Welcome to your CDP Climate Change Questionnaire 2021

C0. Introduction

C0.1

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

CEMEX, S.A.B. de C.V. is a publicly traded stock corporation with variable capital, or sociedad anónima bursátil de capital variable, organized under the laws of Mexico, with its headquarters located at Avenida Ricardo Margáin Zozaya #325, Colonia Valle del Campestre, San Pedro Garza García, Nuevo León, 66265, Mexico. CEMEX's main phone number is +52 81 8888-8888. CEMEX, S.A.B. de C.V. was founded in 1906 and was registered with the Mercantile Section of the Public Registry of Property and Commerce in Monterrey, Nuevo León, Mexico, on June 11, 1920 for a period of 99 years. At our 2002 ordinary general shareholders' meeting, this period was extended to the year 2100 and in 2015 this period changed to be indefinite. Beginning April 2006, CEMEX's full legal and commercial name is CEMEX, Sociedad Anónima Bursátil de Capital Variable. CEMEX is one of the largest cement companies in the world, based on annual installed cement production capacity as of December 31, 2019, of approximately 93 million tons. CEMEX is the second largest ready-mix concrete company in the world with annual sales volumes of approximately 50 million cubic meters and one of the largest aggregates companies in the world with annual sales volumes of approximately 135 million tons, in each case, based on our annual sales volumes in 2019. CEMEX is also one of the world's largest traders of cement and clinker. CEMEX, S.A.B. de C.V. is an operating and holding company engaged, directly or indirectly, through its operating subsidiaries, primarily in the production, distribution, marketing and sale of cement, ready-mix concrete, aggregates, clinker and other construction materials throughout the world, and that provides reliable construction-related services to customers and communities in more than 50 countries throughout the world, and maintains business relationships in over 100 countries worldwide. CEMEX operates globally, with operations in Mexico, the United States, Europe, South America, Central America, the Caribbean, Asia, the Middle East and Africa. CEMEX had total assets of approximately US$29 billion as of December 31, 2019. As of December 31, 2019, CEMEX's cement production facilities were in Mexico, the United States, the United Kingdom, Germany, Spain, Poland, Czech Republic, Croatia, Colombia, Panama, Costa Rica,

the Dominican Republic, Puerto Rico, Nicaragua, Trinidad and Tobago, Jamaica, Barbados, Egypt, and the Philippines. CEMEX has a rich history of improving the well-being of those it serves through innovative building solutions, efficiency advancements, and efforts to promote a sustainable future.

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
Reporting year	January 1, 2020	December 31, 2020	No

C0.3

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

Barbados
Colombia
Costa Rica
Croatia
Czechia
Dominican Republic
Egypt
France
Germany
Guatemala
Israel
Jamaica
Mexico
Nicaragua
Panama
Philippines
Poland

Puerto Rico
Spain
Trinidad and Tobago
United Arab Emirates
United Kingdom of Great Britain and Northern Ireland
United States of America

C0.4

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

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Financial 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
Aggregates production
Concrete production
Concrete pavement / asphalt / tarmac

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual(s)	Please explain
Board-level committee	The Sustainability Committee is responsible for ensuring sustainable development in our strategy; supporting our Board of Directors in fulfilling its responsibility to shareholders regarding sustainable growth; evaluating the effectiveness of sustainability programs and initiatives; providing assistance to our Chief Executive Officer and senior management team regarding the strategic direction on sustainability; and endorsing our model of sustainability, priorities, and key indicators. This explicitly includes all topics related to climate change and CO2 emissions. The Sustainability Committee is made of four Directors on the Board. An example of the type of decisions made by the Sustainability Committee is the validation, resources approval and follow up of the "CO2 Reduction roadmap" developed for each cement site to model and assess the carbon mitigation potential that can be seized from each installation considering different factors. Advancements on the Roadmap, as well as in the implementation of CEMEX's CO2 Strategy, business plans and performance are reviewed by the committee in each of the meetings as a fixed topic in the agenda.
President	The President of the Sustainability Committee is the primary responsible on Climate Action Strategy in CEMEX. The Committee President is an independent member of our board of directors. On March 26, 2020, CEMEX, S.A.B. de C.V. held an ordinary general shareholders' meeting in which the shareholders for the first time approved the appointment of the members of the Sustainability Committee, meaning that we have elevated the appointment of the members to be made at the shareholder level instead of at the board of directors level (we are a public company in Mexico and in the U.S.). The responsibilities are those described in the Sustainability Committee role, and an example of the types of decisions he makes is the

	revision and resources assurance of the CO2 reduction roadmap initiatives site by site, recently updated in late 2020 to strengthen our 2030 commitment and reshape our 2050 target.

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and	The Sustainability Committee pursues CEMEX has board-level oversight on Climate Change and CO2 Management Strategy. The Committee meets four times a year and is normally briefed by the Corporate Director Sustainability or the Executive VP for Sustainability and Operational Development. This includes in-depth reviews of particular topics which are planned in advance (at the end of the previous year) as well as unforeseen recent developments that are considered material enough to be brought to the Board's attention or require guidance from the Sustainability Committee. In 2018, CEMEX developed a CO2 Reduction Roadmap launched across all our cement sites to model and assess the carbon mitigation potential that can be seized from each installation considering different factors. The roadmap has been revisited in late 2020 to increase the level of ambition to a Well-Below-2DS. The advancements on the Roadmap, as well as in the implementation of CEMEX's CO2 Strategy, business plans and performance are reviewed by the committee in each of the meetings as a fixed topic in the agenda. Besides, in 2020 the scheduled agenda for the Sustainability Committee meetings included the following topics that are also related to climate change: CEMEX's 2020 Integrated Report Structure and Content Sustainability KPI's Annual Performance and Improvement Plan Global and Regional Sustainability Risks Agenda Update Climate Change Strategy and CO2 Management

	targets for addressing climate-related issues	The enriching Sustainability Committee discussions led to valuable outcomes related with climate-change, as the launching of the Sustainability Scorecard in 2018 to closely monitor performance of all countries in core KPIs and ensure progress towards our global objectives, and the CEMEX CO2 Reduction Roadmap by cement installation

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
Other C-Suite Officer, please specify Executive Vicepresident Sustainability, Commercial and Operations Development	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly

C1.2a

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

The Executive Vice-president Sustainability, Commercial and Operations Development is a position in the Executive Committee to oversee the areas of:

- Sustainability
- Operations & Technology
- Energy
- R&D & IP Management
- Health & Safety
- Procurement
- Commercial
- Digital Marketing

The Executive Vicepresident Sustainability, Commercial and Operations Development reports directly to the CEO of the company. The sustainability function was assigned to this EVP because this Vice Presidency oversees all cross-functions of the company (all business and all departments) and manages directly sustainability topics which are embedded in all organization, together with the rest of the above-mentioned functions.
The responsibilities with respect to climate change include:
- Monitoring of the company's performance in terms of CO2 emissions and related KPIs
- Monitoring of the company's CO2 Roadmap implementation and resources assurance for the execution of the reduction initiatives and presentation to the ExCo/Board for approval.
- Assessment of climate-related risks and opportunities (responsible for climate-related topics in integrated risk assessment)
- Preparation of targets and initiatives for approval by ExCo / Board
- Implementation of approved targets and initiatives

C1.3

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

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	CEMEX has established a consistent set of internal targets for specific net CO2 emissions (kg CO2/ton of cementitious product) at global, regional, national and plant level. These targets are a mandatory part of the yearly evaluation for the CEO, Executive Committee members (regional level), Country Managers (business unit level), and some other functions (e.g. corporate sustainability, Global Operations and Technology).

C1.3a

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

Entitled to incentive	Type of incentive	Activity inventivized	Comment

Chief Executive Officer (CEO)	Monetary reward	Emissions reduction project Emissions reduction target	Variable compensation is linked to achievement of targets. One of these targets is the achievement of a global CO2 reduction target for the year in question that is in line with a credible pathway towards reaching our publicly stated long-term target.
Other C-Suite Officer	Monetary reward	Emissions reduction project Emissions reduction target	Variable compensation is linked to achievement of targets. One of these targets is the achievement of a global CO2 reduction target for the year in question that is in line with a credible pathway towards reaching our publicly stated long-term target. These targets are implemented for the Executive VP of Sustainability and Operations Development (global target) and the regional presidents in the ExCo (with region-specific targets).
Business unit manager	Monetary reward	Emissions reduction project Emissions reduction target Energy reduction project Energy reduction target	Variable compensation for all our country presidents is linked to achievement of targets. One of these targets is the achievement of country-specific CO2 reduction target for the year in question that is in line with a credible pathway towards reaching our publicly stated long-term target.
Corporate executive team	Monetary reward	Emissions reduction project Emissions reduction target Energy reduction project Energy reduction target	
Environment/Sustainability manager	Monetary reward	Emissions reduction project	

		Emissions reduction target Energy reduction project Energy reduction target	
Energy manager	Monetary reward	Emissions reduction project Emissions reduction target Energy reduction project Energy reduction target	
Risk manager	Monetary reward	Emissions reduction project Emissions reduction target	
Procurement manager	Monetary reward	Environmental criteria included in purchases Supply chain engagement	

C2. Risks and opportunities

C2.1

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

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	3	Please note these definitions of short, medium and long term only apply to this questionnaire, particularly our assessment of risks and opportunities, and should not be used for interpreting any other CEMEX communication.
Medium-term	3	6	Please note these definitions of short, medium and long term only apply to this questionnaire, particularly our assessment of risks and opportunities, and should not be used for interpreting any other CEMEX communication.
Long-term	6	35	Please note these definitions of short, medium and long term only apply to this questionnaire, particularly our assessment of risks and opportunities, and should not be used for interpreting any other CEMEX communication.

C2.1b

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

CEMEX identifies and calculates the impact of every financial or strategic risk, but defines as a "substantive impact" any impact that:

- Affects to at least 15% of our business unit, regardless of its financial or strategic impact.
- OR affects a whole Region, regardless of its financial or strategic impact.
- OR, regardless of the number of business units affected, the financial or strategic impact is higher than 1% over the the total expected yearly EBITDA results within a 10 year period or threaten its competitiveness.
- OR, the impact is higher than 5% over the specific expected EBITDA of a business unit within a 10 year period or threaten its competitiveness.

