a

(C-CE8.2a) Report your organization's energy consumption totals (excluding feedstocks) for cement production activities in MWh.

	Heating value	Total MWh
Consumption of fuel (excluding feedstocks)		5,840,838
Consumption of purchased or acquired electricity		629,027
Total energy consumption		44,016

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	No
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.

Fuels (excluding feedstocks)

Other, please specify

Coal + Anthracite

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

396,111

Comment

Fuels (excluding feedstocks)

Petroleum Coke

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

4,842,226

Comment

Fuels (excluding feedstocks)

Residual Fuel Oil

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

34,722

Comment

Fuels (excluding feedstocks)

Diesel

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

1,944

Comment

Fuels (excluding feedstocks)

Natural Gas

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

68,056

Comment

Fuels (excluding feedstocks)
Lignite Coal

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
247,500

Comment

Fuels (excluding feedstocks)
Industrial Wastes

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
284,445

Comment

Fuels (excluding feedstocks)
Other, please specify
Other Fossil

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
2,778

Comment

C-CE8.2c

(C-CE8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel for cement production activities.

Fuels (excluding feedstocks)

Other, please specify

Coal + Anthracite

Heating value

LHV

Total MWh fuel consumed for cement production activities

396,111

MWh fuel consumed at the kiln

396,111

MWh fuel consumed for the generation of heat that is not used in the kiln

0

Fuels (excluding feedstocks)

Petroleum Coke

Heating value

LHV

Total MWh fuel consumed for cement production activities

4,842,226

MWh fuel consumed at the kiln

4,842,226

MWh fuel consumed for the generation of heat that is not used in the kiln

0

Fuels (excluding feedstocks)

Residual Fuel Oil

Heating value

LHV

Total MWh fuel consumed for cement production activities

34,722

MWh fuel consumed at the kiln

32,778

MWh fuel consumed for the generation of heat that is not used in the kiln

1,944

Fuels (excluding feedstocks)

Diesel

Heating value

LHV

Total MWh fuel consumed for cement production activities

1,944

MWh fuel consumed at the kiln

0

MWh fuel consumed for the generation of heat that is not used in the kiln

1,944

Fuels (excluding feedstocks)

Natural Gas

Heating value

LHV

Total MWh fuel consumed for cement production activities

68,056

MWh fuel consumed at the kiln

35,000

MWh fuel consumed for the generation of heat that is not used in the kiln

33,056

Fuels (excluding feedstocks)

Lignite Coal

Heating value

LHV

Total MWh fuel consumed for cement production activities

247,500

MWh fuel consumed at the kiln

247,500

MWh fuel consumed for the generation of heat that is not used in the kiln

0

Fuels (excluding feedstocks)
Industrial Wastes

Heating value
LHV

Total MWh fuel consumed for cement production activities
284,445

MWh fuel consumed at the kiln
284,445

MWh fuel consumed for the generation of heat that is not used in the kiln
0

Fuels (excluding feedstocks)
Other, please specify
Other Fossil

Heating value
LHV

Total MWh fuel consumed for cement production activities
2,778

MWh fuel consumed at the kiln
27,778

MWh fuel consumed for the generation of heat that is not used in the kiln
0

C8.2d

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

Diesel

Emission factor
74.1

Unit
kg CO2 per GJ

Emission factor source
WBCSD Cement Sustainability Initiative (CSI) Cement CO2 and Energy Protocol Version 3.1

Comment

Çimsa is the first and only Turkish company joining Cement Sustainability Initiative (CSI). We calculate our all emissions through the CSI toll (WBCSD Cement Sustainability Initiative (CSI) Cement CO2 and Energy Protocol Version 3.1) which is verified by the authorized third party. It provides a harmonized methodology for calculating CO2 emissions, with a view to reporting these emissions for various purposes. The given breakdown figures are based on verified CSI tool.