- OR, customer or communities concerns increase in an specific area (the incidents and concerns are monitored in a daily basis and as soon as the frequency of registry increase it is monitored to evaluate its financial or strategic impact; it is classified as substantive as soon as the EBITDA)
- OR, as per shareholder or Executive Committee request.

C2.2

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

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

CEMEX' Enterprise Risk Management (ERM) system is a network of more than 35 risk management professionals around the world. This includes some corporate risk management specialists that do the assessment in collaboration with regional, national personnel as well as specialists for five key topics (including sustainability, which in turn includes climate change). The sustainability specialist in the network focuses on regulatory and other (such as reputational or market) risks, whereas physical risks related to climate change (e.g. increased probability of flooding, potential interruptions of the supply chain) are covered by regional and local representatives. In addition the sustainability expert in the

ERM network is collaborating with regional and local sustainability staff for the monitoring and analysis of corresponding developments.

The company's risk agenda is formally updated at least twice a year and it follows a bottom-up approach (plant-country-region-corporate). However, all contributors (direct and indirect) constantly monitor the evolution of important topics (regulatory, scientific and other developments) and changes that are identified as material will trigger an immediate adjustment. For example, regional experts are constantly following legislative developments related to CO2 and meeting in a quarterly basis to share their progress, analyzing potential impacts for CEMEX, and immediately reporting any material changes (such as new emission taxes or important adjustments to emissions trading systems) to the ERM network and Corporate Sustainability.

The identification and assessing of the climate-related risks and opportunities scope compress the full value chain, mainly the direct operations but also upstream, where supplies are monitored to evaluate any potential risk of lack or price increase and downstream, where the logistics and market is monitored to identify and evaluate any potential risk in the market (customer behaviour changes to adapt the portfolio, logistics to deliver our products...). Identification and assessing of the climate-related risks and opportunities are analysed in a short, medium and long term time horizon.

An example of how the described process is applied to a transitional risk: the most important transitional risk identified is the transition to a new or update of the carbon regulation.1) Situation: Sustainability and ERM monitor the status of each country in regards to carbon regulation, having different situations: some countries are already regulated and the regulation will evolve in the short-term (i.e. EU and California), in some other countries there is a short-term plan to implement a new carbon regulation (i.e. Mexico) and there are some countries with no short-term risk, but a med or long-term is consider. 2) Task: first the financial impact of the transitional risk is evaluated in terms of CO2 and cost, and the goal is to minimize this impact. 3) Action: the action taken has been the development of the cement site-by-site plan "CEMEX CO2 Roadmap", to identifying and listing all the carbon reduction initiatives specific for each site regardless of a carbon regulation in place. The plan has to be tracked and the resources ensure for full implementation. 4) Result: the result of the action is that, after the implementation of all the identified initiatives, the financial impact can be significantly reduced to close to -20%.

An example of how the described process is applied to a physical risk: an example of a physical risk identified is the increase of extreme storm events that can disrupt supply of crucial inputs. 1) Situation: Increased frequency and strength of tropical cyclones (as well as other extreme storms) can cause disruption of the supply of our operations. ERM selects those operations with higher probability of a extreme event to happen, based in mainly historical events derived from climate change patterns (within the scope for example SCAC (South Central America & Caribbean) - Dominican Republic, Colombia and Puerto Rico). 2) Task: first the financial impact of the transitional risk is evaluated and the goal

is to minimize this impact. 3) Action: to manage this risk ERM takes a structured and homogeneous approach worldwide by implementing a so called "Business Continuity Program" (BCP) to minimize the potential impact of a disruptive event in our businesses. Under the scope of the BCP a Business Recovery plan is implemented in each identified site, and it the continuity and recovery of operations to keep fulfilling our commitments to our clients by improving operational resiliency and returning to business as usual. ERM develop recovery strategies for PREPSI (People, Resources, Equipment, Premises, Suppliers and Information). The loss of PREPSI is considered in two stages: Operational continuity (by temporary continue providing the goods or services agreed upon with customers) and Return to business as usual (recovering business back to normal levels of operation). The risk management includes for example policy revisions, like inventory increase. 4) Result: the result of the implementation of BCP and Business Recovery plan is the reduction of the impact of an extreme event, as we increase the recovery time of the affected operation by, for instance, increasing the supplies inventories or identifying a backup supply.

Additionally, we are in the process of reviewing the COSO-WBCSD guideline on "Applying enterprise risk management to environmental, social and governance-related risks" to enrich our process and our strategy for identification and assessment of our climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

CEMEX assesses annually their main locations exposures to natural hazards with the “Property Loss Prevention Program” (PLPP). This program is conducted by FM Global, CEMEX’s global property insurer, with the collaboration of site experts, mainly operations, procurement, and planning. The assessment provides each plant with a grade score by which all plants can be assessed.

The process to carry out the annual assessment is as follows:

- All cement sites are assessed annually, additionally with certain frequency some other strategic locations with a significant insurable value are visited like officers, marine terminals, warehouses, etc.
- The probability of occurrence and the financial impact if the identified risks are materialized, are evaluated in each site
- To evaluate the probability of occurrence of these climate related events (natural hazards), FM Global gets support from several proprietary maps of windstorm, flooding, seismic, wildfires…, built on information from the NASA, Research Centers, Universities, and other governmental local sources mainly in the USA.
- The financial impact is classified in two different terms: “Loss Expectancies-Property Damage”, the “Loss Expectancies-Time Element”. The “Loss Expectancies-Property Damage” evaluate the cost of the physical damage to equipment or infrastructure and the ”Loss Expectancies-Time Element” evaluates the production loss and the cost derived from the activities to restore the original production. Depending on the type of event, a recovery time and collateral damage is evaluated with the following formula:

LE-TE = (BI * (T/12 months) * % Exposure

- LE-TE: Loss-Expectancy Time-Element
- BI: Annual reported Incomes
- T: Estimated stoppage time
- %Exposure: percentage of participation of the specific equipment/building over the total site’s production.
- FM Global also considers proprietary data on historical losses (average recovery time) and research and experience on reconstruction of buildings and/or equipment replacement.
- Additionally, FM Global sets a series of recommendations to mitigate the financial impact together with their “remediation cost” to eliminate/mitigate the risk of a physical damage caused by an acute or chronic climate-related event.

All recommendations from the PLPP are prioritized and evaluated for decision making using three criteria: 1. Financial loss expectancy should the risk occur, 2. Risk improvement ratios defined as the ratio of loss expectancy to the cost to complete the recommendation to mitigate or avoid the risk exposure, and 3. Specific catastrophe risks.

After recommendation’s completion, the loss expectancy-property damage and loss expectancy-time element can be reduced or eliminated, so the recommendation completion is followed-up in a yearly basis and re-evaluated when accomplished.

An example of how the described process is applied to a physical risk with a STAR approach:
Situation: In one of our operations in the Caribbean area, a risk of windstorm has been identified based on the windstorm maps information during the plant assessment.
Task: The FM Global team evaluate the following risks related to windstorm in this specific site, proving the next “Loss expectancies-property damage”, “Loss expectancies-time element” and “Estimated Cost” to mitigate or eliminate the risk:
• Improve the windstorm protection for the Power Station – Loss Expectancies-Property Damage: 2,650,000 USD / Loss-expectancies-Time element: 593,014 USD / Total estimated Cost: 90,000 USD (examples of actions to mitigate the risk: Provide additional securement to the lap-seam over the high-bay roof of the Power Station / Replace rolling door on low-bay section of the Power Station with wind-rated doors…)
• Improve windstorm protection for Warehouse/Workshop Building – Loss Expectancies-Property Damage: 2,600,000 USD / Loss-expectancies-Time element: 593,014 USD / Estimated Cost: 185,000 USD (example of actions: Replace the rolling doors on the Warehouse/Workshop Building with wind-rated doors / Secure roof-mounted equipment over the Warehouse/Workshop Building…)
• Improve windstorm protection for the Palletizer and Finished Product Warehouse – Loss Expectancies-Property Damage 1,300,000 USD / Loss-expectancies-Time element: 593,014 USD / Estimated Cost: 27,000 USD (example of actions: Provide additional securement to the perimeter and corners of the Finished Product Warehouse / Replace the skylights over the Palletizer and Finished Product Warehouse to resist wind pressures…)
Action: The recommended actions are then prioritized (Priority 1, 2, 3) and calendarized for execution.
Result: After the completion of the recommendations, the Loss expectancies after completion are:
• Power station: Total Loss Expectancies After completion = from 3,243,014 USD (2.650.000 + 593,014) down to 320,000 USD (Property Damage = 230,000 USD + Time Element = 90,000 USD)
• Warehouse/Workshop building: Total Loss Expectancies After completion = from 3,193,014 USD down to 370,000 USD (Property Damage = 280,000 USD + Time Element = 90,000 USD)
• Palletizer and Finished Product Warehouse: Total Loss Expectancies After completion = from 1,893,014 USD down to 250,000 USD (Property Damage = 160,000 USD + Time Element = 90,000 USD)
This means that, by executing all the recommended actions with a total cost of 302,000 USD, we reduce the total Loss Expectancies of the site related to a windstorm risk from 8,329,042 USD down to 940,000 USD.

C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	A number of CEMEX operations are currently subject to climate change-related legislation, including emissions trading systems (European Union, California) and taxes (e.g. Colombia, México...). Given the significant implications that even small changes to e.g. free allocation to our operations or overall scarcity of allowances can have it is paramount for CEMEX to follow closely current developments and adjust our risk adjustment and strategy accordingly. EXAMPLE of Risk Type: Carbon tax on just liquid and gas (coal and petcoke are excluded) fossil fuels in Colombia, already affecting our operational cost, mainly related to transport. The same happens with the current regulation in Mexico, where all fossil fuels, excluding Natural Gas, are taxed, so this taxation is directly affecting our operational cost.
Emerging regulation	Relevant, always included	CEMEX fully supports the implementation of the Paris Agreement and collaborates with governments around the world to define and implement Nationally Determined Contributions (NDCs). In a quarterly basis, the CEMEX "CO2 Regulation Focus Group", comprised of PA, Operations and Sustainability members in each Region, share the insights from this collaboration with governments and identify any risk in emerging regulations. EXAMPLE of Risk Type: Te trial period for the New ETS in Mexico has already started with a planned duration of 3-years, and it will will have a noticeable impact on our operations. We are in close collaboration to Governments (through CANACEM (Mexican Cement Association)) on the revision of the new ETS regulation during its trial period. The same exercise was made for all countries in SCA&C Region; carbon tax regulation vs. ETS has been analyzed in terms of emissions and economic impact of each scenario, and we evaluate the impact of the potential ETS implementation in Colombia in the next 2-years. Additionally, in Colombia, a new tax on petcoke and coal is being analized and expected to be in place starting in 2021.
Technology	Relevant, always included	Technology is the key lever for CEMEX to significantly reduce its CO2 footprint in the long run. CEMEX is involved in new R&D products (such as our proprietary low-CO2 clinker) and other new technologies projects on Carbon Capture. CEMEX has a R&D department evaluating and assessing new climate-change technologies (proprietary or external), and a dedicated multidisciplinaty team to evaluate new technologies in the market. CEMEX usually works under the H2020 EU scheme and new EU Innovation Fund, and is also collaborating with NPC in USA in Carbon Capture, Utilization and Storage (CCUS) technologies, which can help us to manage transition risks. The technology is considered a risk in some installation where not implementing new technologies could result in a non-profitable operation. EXAMPLE of Risk Type: for instance, CEMEX is involved in the design & development stage of EU funded projects like LEILAC project, GENESIS,

		EcoCO2...and California and Texas plants requested in June2020 two DOE funds to execute a feasibility study on Carbon Capture.
Legal	Relevant, always included	Although we are currently not subject to any climate change-related litigation, the increasingly attention and commitment of governments to comply with NDC will evolve in a more robust legislation and compliance surveillance, so increase in litigation or penalties risk. CEMEX Central Legal department is monitoring in a quarterly basis all "Regulatory Matters and Legal Proceedings" applicable to our company, including all those related to climate change. EXAMPLE of risk type: Water scarcity in some areas where we operate is one example on how the legal proceedings and regulatory matters are included in the quarterly revision. The control from the legal perspective is the strict compliance of each water withdrawal permit, to avoid any disturbance in the water layer and a potential legal action derived from it. Another example of legal risk is every time more demanding enhanced emissions-reporting obligations and more demanding air emissions limits; we are analysing this risk as a potential emerging regulation and from the legal perspective in case of not meeting the new revised limits.
Market	Relevant, always included	The main impact on markets is likely to happen via regulation. The impact of market developments that are not driven by regulation is likely to be rather small in the short term, and changes are expected to occur very slowly. Nonetheless CEMEX has identified this as a key topic in the long run as it has the potential to reshape the industry, and is integrating it in its CO2 strategy. Types of market trends that are likely to become relevant in the long term include demand for low-carbon products or products for better energy efficiency of buildings, as it is now being pursued for instance in the EU Taxonomy. Low carbon products or high efficiency products demand is closely monitored by our commercial department, and our R&D in constant research of innovative solutions. EXAMPLE of risk type: the low-carbon product demand trend is assessed and crossed with R&D development to adapt our facilities to the expected demand (i.e. lightweight concrete, fiber reinforced...) and also linked to building solutions obligations imposed by regulations (i.e. adaptation of existing buildings to energy efficiency obligations in a local/country basis)
Reputation	Relevant, always included	For the time being the key reputation risks are related to our investors, but in the future it cannot be ruled out that also customers will increasingly base their purchasing decisions on our reputation. CEMEX is in constant exchange with its stakeholders to understand their views and expectations. This risk is monitored in a regular and coordinated basis by PA, Sustainability and Investor relationships. The most important channels in the context of climate change are: - regular stakeholder surveys evaluating our image and materiality matrix - dialogue with the investment community (e.g. institutional investors, financial and sustainability analysts)

		- review of external reports by e.g. NGOs, authorities, or media EXAMPLE of type of risk: An example of this kind of reputation risk is “the perception” the markets could have of the cement sector, as it is seen as a big contributor to CO2 global emissions, so this could affect our sales (risk) but also create some opportunities (need to extend the new low carbon products portfolio). We are monitoring in our risk assessment this potential risk, identifying the customer needs through the constant exchange with them, and this allows us to quickly identify this “lack of confidence” in our product, and constantly monitoring the press releases related to give the proper answer and take the correct actions. Additionally, we are actively participating in those cement associations of the locations where we are present, so we also discuss reputation risk and take actions accordingly (response to media). All these sources are considered when including the reputation risk and its consequences in sales in the risk-assessment process.
Acute physical	Relevant, always included	The assessment of acute physical climate risks, mainly extreme weather events such as tropical cyclones, is a constant task in our ERM system. This includes both the updating of local emergency plans as well as the collaboration with the insurer to understand the potential changes in insured risks. EXAMPLE of risk type: All areas with natural-disaster high occurrence probability are identified and the impacts are assessed in terms of production losses and reconstruction cost
Chronic physical	Relevant, always included	CEMEX operates a number of terminals and also plants directly on the sea chronic physical risks such as rising sea levels, so this physical risk could become a long-term problem for the company. Another example of chronic physical risk being monitored is the water scarcity in the areas where we operate, to ensure the operation continuity. EXAMPLE of risk type. To assess the impact of the water scarcity chronic physical risk, we evaluate the cost increase associated to other water sources or production losses. To mitigate the impact, we set a new target in 2018 to update our water scarcity map (Aqueduct tool) and update the water management plants in all those facilities with severe or high-water scarcity (applicable for all businesses)

C2.3

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

Yes

C2.3a

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

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation

Carbon pricing mechanisms

Primary potential financial impact

Increased direct costs

Company-specific description

CEMEX supports carbon pricing, particularly in the form of cap-and-trade, as the most effective and efficient means to combat climate change. However, it is very important that a pricing system is well designed, maintaining the fair competition preserving both, the industry and the climate effects if a carbon-leakage occurs; competition does not refer only to regulated and unregulated geographies, but also among potential substitute products (e.g. concrete vs. asphalt, timber or steel).

CEMEX evaluates the risk of the transition to a carbon pricing regulation in those Countries with a regulation already in place that will certainly evolve to a next phase/taxation scheme, or those with an announce new regulation in the short-term. The facilities are:

1. California (1 cement plant within the scope) - Already an ETS in force and already defined the rules or the new allocation period (CCA carbon price floor average (2021-2030): 26.7 USD/t)

2. All EU cement Operations. The new allocation rules for Phase IV EU ETS are now known, but there is a high uncertainty on the free allocation continuity due to the Carbon Border Adjustment Mechanism from 2026 on, so we also evaluate the risk of gradually missing free allocation; UK is also evaluated separately taking into account the proposal after Brexit already published (EUA price: 45 EUR/t – UKA price: 45

EUR/t (equivalent to 51.3 USD/ton)).
3. Colombia: tax on liquid and gas fossil fuels, with a potential risk evaluated of solid fossil fuels taxation (petcoke or coal) likely to be in place from 2022 on (expected tax on coal: 41,861 Colombian Peso equivalent to 11.1 USD/t) and a potential to implement a cap-and-trade ETS in the short term.
4. Mexico: tax on fuels in place, and with a known transition to and ETS in the short term as the trial period of the ETS already started in 2020 (3-years). We also include a potential carbon tax in Nuevo Leon state (affecting Monterrey plant) over the total CO2 emissions of the plant evaluated at 15 USD/t of CO2.
5. Other geographies are monitored in a quarterly basis in the "CO2 Regulation focus Group" meetings, to determine their middle term impact (i.e Egypt: working with Low Emission Capacity Building (LECB) Project to evaluate the best carbon taxation scheme, other countries in SCA&C region evolving to comply with the committed NDC (Panama, Caribbean, Costa Rica))

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,330,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

A quantitative breakdown of the financial impact figure is provided next:

1. EU ETS financial impact = (Expected balance of Phase IV (2021-2030) - Surplus Phase III (2013-2020)) * 45 EUR CO2/t (51.3 USD CO2/ton). Expected balance Phase IV considers gradual removal of free allocation (2026: -20% / 2027: -40% / 2028: -60% / 2029: -80% / 2030: -100% (no free allocation) // California ETS = (Expected balance of Phase IV (2021-2030) - Surplus Phase III) * 31 USD CO2/t
Total EU ETS and California ETS = 23.3 MM tons CO2 (Balance Phase IV plus Existing surplus) * 50.5 USD/ton (weighted average EU ETS and California prices) = 1,178,000,000 USD

2. Colombia risk on a carbon tax on pet-coke = 290 ktons/year (expected petcoke consumption within a 10-year timeframe) * 11.1 USD CO2/t = 32,0000,000 USD

3. Mexico risk on a carbon tax on CO2 emissions in Nuevo Leon (Monterrey plant) = Expected CO2 emissions within a 10-year timeframe (12 MM tons) * 10 USD CO2/t = 12,000,000 USD

Total financial impact figure = 1 (EU+Cal) + 2 (Col) + 3 (Mex) = 1,330,000,000 USD

Cost of response to risk

599,000,000

Description of response and explanation of cost calculation

In order to mitigate the impact of increasing the operating cost derived from strengthen the GHG (CO2) regulation and increase the GHG pricing, in 2018 CEMEX started to build a cement site-by-site plan, the "CEMEX CO2 Roadmap", to identifying and listing all reduction initiatives needed to accomplish our 2030 target. The CO2 roadmap has been revisited in 2020-2021 to increase our climate ambition in line with Well-Below-2ºC Scenario.
CEMEX has identified, evaluated and prioritized a total of 290 initiatives to be executed during this decade. The initiatives have been calendarized and their implementation is monitored in a monthly basis by the CEO and ExCo. Identified initiatives include: switch to AF (biomass) or natural gas in US, SCAC and MEX, clinker substitutes in All Operations, decarbonated raw materials in EU operations, energy efficiency... CEMEX also actively participates in the development of CCU (Carbon Capture Utilization) tech. as a long-term solution, in an open

and constant dialogue with policy makers.

Case study (STAR) to mitigate the risk of the transition to carbon pricing:
• Situation: Operations in Colombia are facing a risk of being applied a tax on fossil fuels (applicable to petcoke in our case) from 2022 on (the law has to be approved yet). The announced tax is equal to 41,861 Colombian Peso equivalent to 11.1 USD/ton of petcoke, updated annually with the CPI+1. We need to work to minimize the impact of the tax.
• Task: Try to minimize the impact of the future announced task identifying the petcoke volume which can be reduced by displacing it with an alternative fuel.
• Action: A New 1.6 MM USD investment was allocated in the plant in late 2020 in order to increase the Alternative Fuels Substitution from 20% up to 35%, so to reduce petcoke consumption and reduce CO2 emissions.
• Result: Due to the execution of this project, the petcoke consumption in this site is expected to be reduced in an annual basis a 18.8% in volume compared to 2020 petcoke volumes.