Industrial Wastes

Emission factor

83

Unit

kg CO2 per GJ

Emission factor source

WBCSD Cement Sustainability Initiative (CSI) Cement CO2 and Energy Protocol Version 3.1

Comment

Çimsa is the first and only Turkish company joining Cement Sustainability Initiative (CSI). We calculate our all emissions through the CSI toll (WBCSD Cement Sustainability Initiative (CSI) Cement CO2 and Energy Protocol Version 3.1) which is verified by the authorized third party. It provides a harmonized methodology for calculating CO2 emissions, with a view to reporting these emissions for various purposes. The given breakdown figures are based on verified CSI tool.

Lignite Coal

Emission factor

101

Unit

kg CO2 per GJ

Emission factor source

WBCSD Cement Sustainability Initiative (CSI) Cement CO2 and Energy Protocol Version 3.1

Comment

Çimsa is the first and only Turkish company joining Cement Sustainability Initiative (CSI). We calculate our all emissions through the CSI toll (WBCSD Cement Sustainability Initiative (CSI) Cement CO2 and Energy Protocol Version 3.1) which is verified by the authorized third party. It provides a harmonized methodology for calculating CO2 emissions, with a view to reporting these emissions for various purposes. The given breakdown figures are based on verified CSI tool.

Natural Gas

Emission factor

56.1

Unit

kg CO2 per GJ

Emission factor source

WBCSD Cement Sustainability Initiative (CSI) Cement CO2 and Energy Protocol Version 3.1

Comment

Çimsa is the first and only Turkish company joining Cement Sustainability Initiative (CSI). We calculate our all emissions through the CSI toll (WBCSD Cement Sustainability Initiative (CSI) Cement CO2 and Energy Protocol Version 3.1) which is verified by the authorized third party. It provides a harmonized methodology for calculating CO2 emissions, with a view to reporting these emissions for various purposes. The given breakdown figures are based on verified CSI tool.

Petroleum Coke

Emission factor

92.8

Unit

kg CO2 per GJ

Emission factor source

WBCSD Cement Sustainability Initiative (CSI) Cement CO2 and Energy Protocol Version 3.1

Comment

Çimsa is the first and only Turkish company joining Cement Sustainability Initiative (CSI). We calculate our all emissions through the CSI toll (WBCSD Cement Sustainability Initiative (CSI) Cement CO2 and Energy Protocol Version 3.1) which is verified by the authorized third party. It provides a harmonized methodology for calculating CO2 emissions, with a view to reporting these emissions for various purposes. The given breakdown figures are based on verified CSI tool.

Residual Fuel Oil

Emission factor

77.4

Unit

kg CO2 per GJ

Emission factor source

WBCSD Cement Sustainability Initiative (CSI) Cement CO2 and Energy Protocol Version 3.1

Comment

Çimsa is the first and only Turkish company joining Cement Sustainability Initiative (CSI). We calculate our all emissions through the CSI toll (WBCSD Cement Sustainability Initiative (CSI) Cement CO2 and Energy Protocol Version 3.1) which is verified by the authorized third party. It provides a harmonized methodology for calculating CO2 emissions, with a view to reporting these emissions for various purposes. The given breakdown figures are based on verified CSI tool.

Other

Emission factor

96

Unit

kg CO2 per GJ

Emission factor source

WBCSD Cement Sustainability Initiative (CSI) Cement CO2 and Energy Protocol Version 3.1

Comment

Çimsa is the first and only Turkish company joining Cement Sustainability Initiative (CSI). We calculate our all emissions through the CSI toll (WBCSD Cement Sustainability Initiative (CSI) Cement CO2 and Energy Protocol Version 3.1) which is verified by the authorized third party. It provides a harmonized methodology for calculating CO2 emissions, with a view to reporting these emissions for various purposes. The given breakdown figures are based on verified CSI tool.
The emission factor of Coal + Anthracite is applied as 96.0 and the emission factor of other fossil is applied as 80.0

C8.2e

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

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	44,016	44,016	0	0
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C-CE8.2e

(C-CE8.2e) Provide details on the electricity and heat your organization has generated and consumed for cement production activities.