Cost of management calculation: the cost is equal to the identified investments for the period 2021-2030 = 596 MM USD. Additionally, a Full-Time-Employee for lobbying actions is included as a mitigation cost (200 kUSD/year) + an additional resource for CCUS development hired in Europe (100 kUSD/year) for a 10-year-timeframe.
Cost to response = Identified investment for 2021-2030 (596 MMUSD) + Lobbying & CCUS technician (3 MM USD (10-years)) = 599,000,000 USD

Comment

Cost of management calculation: the cost is equal to the identified site level investments for the period 2021-2030 = 596 MM USD. Additionally, a Full-Time-Employee for lobbying actions is included as a mitigation cost (200 kUSD/year) + an additional resource for CCUS development hired in Europe (100 kUSD/year) for a 10-year-timeframe. A quantitative breakdown of the cost of response to risk is provided next:
Cost to response = Identified investment for 2021-2030 (596 MMUSD) + Lobbying & CCUS technician (3 MM USD (10-years)) = 599,000,000 USD

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

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

Primary potential financial impact

Increased capital expenditures

Company-specific description

Increased frequency and strength of tropical cyclones (as well as other extreme storms) can cause direct damage to our operations. All the operations are assessed by FM Global, our global insurer and the CEMEX Technical team under the program LPP (Loss-Prevention Program). Derived from this assessment we get the “Loss Expectancies-Property Damage”, the “Loss Expectancies-Time Element” and the “remediation cost” to eliminate or mitigate the risk of physical damage due to an acute or chronic climate-related event. The “Loss Expectancies-Property Damage” evaluate the cost of the physical damage to equipment or infrastructure and the ”Loss Expectancies-Time Element” evaluates the production loss and the cost derived from the activities to restore the original production.

The Loss Expectancies are evaluated with the “total financial loss model” developed by FM Global, which effectively calculates the true value of resilience. The probability of occurrence of these natural hazards (flooding, windstorms…) in a site is evaluated with the help of several proprietary maps of windstorm, flooding and others available like seismic, wildfires…, built on information from the NASA, Research Centers, Universities, and other governmental local sources mainly in the USA.

Additionally, to manage the physical risks (mainly for disruptive risks) CEMEX takes a structured and homogeneous approach worldwide; CEMEX ERM (Enterprise Risk Management) launched in 2017 a so called "Business Continuity Program" (BCP), to minimize the potential impact of a disruptive event in our businesses. This program includes Emergency Support, Crisis Management and Business Recovery (details on management). Having a BCP in order has the following benefits: It reduces the recovery time after a disruptive event // It reduces the potential impact of a disruptive event // It promotes positive engagement with stakeholders in advance (staff, customers, suppliers) // It allows to anticipate and prepare for possible consequences // Beyond risk mitigation, BC can turn a crisis into an opportunity // Aligns internal efforts towards the same recovery direction or goal.

Time horizon

Long-term

Likelihood

About as likely as not

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)

70,028,391

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The financial impact figure is obtained from the FM Global annual evaluation, and it is equal to the “Loss Expectancies-Property Damage” calculated for the climate-related acute and chronic identified risks. The Loss Expectancies-Property Damage” evaluates the equipment and infrastructure damage cost caused by the acute or chronic physical event identified for the site.

Total “Loss Expectancies-Property Damage” identified by FM-Global for acute and chronic climate-related risks for CEMEX is 70,028,391 USD with the following disclosure by Region: South-Central America & Caribbean: 37,390,000 USD / Mexico: 2,500,000 USD / United States: 22,458,391 USD / Europe Middle-East Africa & Asia: 7,680,000 USD.

An example of the identified risks, calculated Loss Expectancies and remediation cost is explained next: In one of our operations in the Caribbean area, a risk of windstorm has been identified based on the windstorm maps. The identified risks related to windstorm, “Loss

expectancies-property damage" and "Estimated Cost of mitigation" are:

• Improve the windstorm protection for the Power Station – Loss Expectancies-Property Damage: 2,650,000 USD / Estimated Cost: 90,000 USD (examples of actions to mitigate the risk: Provide additional securement to the lap-seam over the high-bay roof of the Power Station / Replace rolling door on low-bay section of the Power Station with wind-rated doors…)

• Improve windstorm protection for Warehouse/Workshop Building – Loss Expectancies-Property Damage: 2,600,000 USD / Estimated Cost: 185,000 USD (example of actions: Replace the rolling doors on the Warehouse/Workshop Building with wind-rated doors / Secure roof-mounted equipment over the Warehouse/Workshop Building…)

• Improve windstorm protection for the Palletizer and Finished Product Warehouse – Loss Expectancies-Property Damage 1,300,000 USD / Estimated Cost: 27,000 USD (example of actions: Provide additional securement to the perimeter and corners of the Finished Product Warehouse / Replace the skylights over the Palletizer and Finished Product Warehouse to resist wind pressures…)

Cost of response to risk

9,057,000

Description of response and explanation of cost calculation

CEMEX assesses annually all plants' exposure to all types of risks, including extreme weather-related risks, through the LPP (Loss-Prevention Program). This program is conducted by the engineering services of CEMEX and the global insurer (FM Global) and provides each plant with a score to be assessed "RiskMark Score". The probability of flooding, windstorms, seism, fires…in a site is evaluated by FM Global and CEMEX in an annual basis with the help of "Global Flood, Seism and Windstorms Maps" developed by FM Global with information from NASA, Research Centers, Universities and other governmental local sources like mainly USA.

Case study to describe an example of how to manage the acute physical risk (flood)

• Situation: In the evaluation of our sites in 2020 by FM Global, the UK local flood maps shown a large area exposed to flood in one of our sites, affecting the clinker store and cement mill building which are at high risk of flooding.

• Task: FM Global identified 3 new recommendations to prevent the flooding of the area with a calculated Loss Expectancies-Property Damage of 1,800,000 USD:

o Enhance the existing flood emergency response plan (FERP). Cost: 10 kUSD

o Install FM Approved flood protection equipment at doorways and openings. Cost: 100 kUSD

o Install permanent flood defences. Cost: 400 kUSD

• Action: The 3 recommendations are now being implemented with a due date of Dec-2021.

• Result: Thanks to the implementation of the FM Global recommendation our RiskMark score will increase more than 4.5 points and the loss

expectancies-property damage will be reduce from 1,800,000 USD down to 100,000 USD (residual damage after completion of the recommended actions).
Cost of management calculation: the shown figure is the portion of the insurance fee in 2020 related to natural disasters (physical acute and chronic risk) plus the “Estimated Cost of actions” identified by FM Global in the LPP evaluation. Both the natural hazards related insurance fee and the cost of actions is then split in “property-damage” and ”time-element” according to its relative weight over the total Loss Expectancies, which are 45% and 55% respectively.
A quantitative breakdown of the cost of response to risk is provided next:
Cost of insurance provider 2020= 34,792,000 USD * 47% (Natural Hazards Related premiums): = 16,341,697 USD
Total estimated Cost of actions = 3,630,500 USD
Total Cost of management for property damage = 16,341,697*45% + 3,630,500*45% = 9,057,000 USD

Comment

Cost of management calculation: the shown figure is the portion of the insurance fee in 2020 related to natural disasters (physical acute and chronic risk) plus the “Estimated Cost of actions” identified by FM Global in the LPP evaluation. Both the natural hazards related insurance fee and the cost of actions is then split in “property-damage” and ”time-element” according to its relative weight over the total Loss Expectancies, which are 45% and 55% respectively.
A quantitative breakdown of the cost of response to risk is provided next:
Cost of insurance provider 2020= 34,792,000 USD * 47% (Natural Hazards Related premiums): = 16,341,697 USD
Total estimated Cost of actions = 3,630,500 USD
Total Cost of management for property damage = 16,341,697*45% + 3,630,500*45% = 9,057,000 USD

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Acute physical

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

Primary potential financial impact

Decreased revenues due to reduced production capacity

Company-specific description

Increased frequency and strength of tropical cyclones (as well as other extreme storms) can also cause loss of production in our operations due to the time to recover the plant to its original production prior to the event.

As commented in Risk 2, all the operations are assessed by FM Global, our global insurer, and the CEMEX Technical team to calculate the “Loss Expectancies-Time Element” and the “remediation cost” to eliminate or mitigate the risk of production loss due to an acute or chronic climate-related event, as extreme climate events can disrupt supply of crucial inputs and product outputs. “The Loss Expectancies-Time Element” are evaluated with the “total financial loss model” developed by FM Global and provides an estimation of the loss of production together with the cost expended during the time to recover the plant to its production levels prior to the event with the formula described in the process C2.2. New Row 1. The probability of occurrence of these natural hazards (flooding, windstorms…) in a site is evaluated with the help of several proprietary maps of windstorm, flooding and others available like seismic, wildfires…, built on information from the NASA, Research Centers, Universities, and other governmental local sources mainly in the USA.

Additionally, to manage the physical risks (mainly for disruptive risks) CEMEX takes a structured and homogeneous approach worldwide; CEMEX ERM (Enterprise Risk Management) launched in 2017 a so called "Business Continuity Program" (BCP), to minimize the potential impact of a disruptive event in our businesses. This program includes Emergency Support, Crisis Management and Business Recovery (details on management). Having a BCP in order has the following benefits: It reduces the recovery time after a disruptive event // It reduces the potential impact of a disruptive event // It promotes positive engagement with stakeholders in advance (staff, customers, suppliers) // It allows to anticipate and prepare for possible consequences // Beyond risk mitigation, BC can turn a crisis into an opportunity // Aligns internal efforts towards the same recovery direction or goal.

Time horizon

Long-term

Likelihood

About as likely as not

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)

84,477,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The financial impact figure is obtained from the FM Global annual evaluation, and it is equal to the “Loss Expectancies-Time Element” calculated for the climate-related acute and chronic identified risks, where the loss of production together with the cost expended during the time to recover the plant to its production levels prior to the event are evaluated.

Total “Loss Expectancies-Time Element” identified for acute and chronic climate-related risks for CEMEX is 84,477,000 USD with the following disclosure by Region: South-Central America & Caribbean: 56,740,275 USD / United States: 9,484,384 USD / Europe Middle-East Africa & Asia: 5,731,398 USD / Mexico: 12,520,822 USD

An example of the identified risks calculated “Loss Expectancies-Time Element” and remediation cost is explained next: In the same operations in the Caribbean area exposed in Risk 2, a risk of windstorm has been identified based on the windstorm maps. The identified risks related to windstorm, “Loss expectancies-Time Element” is 593,014 USD, calculated as the production loss and cost to recover the original capacity of the facility after the event occurs for each of the equipment/building identified (power station, Warehouse/Workshop Building and Palletizer and Finished Product Warehouse).

Cost of response to risk

10,926,000

Description of response and explanation of cost calculation

CEMEX assesses annually all plants' exposure to all types of risks, including extreme weather-related risks, through the LPP (Loss-Prevention Program). This program is conducted by the engineering services of CEMEX and the global insurer (FM Global) and provides each plant with a score to be assessed "RiskMark Score". The probability of flooding, windstorms, seism, fires…in a site is evaluated by FM Global and CEMEX in an annual basis with the help of "Global Flood, Seism and Windstorms Maps" developed by FM Global with information from NASA, Research Centers, Universities and other governmental local sources like mainly USA.

Case study to describe an example of how to manage the acute physical risk (flood)

• Situation: In the evaluation of our sites in 2020 by FM Global, the UK local flood maps shown a large area exposed to flood in one of our sites, specifically affecting the clinker store and cement mill building which are at high risk of flooding.

• Task: FM Global identified 3 new recommendations to prevent the flooding of the area with a calculated Loss Expectancies-Time Element of 1,496,384 USD:

o Enhance the existing flood emergency response plan (FERP). Cost: 10 kUSD

o Install FM Approved flood protection equipment at doorways and openings. Cost: 100 kUSD

o Install permanent flood defences. Cost: 400 kUSD

• Action: The 3 recommendations are now being implemented with a due date of Dec-2021.

• Result: Thanks to the implementation of the FM Global recommendation our RiskMark score will increase more than 4.5 points and the loss expectancies-time element will be reduce from 1,496,000 USD down to 872,890 USD (residual loss of production after completion of the recommended actions), meaning a loss expectancy reduction of 623,494 USD.

Cost of management calculation: the shown figure is the portion of the insurance fee in 2020 related to natural disasters (physical acute and chronic risk) plus the "Estimated Cost of actions" identified by FM Global in the LPP evaluation. Then the weight of "time element" over the total Loss Expectancies of 55% is applied.

A quantitative breakdown of the cost of response to risk is provided next:

Cost of insurance provider 2020= 34,792,000 USD * 47% (Natural Hazards Related premiums): = 16,341,697 USD

Total estimated Cost of actions = 3,630,500 USD

Total Cost of management for property damage = 16,341,697*55% + 3,630,500*55% = 10,926,000 USD

Comment

Cost of management calculation: the shown figure is the portion of the insurance fee in 2020 related to natural disasters (physical acute and chronic risk) plus the “Estimated Cost of actions” identified by FM Global in the LPP evaluation. Then the weight of “time element” over the total Loss Expectancies of 55% is applied.
A quantitative breakdown of the cost of response to risk is provided next:
Cost of insurance provider 2020= 34,792,000 USD * 47% (Natural Hazards Related premiums): = 16,341,697 USD
Total estimated Cost of actions = 3,630,500 USD
Total Cost of management for property damage = 16,341,697*55% + 3,630,500*55% = 10,926,000 USD

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?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of new products or services through R&D and innovation

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

CEMEX believes that concrete products, due to its versatility and robustness to build resilient infrastructure, can help combat and prevent the detrimental consequences of climate change by protecting people, property and the environment, by providing the level of climate proofing that will become mandatory as national building codes are revised to cope with more extreme weather events.

Additionally, in the Net-Zero by 2050 published by IEA, they recognized that when economies are developing, per capita cement and other materials demand tends to rise; during the last two decades, cement growth its demand by 2.4-times in response to global economic and population expansion. They also mention that an increase in demand is foreseen for cement as it is required to build additional transport infrastructure (roads, cycles, cars and trucks) and energy infrastructure, e.g. power plants and wind turbines to adapt to new Net-Zero Scenarios.

As CEMEX has a high presence in markets in developing countries (South-Central America and Caribbean, Mexico, Philippines, Egypt…), it is very likely to have the opportunity of increasing the demand of concrete products first to attend the societal growth needs, and then due to the need of adapting buildings and infrastructure to expected climate change effects, mainly in those geographies most exposed to extreme weather events, in our specific case Southern US, Latin America, and south-east Asia.

For instance, we observed a slightly higher demand, mainly in Latin America and Philippines, of products like Promptis® Rapid-hardening concrete that develops compressive strength to demold and move elements in four hours, so helped sites recover time lost during lockdowns and catch up with construction schedules, and Pervia®, a solution for draining pavement that makes it easier for water to permeate and be conducted to a water management system.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

126,100,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The financial impact is estimated considering an increase of 0,8% in the demand of concrete and cement due to the need of adapting buildings and infrastructure to climate change effects. To get this 0,8% we used as a base the global avegare CAGR 0,5% for cement demand published by the IEA Net-Zero 2050, and we expect a slightly higher demand increase in the most exposed areas to climate-related risks. Regions considered as more likely to be impacted are: Southern US, Latin America (Mexico, SCAC (South Central America and Caribbean)) and south-east Asia. Figures shows expected revenues increase over the next decade.
Additionally, as we commented, we estimate an additional global demand increase due to the need of new climate-related infrastructure, like additional transport infrastructure (cycling roads...) and energy infrastructure, e.g. power plants and wind turbines to adapt to new Net-Zero Scenarios. Anyway, to be conservative, we do not consider this global potential demand increase.

A quantitative breakdown of the financial impact figure is provided next (please note that EBITDA by plant/Region cannot be disclosed)
(Sum of 2020 annual Cement and Concrete's EBITDA in (SCAC + Mexico + Philippines + South USA) * 0,8% (annual increase) * 10 years = 126,100,000 USD

Cost to realize opportunity

4,800,000

Strategy to realize opportunity and explanation of cost calculation

The strategy to realize the opportunity to increase the concrete demand to respond to societal needs quickly and affordably is to promote the benefit of innovative products and techs. That is why, in 2019, CEMEX developed a new division called “Urbanization Solutions”. Through Urbanization Solutions CEMEX capitalizes on its expertise in building materials to offer complementary solutions to solve the most pressing societal needs: resilient buildings and infrastructure appropriate for disaster relief, energy-efficiency and affordability.
Case study - increase in demand of concrete by offering products to combat climate change effects
Situation: Bogotá Water Utility Company has a masterplan to recuperate/protect wetlands inside metropolitan area (project “Parque Lineal Humedal Juan Amarillo”). Wetlands are prone to flooding during extreme rainy events – that have erratically proliferated during last decade - that can affect close-by poorly settlements.
Task: CEMEX and the water utility company “Empresa de Acueducto de Bogotá” explored the use of novel technologies in permeable concrete PERVIA™ – never applied in lineal parks nor environmental protection strips – 60m from wetland border to settlement – to create pedestrian and bicycle paths that will provide protection to population from flooding and will also serve for sporting, leisure and biodiversity protection.
Action: CEMEX digitally simulated with proprietary engineering calculators the structural and hydrological design of permeable concrete PERVIA™, which allows to permeate rainwater to underneath substrates meanwhile maintaining a usable and strong surface. Pilot tests were also performed on site to prove the concept and showcase authorities, contractors, and key stakeholders.
Result: Between 2019-20 the construction of first 4,5km of pedestrian path required delivery of 3.000 m3 of PERVIA™ concrete and replacing 13.500 m2 of asphalt (initial solution) by a permeable concrete surface alongside the wetland (benefit 100.000 USD).
Cost to realize the opportunity: Total cost of direct structure in urbanization solutions * 14% (dedicated resources to building and infrastructure construction solutions) plus Total cost of direct structure in R&D * 9% (dedicated resources to design and urban dynamics and materials and product design), both over a 10-years’ time = 4,800,000 USD. Additionally, CEMEX collaborates with external architects and developers in a case-by-case basis, but this cost is excluded.

Comment

Cost to realize the opportunity: Total cost of direct structure in urbanization solutions * 14% (dedicated resources to building and infrastructure construction solutions) plus Total cost of direct structure in R&D * 9% (dedicated resources to design and urban dynamics and materials and product design), both over a 10-years’ time = 4,800,000 USD. Additionally, CEMEX collaborates with external architects and developers in a case-by-case basis, but this cost is not included.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

Several studies have concluded that buildings are responsible for around 40% of global energy consumption and a similar percentage of GHG emissions. It is therefore crucial that the energy efficiency of buildings be improved, and the most likely way to achieve this is via more stringent energy efficiency standards for buildings. This will open several opportunities for CEMEX: - Significantly lowering total energy consumption of buildings and helping to design the "sustainable cities of the future", will most likely require an increased replacement or refurbishment of existing buildings, which means more construction activity. - It is widely recognized that concrete's thermal properties make it an excellent structural material for energy-efficient buildings in both cold and hot climates, implying that under more stringent efficiency standards the consumption of concrete per unit is likely to increase. - More stringent building codes are likely to foster the development of new materials and constructive solutions; this will give innovative companies like CEMEX a competitive edge and will allow for higher margins on these already existing and new higher performance products being developed.

A very specific example was showcased on the British TV program Grand Designs; it is the Corrigall "Concrete House", which exemplifies the spirit of collaboration between our R&D, customers, architects, and engineers that CEMEX is always pursuing. The objective was to minimize, if not eliminate, conventional steel reinforcement while achieving very high thermal efficiency. Using CEMEX Resilia ultra-high strength and CEMEX hyper ductile fiber-reinforced concrete, the outcome was the first building in the UK where steel reinforcement was reduced by 75%, embodying a 39% reduction of CO2 in the concrete structure or the equivalent of 120 tCO2. Our Insularis concrete technology was also used to achieve high thermal insulation, reducing the structure's thermal bridges and its overall energy consumption by 17%.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

30,660,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Calculations are done considering an increase of 4% annually in the demand of "high-energy-efficient" portfolio of products for 10 years (6% of total concrete sales in 2020 related to this energy efficient products portfolio). This increase is estimated based on the historical demand increase over the last 5 years (annual average 5%) and considering that, according to IEA Net Zero by 2050 report, mandatory zero-carbon-ready building energy codes for all new buildings need to be introduced in all regions by 2030.