	Total gross generation (MWh) inside the cement sector boundary	Generation that is consumed (MWh) inside the cement sector boundary
Electricity	44,016	44,016
Heat	0	0
Steam	0	0

C8.2f

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

Basis for applying a low-carbon emission factor

Off-grid energy consumption from an on-site installation or through a direct line to an off-site generator owned by another company

Low-carbon technology type

Other low-carbon technology, please specify

Waste Heat Recovery (WHR)

Region of consumption of low-carbon electricity, heat, steam or cooling

Europe

MWh consumed associated with low-carbon electricity, heat, steam or cooling

44,016

Emission factor (in units of metric tons CO2e per MWh)

0

Comment

We produce our own electricity from the waste heat gases of first and second production kilns in Mersin Cement Plant. By this method, we generate approximately 20% of our electricity spend on these two production lines. During the reporting year, we generate 44,016 MWh electricity and all are used for our own production processes. By establishing and using Waste Heat Recovery (WHR) System, we saved 20,774 tCO2e in 2018. In the WHR System, there is no combustion or process releasing GHGs, therefore the emission factor is zero.

C9. Additional metrics

C9.1

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

C-CE9.6

(C-CE9.6) Disclose your organization's low-carbon investments for cement production activities.

Investment start date

January 1, 2018

Investment end date

December 31, 2020

Investment area

R&D

Technology area

Low clinker cement

Investment maturity

Pilot demonstration

Investment figure

430,584.4

Low-carbon investment percentage

0 - 20%

Please explain

Patent application for CSA has been done but it is not issued yet. The product has less emissions than portland cement and the company decleared that industrial production of CSA will be done in a short term.

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 and/or Scope 2 emissions and attach the relevant statements.

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

EY_Çimsa_Assurance statement for 2019 CDP response_signed.pdf

Page/ section reference

One full page

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

Scope

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

EY_Çimsa_Assurance statement for 2019 CDP response_signed.pdf

Page/ section reference

One full page

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

99

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, and we do not currently 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?

No, we do not engage

C12.1d

(C12.1d) Why do you not engage with any elements of your value chain on climate-related issues, and what are your plans to do so in the future?

As ÇİMSA, we are putting great importance on sustainability and climate change. In parallel to our vision we took many pioneering steps, such as being one the leading companies in sustainability reporting, publishing one of the first integrated report in Turkey and the first integrated report in real sector, publishing our climate change strategy, sponsoring CDP Turkey Climate Change Programme, We are trying to continuously improve our sustainability management system. We are willing to include our value chain step by step in the future.

C12.3

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

Direct engagement with policy makers
Trade associations
Other

C12.3a

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

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Mandatory carbon reporting	Support	The mandatory carbon reporting regulation in Turkey came into the force in May 2014. 2017 GHG reports of our cement plants have been prepared, then verified and submitted to Ministry of Environment and Urbanisation. Our GHG reports have been evaluated for compliance.	We supported the Mandatory Carbon Reporting legislation and took the necessary precautions and actions for full compliance. We are putting effort to determine the most accurate and efficient GHG Monitoring Methodology. On this purpose; we are working together with World Business Council of Sustainable Development - Cement Sustainability Initiative (WBCSD CSI) as a member. WBCSD CSI is one of the world's pioneering organization on sustainability in cement industry. Therefore we evaluate all the methodologies relevant to GHG Monitoring available for the best fit. We finalized our preparations for GHG reporting and ready. We are open and willing to share our accumulated experiences as well as by giving our comments with legal authorities to access to the