A quantitative breakdown of the financial impact figure is provided next
(Revenue 2020 related to Products * 4% annual increase in sales * 10 years) = 30,660,000 USD

Cost to realize opportunity

6,800,000

Strategy to realize opportunity and explanation of cost calculation

CEMEX performs R&D projects by detecting first the future needs and challenges of the society; to detect the future needs and evaluate existing and emerging technologies, we work with the “Tech Intelligence Program”, comprised of 52 CEMEX members of different disciplines gathered to collaborate evaluating “technology alerts” (emerging or already developed) and a survey is done to collect their impressions on the technology and develop afterwards the solution.
Case Study to realize the opportunity to increase our revenues through low carbon products and construction solutions:
Situation: Pich Architects wanted to develop a structure designed to achieve net-zero energy consumption in Monterrey, Mexico (OUM Wellness building)
Task: CEMEX and Pich Architects combined their capabilities to achieve the challenge and agree the supply of CEMEX’s global concrete brand, Resilia ®
Action: CEMEX provided the Resilia ® concrete, a substitute for steel with fibers that provide hyper strength and ductility. The building combines the sustainability attributes of our construction material with an active bioclimatic facade to reduce exterior air temperature by 6 °C to 8 °C, improving comfort in the intermediate spaces of the building and reducing the surface temperature of the outer face of the enclosures in direct contact with the air-conditioned interior spaces.
Result: the construction in ongoing and the project has the maximum environment ambition as it aims to be certified as NZEB, LEED®, and WELLTM. CEMEX contribution to this innovative solution has been well received and has increased the demand of Resilia ® a 5% globally from 2019 to 2020 , which means to increase the incomes close to 800,000 USD.

Cost to realize the opport: The cost of developing a new high-energy-efficiency product depends on several circumstances and it is part of R&D activities. On the top of this, there are other relevant expenses for e.g. certification and market introduction.
The estimated cost is related to the cost of R&D structure (staff) dedicated to developing this type of innovative solutions together with the estimated cost of market penetration of a new product (new product marketing campaign).
Total cost of direct structure in R&D * 12% (% of dedicated resources to new high efficiency solutions) over a 10-years’ time = 4,800,000 USD + 2,000,000 (marketing over 10-years) = 6,800,000 USD

Comment

Cost to realize the opport: The cost of developing a new high-energy-efficiency product depends on several circumstances and it is part of the R&D department activities. On the top of this, there are other relevant expenses for e.g. certification and market introduction.
The estimated cost is related to the cost of R&D structure (staff) dedicated to developing this type of innovative solutions together with the estimated cost of market penetration of a new product (new product marketing campaign).

Total cost of direct structure in R&D * 12% (% of dedicated resources to new high efficiency solutions) over a 10-years' time = 4,800,000 USD + 2,000,000 (marketing over 10-years) = 6,800,000 USD

Identifier

Opp3

Where in the value chain does the opportunity occur?

Upstream

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Reduced direct costs

Company-specific description

Both the environment and CEMEX's revenues can benefit from co-processing if the right waste management regulation is in place. The right waste management regulation will enable the development of a profitable waste management business by, for instance, imposing taxes and bans to landfills. This will lead to increase the alternative fuels availability at a lower cost and to reduce the CO2 emissions.
The benefits of co-processing (switching from conventional fossil fuels to Alternative Fuels, mainly RDF (Refuse Derived Fuels)) are sometimes not widely understood in our areas of influence, especially in those regions with lack of or low regulatory enforcement, like Latin America, Asia and Africa and some areas in the USA, which are precisely the CEMEX markets that are expected to be most positively impacted, as they are the ones with more opportunity to increase the Alternative Fuels rates at a lower fuel cost.
Countries like Germany, where the waste directive and the appropriate economic instruments to develop profitable waste management business are fully in place, reaches year over year alternative fuel substitution rate of 75%-80%, while CEMEX 2020 average was 25.3%.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

62,140,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

As the potential impact identified is to reduce the exposure to future fossil fuel price increase through the switching from fossil fuels to alternative fuels (AF), the financial impact figure shown is estimated with the following assumptions:

1. Average saving of 3 USD/Gcal of expected fuel mix vs.current fuel mix cost.
2. Annual increase of 5% of the total thermal substitution globally.
3. The estimated saving is calculated for 10 years.

A quantitative breakdown of the financial impact figure is provided next:

Total Thermal Gcal consumption 2020 in cement kilns (41.4 million Gcal) * 5% improvement * (3 USD/Gcal * 10 year = 6,214,000 USD

Cost to realize opportunity

6,000,000

Strategy to realize opportunity and explanation of cost calculation

To realize the opportunity to increase the use of lower-emissions sources of energy in our kilns we have several lines of actions:
1. Contact the Local/Regional/National administrations to promote the implementation of the proper regulation.
2. We also promote the co-processing in our communities and with our main stakeholders.
3. We also take a proactive approach in developing own waste management businesses, which are sometimes difficult if the regulatory incentives are not in place.
A case study describing our approach to materialize this opportunity is explained next:
Situation: Due to a lack of waste management and solid regulation in Mexico, CEMEX founded a company in 1993 to carry out and integral management of industrial, agricultural and domestic waste, “Pro Ambiente”. “Pro Ambiente” is now specialized in separate waste collection, reuse, recycling and recovery of the non-recyclable fraction to be co-processed in our kilns. The challenge is still being huge as there are still no proper regulatory mechanisms in place to fully develop this business.
Task: Pro Ambiente wanted to get the most out of the business and to promote the responsible waste management as much as possible.
Action: with this purpose Pro Ambiente developed in 2018 Wazte, a digital platform to offer our customers and any other interested party (including authorities) a responsible collection and treatment of their wastes
Result: From May 2018 up to 2020, Wazte has collected 113,000 tons of waste, avoiding the emission of more than 160,000 tons of CO2 and generating an income of 3,120,000 USD in Proambiente. The income exceptation for 2021 is above 4,600,000 USD. On the other hand, the savings in our variable cost due to the consumption of these collected alternative fuels in our kilns in Mexico was close to 1,200,000 USD in 2020.

The cost to realize the opportunity in the medium-term worldwide is the cost of the lobbying actions to promote the implementation of the appropriate waste management policies and to promote the unique benefits of co-processing. Quantitative breakdown of the cost to realize the opportunity = estimated cost of the lobbying actions equivalent to 200 annual lobbying hours * 60 USD/hour * 50 lobbying resources around the world = 600,000 USD/year * 10 years = 6,000,000 USD for 10 years.

Comment

The cost to realize the opportunity in the medium-term worldwide is the cost of the lobbying actions to promote the implementation of the appropriate waste management policies and to promote the unique benefits of co-processing. Quantitative breakdown of the cost to realize the opportunity = estimated cost of the lobbying actions equivalent to 200 annual lobbying hours * 60 USD/hour * 50 lobbying resources around the world = 600,000 USD/year * 10 years = 6,000,000 USD for 10 years.

C3. Business Strategy

C3.1

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

Yes, and we have developed a low-carbon transition plan

C3.1a

(C3.1a) Is your organization's low-carbon transition plan a scheduled resolution item at Annual General Meetings (AGMs)?

	Is your low-carbon transition plan a scheduled resolution item at AGMs?	Comment
Row 1	Yes	

C3.2

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

Yes, qualitative and quantitative

C3.2a

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

Climate-related scenarios and models applied	Details
2DS RCP 4.5 RCP 6	The climate-related scenario analysis used by CEMEX is the 2DS as a central scenario, in accordance with the sectorial approach published by a joint effort IEA-CSI Cement Low-Carbon Technology Roadmap in 2018 (based on ETP 2015 for all the industry using SDA methodology) and updated this year to the ETP2016. Other scenarios considered include both more restrictive (2DS_ETP 2017 and B2DS - ETP 2017, the latter compatible with Well-Below 2ºC Scenario) and less regulated (RCP 4.5, RCP

Other, please specify B2DS-ETP2017 equivalent to Well-Below-2DS	6.0) scenarios. The geographical scope of the scenarios is global, and the time horizon the year 2050. CEMEX target 2030 is aligned with this 2DS calculations_ETP2016, but CEMEX announced in June 2021 a new target aligned to Well-Below-2D Scenario, as well as its commitment to SBTi. The five scenarios used are complemented by a concise and consistent narrative that details some of the open topics such as regulatory framework, physical risks, public opinion and particularly the corresponding indicative price of carbon emissions; the latter is informed by official sources (e.g. the IEA ECP scenarios). In all scenarios the potential implications for CEMEX are analyzed in a qualitative and quantitative way (Best Estimate). In the area of the physical impacts of climate change the analysis discusses both risks for our assets as well as potential risks and opportunities in our markets; in the area of transitional risks the focus is very much on the consequences of climate change-related legislation, including margin effects, volume effects, stranded assets, and the profitability of R&D into low-carbon processes and products. The main results of the analysis are: - Transitional risks and opportunities are far more relevant for CEMEX than physical ones; - The more CO2 emissions are constrained the more relevant are transitional risks; - Transitional risks are not a challenge for the sector (defined as production of mineral binders, not necessary as traditional Portland cement) as a whole (because of a lack of suitable substitutes), but in most scenarios will play a decisive role for the competitiveness of individual companies within the sector - although the profitability of R&D into low-carbon solutions is highest in the most carbon-constrained scenarios, they are still attractive in the least constrained one - Particularly in the most constrained scenarios the need to develop new business models becomes apparent The results of this analysis confirm that CEMEX' carbon strategy is in general robust. It underlines the need to integrate further emission reduction options that go beyond the traditional levers (energy efficiency, alternative fuels, and clinker substitutes). These results feed directly into the further evolution of our carbon strategy and targets. As a consequence of the scenario analysis - our new long-term CO2 target will most likely go beyond what can be achieved with traditional levers, - R&D into non-traditional emission reduction options will be further strengthened; for example, the development and roll-out of our new low-carbon clinker (that shows an emission reduction of over 15% compared to traditional Portland cement clinker) was sped up mainly in Mexico and Spain.

	The scenario analysis has not resulted in additional monitoring activities as the existing monitoring processes for CO2 emissions and other KPIs related to climate are considered adequate. The results of the analysis have been reported to the Corporate Sustainability Director, the Executive VP for Sustainability and Operations Development, the Executive Committee and the Board.

C3.3

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

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Climate-related risks and mainly opportunities have already adapted our short-term strategy to commercialize products that support the low-carbon transition and value-added products globally, but specially in EU. Cement and concrete already provide a number of characteristics that are important for a low-carbon transition, such as longevity, resistance, wide availability etc. Nonetheless there is still a significant potential for further developments to e.g. improve the insulating properties of concrete, further increase its strength, or to implement smart functions to increase maintenance intervals and technical lifetimes. As one of the industry leaders CEMEX will continue to be at the forefront of these developments with the help our R&D department. So, our portfolio is adapting to the new demand, and the demand of products with sustainability attributes (like energy efficiency, resource efficiency, low CO2 footprint) has been increasing in the last 5Y by doubling their demand, and we plan to increase an additional 5% annually in the med-long term period. Case study: Situation: CEMEX observed a demand of low-carbon products mainly in Europe but also in other countries like Colombia. Task: CEMEX aimed to offer to the market a new low-carbon range of concrete products Action: During 2019 R&D developed an innovative geopolymer-based concrete achieving a footprint reduction of up to 70% compared to a traditional structural concrete. The new product is a result of an

		intensive research becoming is the first product of its kind available on the market. Together with the geopolymer-based concrete, Vertua Ultra Zero, we developed Vertua Classic and Vertua Plus, reducing the emissions 30% and 50% respectively. CEMEX also offer to the customer the compensation of the remaining emissions, partnering with Natural Capital Partners in Europe and getting a Carbon Neutral Product certification. Result: In early 2020 we got to successfully launch to the market the Vertua low-carbon concrete range first in UK, and then we rolled it out to France, Germany and Colombia during 2020. In 2021 we extended the Vertua concrete offer to other markets like Mexico and Spain, so it is now being offered in more than 60% of our ready-mix markets. The demand is slightly increasing, and it is close to 1% of the total ready-mix sales in Europe YTD2021.
Supply chain and/or value chain	Yes	Climate Change plays and increasingly important role in the selection of suppliers, particularly for electrical energy impacting our short and medium-term strategy. As a result we have been reducing our scope 2 emissions for more than a decade by sourcing electricity from renewable sources, getting a 29% of our cement operations electricity consumption coming from renewable sources in 2020; the most prominent example was the development of the Eurus and Ventika I and II wind farms in Mexico with a combined capacity of more than 500 MW. In 2018 we reinforce our commitment by setting a target of 40% of the electricity coming from renewable in cement in 2030. Case study: Situation: CEMEX analysed the cement the electricity supplies in late 2018 and evaluate the options to reduce our intensity and the cost-effectiveness of the alternatives Task: In 2018, we set a target on renewable power for 2030 and designed a low-carbon transition plan for scope 2 Action: In late 2018, CEMEX UK signed a contract with Engie to supply 100% from renewable sources. Result: We reduced our CO2 emissions over 100,000 tons/year and in June21 we extended the partnership 3 more years. Regarding downstream services, within the same short and med-term timeframe, CEMEX provides different Green Building Certification Services, like ecoperating building certification, urban development consultancy, green building certification, bio-climatic architecture, energy efficient engineering together with sustainable materials and solutions development. During 2020 we also provided products and

		solutions for more than 1,000 projects that aim to achieve LEED or BREAM certifications, representing close to 7 million m2 of construction space. Additionally, CEMEX knows the challenge of climate change requires collaboration at several levels. We work with stakeholders, particularly governments and authorities, to develop frameworks that allow society to transition to a low-carbon world effectively and efficiently and to adapt to those consequences of climate change that cannot be avoided any more.
Investment in R&D	Yes	CEMEX committed to deliver Net-Zero CO2 concrete in 2050, so the R&D investment is a key player in our short, med and long-term strategy for all our cement and concrete operations worldwide. According to different studies, like the IEA-CSI Technology Roadmap 2018 and IEA Net-Zero by 2050, one of the major contributors to our emissions reduction to achieve carbon neutrality will be the capture and storage or utilization of CO2 emitted from our processes. The role and relevance of our R&D department based in Switzerland is now essential, as well as the participation of CEMEX Ventures in the research of low-carbon solutions offered by companies and start-ups, like the agreement that we signed in Sept 2020 with Carbon Clean, a global leader in low-cost CO2 amine-based capture technology. CEMEX launched in late 2019 a focus group “CO2 Task Force” involving Operations, R&D, Sustainability, CEMEX Ventures, Logistics, Energy and regional representatives to streamline the analysis and participation in the different research. As a result, CEMEX is now participating in more than 30 innovation projects and aims to build a demonstration pilot in 5 of our facilities. Case study Situation: The major contributor to achieve our 2050 neutrality ambition is carbon capture, so CEMEX needed to get involved in capture research by partnering and consortiums’ participation. Task: The goal is to get a portfolio of cost-effective and scalable capture technologies, so we need to explore and get involved in the different alternatives. Action: CEMEX stablished is determined to be totally disruptive and started conversations with Synhelion. The radically new approach is based on replacing the use of fossil fuels in cement plants with high-temperature solar heat, and capturing 100 percent of the carbon emissions, which are then utilized as feedstock for fuel production, enabling cement manufacturing to achieve net-zero level. This is made possible by the unprecedented temperature levels of solar heat provided by Synhelion’s technology and

		its pioneering process to turn CO2 into synthetic drop-in fuels, such as kerosene, diesel, and gasoline. Result: CEMEX announced their collaboration in September 2020, and we are aiming to build a pilot to be finished in 2023.
Operations	Yes	Starting in 2018 with the European operations, and extended in 2019 to all the operations worldwide, CEMEX developed a very detailed low carbon transition plan for a short and medium-term time horizon. We developed a detailed roadmap site by site with specific actions to achieve our 2030 target and our 2030 renewable electricity target, by implementing different technical measures like increasing the use of AF, particularly biomass, upgrading inefficient kilns like the new kiln in Poland, started up in 2019, increasing the use of clinker substitutes or changing portfolio products to more added cements mainly in SCAC (South-Central America and Caribbean), México and and US, where the swap to Type I-L cements is being deployed in 2019-2020. We also adopted some organizational measures such as awareness raising, monitoring and reporting of emissions, and extensive use of our proprietary carbon footprint tool. To reinforce this commitment, all the operation are set an annual emissions reduction goal already been linked to their remuneration and now also impacting their country EBITDA. Situation: CEMEX has a low carbon transition plan in place (CO2 Roadmap) that is being followed-up in a monthly basis. Task: CEMEX CEO wants to ensure that its low carbon transition plan is accomplished in a timely manner in all the sites at the scheduled pace. Action: In late 2020, CEMEX designed a methodology to impact the EBITDA results of the cement plants depending on their individual performance, the “CEMEX ETS”, that together to the link to remuneration will strengthen the accomplishment of the planned activities. Result: In 2021, we have started to monitor in a monthly basis the YTD performance vs.YTD goal for 100% of our cement sites. Example, Panama has a monthly/YTD target for Net kgCO2/cementitious ton, and it is compared to its monthly/YTD performance. The difference is multiplied by 18 USD/ton impacting its monthly EBITDA (see C11.3. for carbon pricing setting)

C3.4

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

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Indirect costs Capital expenditures Capital allocation Acquisitions and divestments Access to capital	Revenues are mainly affected by the increase in sales expected for the new low carbon, resilient and low carbon products. We are already having an impact in the revenues, however we notice that, as soon as the customer understands the magnitude and importance of having a lower carbon footprint, and of the life cycle assessment of a product, the opportunity will be even higher, and our R&D have to be constantly adapting to the customer and society needs. To factor these opportunities into our financial planning process, we consider a medium magnitude of these type of products, and we estimate the sales increase expected annually and calculate the associated revenues. Magnitude: medium. The magnitude of the impact on sale has been so far around a 0.5%, that is still very low, but we expect a medium impact in the middle term and a medium-high impact in the long term, impacting 100% of our business units. The operating cost (direct and indirect) is already being impacted by changes in regulations that increase operating production cost mainly in EU cement operations and California. We include this operating cost increase effect within the OCF (Operating Cash Flow) forecast in the short term (5 Year Business Plan) and moreover, considering the OCF impact in the middle term by simulating the already known rules of the Phase IV (in EU and California) and also the mitigation actions we are carrying out to reduce the impact (CO2 Roadmap). Another impact in the financial planning is the Alternative Fuels strategy when the price lowers or is expected to lower. We find new Alternative Fuels opportunities in very specific areas (UK) with a 5% of cost decrease compared to previous contracts. The impact of this lever is still low, and it is just affecting to some EU operations (mainly UK and Poland), but we are including the potential effect in the middle term financial planning process (5 Year Business Plan, that is updated annually the minimum, and every time a relevant change arise) Capital allocation and expenditures have an important role for all identified risks and all identified opportunities, so it is factored within our financial planning process with a high impact (magnitude). While climate change-related risks and opportunities are relevant for all kinds of capital, the main areas where they factor into the CEMEX planning process are the following: - Financial capital: systematic consideration of costs induced by GHG regulation (e.g. taxes, cost for purchase of allowances) in the evaluation of investment projects; general stress testing of our mid-term financial planning by applying an internal carbon price USD 30 per metric tonne of CO2 (average price, for details refer to C11 Carbon pricing) and a

		sensitivity analysis with different prices to evaluate the robustness of the investment. - Human Capital: Increasingly stronger focus on climate change-related topics, e.g. R&D into low-carbon technologies and products; further development of climate management and related processes; investigation of the life-cycle impact of our products and services; transparent communication around the company's carbon strategy, performance, and advantages of our products and services - Natural Capital: evaluation of mineral deposits for raw materials for low-carbon products; evaluation of projects to grow biomass as alternative fuel All climate-related risks and opportunities are systematically integrated into the evaluation of acquisitions and divestments. The results will certainly depend on the size of the transaction but may range from low impact to being a substantial part of the overall value; as a systematic approach, the climate related risk is always considered in our acquisition and divestment planning process and factored within a high impact (magnitude). For instance, we announced the temporary closing of two operations in Spain in 2018 and one in UK in 2020, and one of the drivers to take this decision was the higher specific emissions of these operations (we cannot disclose more detailed information), so the production cost increase expected there in the long term (risk evaluation). Example of the impact is that our climate change/low carbon investment increased by more than 25%, and it is planned to increase much more in the coming years, as we planned in our "CO2 Roadmap". The access to capital is an opportunity that is already impacting our operations with a medium impact (magnitude), and we are foreseen a potential to become a high impact risk. Investors, particularly institutional investors, increasingly consider climate-related risks and opportunities in the evaluation of their portfolios, and CEMEX maintains an open and transparent dialogue with all interested investors and informs them about the company's strategy and performance. For instance, we are in the process of analyzing with a financial institution a "sustainability linked-loan". Additionally, we get subsidies in the context of the EU "Innovation Funds" to support our new technologies R&D (H2020) and we applied too to DOE (US) funding for innovation.