			most accurate and efficient reporting system. In addition to that we are working together with Turkish Cement Manufacturers Association (TCMA) on this purpose.
Other, please specify Climate change adaptation	Support with minor exceptions	We express our opinion through Turkish Industry and Business Association (TUSİAD) and Turkish Cement Manufacturers Association (TCMA) about climate change. The mandatory carbon reporting regulation in Turkey came into the force 17th of May 2014. We engage with the policy makers to improve the implementation of the law. An example is given at the proposed solution part.	As ÇİMSA; we support the Climate Change Adaptation and Mandatory Carbon Reporting legislation with minor exception. As an example for the improvement of the law; we propose that GHG calculations be made into account the biomass content of Alternative fuels and calculations should be made separatly for each grey clinker and white clinker.We are attending PMR meetings regarding Emission Trading System and Carbon Tax as well as Carbon Leakage. We give our opinions and comments on these issues.
Other, please specify Reducing the use of fossil fuels	Support	Cement industry is an energy intensive industry and we aim to reduce the fossil fuel usage. Therefore we are willing to use Refuse Derived Fuel (RDF) as much as possible as an alternative fuel to fossil fuels which has a lower emission factor and biomass content. On the behalf of Turkish Cement Manufacturers Association, we negociated with the Ministry of Environment and Urbanisation to remove the calorific basis limit which is 40% as in European Waste Legislation. The Ministry accepted our proposal and this limit has been removed. This could increase the RDF usage in ÇİMSA and Turkey.	Together with Turkish Cement Manufacturers Association (TCMA), our, as in EU laws, our proposition has been accepted to abrogate the 40% restriction in terms of calorific value for the non-hazardous waste usage. This would allow more use of RDF and less GHG emissions.
Other, please specify	Support	Cement industry is an energy intensive industry and we aim to reduce the fossil fuel usage. Therefore we are willing to use	As Çimsa, we are discussing with the Ministry of Environment and Urbanisation about municipal dried sewage treatment sludge and SRF

Reducing the use of fossil fuels		Refuse Derived Fuel (RDF) as much as possible as an alternative fuel to fossil fuels which has a lower emission factor and high biomass content. At the current situation; the use of municipal dried sewage treatment sludge and SRF (Solid Recovery Fuel) produced from the municipal solid wastes by means of Mechanical Biological Treatment Systems is not common in Turkey. We are discussing to establish a feasible system to use these wastes as alternative fuels with Ministry of Environment and Urbanisation.	(Solid Recovery Fuel) produced from the municipal solid wastes. We are aiming to make long-term agreements with the Municipalities. Because, the sewage sludge is carbon neutral (% 100 biomass) alternative fuel and the biomass contents in SRF especially varies from 17% to 55% to decrease CO2 emissions.

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

Turkish Cement Manufacturers Association (TCMA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

TCMA is a strong and an active association of cement manufacturing companies in Turkey. Beyond business wise topics it also started to guide and raise the awareness of its members on Sustainable Business. It tries to develop action plans for cement manufacturers.

How have you influenced, or are you attempting to influence their position?

The Vice-Chairman of the Board and Chairman of the Sustainability Sub-Committee are members of our Board, the Industry Group Head of Sabancı Holding and General Manager of ÇİMSA. Therefore, we take an active role in pioneering the cement industry on sustainability in Turkey. Çimsa's Environment and Resource Recovery Director is the

chairman of the Environment and Climate Change Committee of TCMA. He shares his accumulated experience and fosters the use of alternative raw materials and alternative fuels which is important for reducing CO2 emissions at cement industry and in 2017 he made a presentation on the behalf of TCMA at COP23 in Bonn on the best practices in the Turkish Cement Industry to decrease CO2 Emissions.

Trade association

Business and Sustainable Development Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Business and Sustainable Development Association is a part of the global organization, the World Business Council for Sustainable Development (WBCSD). It performs to foster sustainable development and raise awareness. It tries to develop action plans for switching to Sustainable Business.

How have you influenced, or are you attempting to influence their position?

Çimsa is a member of the Business and Sustainable Development Association and actively engage. Involve all the meetings and shares its opinions for decision making/action taking processes. Also provides feedbacks and vision on behalf of the cement industry for further plans.

Trade association

Cement Sustainability Initiative

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Core members of the Cement Sustainability Initiative (CSI) include cement companies who are also members of the World Business Council for Sustainable Development (WBCSD). They manage the CSI, maintain the CSI Charter (which identifies company commitments and responsibilities), define and fund its work program, and invite new members. Reducing GHG emissions from cement production is a key focus of CSI's work

How have you influenced, or are you attempting to influence their position?

We engage with CSI and search for the solutions to mitigate and adapt to our Climate Change effects. We also discuss legislations and also gather opinions from pioneering and peer companies all around the World. We actively involve CSI's efforts on this purpose and we actively involved in the 11th CSI Forum in New Delhi, India. The event focused on how, through sharing knowledge and experience, the private sector can

capture and build on the opportunities offered by the Sustainable Development Goals (SDGs) and understand the risks of inaction.

Trade association

Sabancı Holding

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Çimsa is a group company of Sabancı Holding and there is an Environment Committee established by the members from all Sabancı Group companies.

How have you influenced, or are you attempting to influence their position?

Environment and Resource Recovery Director is also a member and reflects its own and industries opinions. Common solutions are searched for environmental issues and legislation.

Trade association

Association of Turkish Consruction Material Producers (IMSAD)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

IMSAD is a non-governmental organization representing the construction industry domestically and abroad. IMSAD sustainability committee focuses on the environment, energy management, energy efficiency to develop climate change adaptation policies. Besides; it aims the coordination within the construction industry and performs to take the necessary actions on these issues in the name of industry. It works to raise awareness by informing its members. Çimsa is a member of the Sustainability Committee which conducts above-mentioned duties precisely.

How have you influenced, or are you attempting to influence their position?

Environment Executive is also a member and shares its own improvement works in sustainability meeting, contributes IMSAD sustainability report, follows all construction industry working about sustainability issues for the sustainability world.

Trade association

TUSIAD

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

TUSIAD (Turkish Industry and Business Association) is main association of the Turkish Business Society. Therefore it is the main channel of communication between the Turkish Business and Industrial Sector and the Turkish Government.

How have you influenced, or are you attempting to influence their position?

Environment and Resource Recovery Director is actively involving TUSİAD's Environment and Climate Change Committee. TUSİAD prepared its Position Paper on the Material Issues of Fighting Against Climate Change. ÇİMSA is willing to convey its accumulated experience on the transformation of the cement industry for the Low Carbon Economy in Turkey.

C12.3e

(C12.3e) Provide details of the other engagement activities that you undertake.

Turkish Business World and Sustainable Development Association (SKD) is a non-governmental organization established in 2004 and it represents the World Business Council for Sustainable Development in Turkey. Çimsa is a member of SKD (Business World and Sustainable Development Association) and involving into Sustainability Committee. Çimsa is planing to get engaged to access to the Turkey Materials Marketplace platform which is a cloud-based platform designed to facilitate cross-industry materials reuse among Turkish companies & communities

This is new and innovative business opportunities to reduce waste-to-landfill and carbon footprint, collaborate with like-minded peers, and implement real strategies within a new circular economy.

C12.3f

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

Our company strategy is to track the environmental legislation of climate change continuously and attend platforms such as, Climate Change Committees of Ministry of Environment and Urbanizition, TCMA (Turkish Cement Manufacturers Association) and Association of Turkish Construction Material Producers (IMSAD).

We take an active role especially in associations on sustainability, climate change and environmental pillars.

We develop common solution about climate change and environmental issues, share studies, learnings and enhancements in production processes; share targets about climate change inline with all companies related to the Sabancı Holding.

Turkish Cement Manufacturers Association, in cement industry, efforts are driven to decrease GHG emissions. Most important pillars are; reduction of kiln heat consumption, reduction of electricity consumption, increase of alternative fuels by reducing the use of fossil fuels and increase of cement additives.

Also Çimsa becomes the first and only Turkish company joining Cement Sustainability Initiative (CSI). As sustainability committee members, we take part in task forces of CSI since 2013.

C12.4

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

Publication

In mainstream reports, incorporating the TCFD recommendations

Status

Complete

Attach the document

Cimsa Integrated Report.pdf

Page/Section reference

Page 72-73-74 include emission datas.

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

C14. Signoff

C-FI

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

C14.1

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

	Job title	Corresponding job category
Row 1	Chief Technical Officer - Caner Türkyener	Other, please specify

		Chief Technical Officer

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to
I am submitting my response	Public	Investors

Please confirm below