C3.4a

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

The climate change strategy is fully embedded and integrated in our business strategy and in our business objectives. Regarding objectives, and as part of the revision of our strategy, we published in 2020 (2019 Integrated Report) a new target for 2030, to reduce 35% our net CO2 emissions per cementitious products vs. 1990, together with some other targets for circular economy, renewable energy, water rationale usage, other emissions to air and forestry and biodiversity care (carbon sinks). In June 2021, we announced a more ambitious target for 2025, when we are expecting to achieve our former 2030 target, so to reduce 35% our net CO2 emissions, and a more ambitious target for 2030 to reduce our net emissions per cementitious product a 40% vs. 1990.

The process to integrate the climate-related risk and opportunities into our business strategy and financial planning:

i. PROCESS

The Corporate Director Sustainability is responsible for coordinating the process of developing and updating the company's Climate Change strategy. The basic strategy was developed based on a thorough analysis of both internal (e.g. mitigation potential) and external (e.g. regulatory developments and market trends) circumstances, and it is revisited for a potential update every quarter. By the developing of a cement site-by-site roadmap to identify all CO2 reduction initiatives for each site, regardless of a carbon regulation in place we reinforced this strategy. All CEMEX operations and key corporate VPs are represented in this process.

Additionally, in 2020 we put in place the "CO2 Taskforce", a multidisciplinary group monitoring and selecting those capture technologies where CEMEX wants to focus and invest. This group is meeting in a monthly basis to track all ongoing projects and opportunities. All the outcomes of this climate change strategy revision are discussed with the ExCo and the Sustainability Committee (Board Level).

ii. MAIN ASPECTS OF CLIMATE CHANGE

The predominant aspects are regulation triggered by climate change policies, e.g. carbon taxes or cap and trade, and our voluntary carbon target. However, other aspects such as reputation and consumer behaviour have an increasing importance, particularly for identifying and seizing opportunities.

iii. SHORT-TERM STRATEGY

Particularly the regulatory risks have triggered additional efforts to improve our carbon balance by:

- Technical measures (increased use of AF, particularly biomass; upgrade inefficient kilns; increased use of clinker substitutes)
- Development of offset projects, particularly in our electricity supply chain, and sourcing low-carbon electricity and green fleet vehicles
- Organizational measures such as awareness raising, monitoring and reporting of emissions, application of carbon footprint tool

iv. LONG-TERM STRATEGY

In our long-term strategy the following elements are directly related to climate change; even more than the short-term strategic impacts they are driven by several opportunities:

- Commitment to an emissions reduction goal and subsequently other goals to support this commitment (e.g. percentage of alternative fuels)

- Increased focus on the life-cycle emissions of our products: To minimize the GHG emissions from the built environment one has to do an integrated assessment of emissions over the full life cycle of buildings and structures
- Other efforts in this field include: Communication of the life-cycle advantages of our products / Development of new value-added products / Promotion of energy efficiency to local communities, customers, and vendors / Sponsorship of contests to promote sustainable and innovative building designs, such as the annual CEMEX Building Awards in the U.S.

v. STRATEGIC ADVANTAGE

The short-term measures create a direct and measurable impact; reductions in EU countries or in offset projects translate directly into cost advantages and/or additional revenues. Our focus on life-cycle emissions allows us to offer products with superior value for our clients and to communicate this advantage in the marketplace. In addition to those advantages that are directly related to climate change many of the actions have positive side benefits such as a stabilization of our energy costs.

vi. BUSINESS DECISIONS

Some of the key decisions include:
- In 2020 we launched Vertua ® to the market, a low carbon concrete range of products reducing CO2 footprint up to 70% compared to a standard structural concrete. This new product, unique in our sector, has been obtained thanks to the effort of our R&D department.
- Development of a proprietary "Carbon Footprint methodology and tool" for our main businesses (cement, aggregates, and ready-mix concrete) the results of which are regularly communicated to our stakeholders. The tool is being revamped in 2021 to adapt it to the new standards (ISO14067 and EN15804). Using this tool, we can provide on demand to our customers the CO2 footprint of each one of the products we supply to them, as we do now with Vertua concrete.
- We believe that making the transition from waste management to circular economy is essential to reach a truly sustainable, low-carbon, resource-efficient, and competitive economy. That is why in 2020 we reached an alternative fuels substitution rate of 25.3%.
- In each of the last years several decisions to invest in energy efficiency, renewable energy, clinker substitutes, or alternative fuels have been triggered by our Climate Change strategy and our voluntary goal to reduce emissions. To reinforce this commitment, in 2018 we set a new target for 2030 to reach a level of 40% of power consumption coming from renewable sources in our cement operations and we are revisiting this ambition in 2021.
- Climate Change plays and increasingly important role in the selection of suppliers, particularly for electrical energy. Again, to reinforce this commitment, we continue working with Supplier Sustainability Program for critical suppliers, by setting a new internal target to measure the share of spend assessed under this program.
- CEMEX also provides different Green Building Certification Services, like ecoperating building certification, urban development consultancy, green building certification, bioclimatic architecture, energy efficient engineering together with sustainable materials and solutions development. During 2020, we provided 4.9 million m2

C4. Targets and performance

C4.1

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

Intensity target

C4.1b

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

Target reference number

Int 1

Year target was set

2018

Target coverage

Business division

Scope(s) (or Scope 3 category)

Scope 1+2 (market-based)

Location-based is also monitored

Intensity metric

Metric tons CO2e per metric ton of product

Base year

1990

Intensity figure in base year (metric tons CO2e per unit of activity)

0.867

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure

99

Target year

2030

Targeted reduction from base year (%)

35

Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]

0.56355

% change anticipated in absolute Scope 1+2 emissions

-12

% change anticipated in absolute Scope 3 emissions

0

Intensity figure in reporting year (metric tons CO2e per unit of activity)

0.678

% of target achieved [auto-calculated]

62.2837370242

Target status in reporting year

Underway

Is this a science-based target?

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

Target ambition

2°C aligned

Please explain (including target coverage)

Target covers emissions for cement division, but cement operations' emissions represented a 98.8% of our combined Scope 1+2 emissions in 2020 (%coverage 2020 = 98.8%).

Latest calculations indicate that reductions in specific emissions will offset growth in demand for our products.

We consider this a SBT as we have verified the alignment to the 2DS with Carbon Trust, and they confirmed not just that we are aligned to the 2DS pathway, but also that we have in place the correct governance and technology robustness to accomplish our ambition.

Target reference number

Int 2

Year target was set

2020

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (market-based)

Intensity metric

Metric tons CO2e per metric ton of product

Base year

2020

Intensity figure in base year (metric tons CO2e per unit of activity)

0.7167759

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure

98.81

Target year

2030

Targeted reduction from base year (%)

22.1

Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]

0.5583684261

% change anticipated in absolute Scope 1+2 emissions

-17.92

% change anticipated in absolute Scope 3 emissions

0

Intensity figure in reporting year (metric tons CO2e per unit of activity)

0.7167759

% of target achieved [auto-calculated]

0

Target status in reporting year

New

Is this a science-based target?

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

Target ambition

Well-below 2°C aligned

Please explain (including target coverage)

This new target was set in late 2020 to be submitted for validation to the SBTi initiative in 2021 (we are now in the process but it is not yet approved). Main differences with our Row 1 (Int 1) KPI are:
1. On-site power generation is included in S1 as requested by SBTi
2. Excludes Buñol W Operation as it was divested (announced in 2020 and finally executed in 2021) and according to SBTi guidelines, we have to adjust the target to our current portfolio
3. Emissions are expressed in gross (excluding biogenic emissions, but reported within the boundaries of the target) instead of net
This new target will facilitate the follow up of our new company-wide target in line with the SBTi target setting criteria and will coexists with the Int 1 target until the new target is approved by SBTi. The new target proposed is aligned with the Well-below 2ºC Scenario.
Target coverage: NOTE that SBTi allows to exclude up to 5% of our S1+S2 emissions, that is why target coverage is less than 100.0, although the target is company-wide. The target coverage is equivalent to exclude the emissions in aggregates, ready-mix and asphalts in UK, to align the denominator of the intensity target to the denominator considered in the Sectorial Decarbonization Approach methodology and after having confirmed with SBTi the validity of this approach.

C4.2

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

Target(s) to increase low-carbon energy consumption or production
Net-zero target(s)
Other climate-related target(s)

C4.2a

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

Target reference number

Low 1

Year target was set

2018

Target coverage

Business division

Target type: absolute or intensity

Intensity

Target type: energy carrier

Electricity

Target type: activity

Consumption

Target type: energy source

Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)

Percentage

Target denominator (intensity targets only)

megawatt hour (MWh)

Base year

2018

Figure or percentage in base year

26

Target year

2030

Figure or percentage in target year

40

Figure or percentage in reporting year

29

% of target achieved [auto-calculated]

21.4285714286

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes, the consumption of energy from renewable sources decrease the company's CO2 indirect emissions.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

Amount of power consumed from renewable energy in cement plants (in kWh). KPI Numerator: Amount of power consumed from renewable energy in cement plants (in kWh). Denominator: Total power consumption in cement plants (in kWh). Target covers all our cement operations worldwide. 2030 Target: 40%; 2020: 29%

The consumption of energy from renewable sources decrease the company's CO2 indirect emissions.

C4.2b

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

Target reference number

Oth 1

Year target was set

2018

Target coverage

Business division

Target type: absolute or intensity

Absolute

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

Waste management

Other, please specify

Total consumption of waste-derived sources from other industries (million ton)

Target denominator (intensity targets only)

Base year

2018

Figure or percentage in base year

13,230,000

Target year

2030

Figure or percentage in target year

19,000,000

Figure or percentage in reporting year

12,400,000

% of target achieved [auto-calculated]

-14.3847487002

Target status in reporting year

Underway

Is this target part of an emissions target?

This is part of our emissions intensity target to reduce our kgCO2 emissions per ton of cementitious product a 35% vs. 1990 for cement, but it also consider the waste-derived sources from other industries consumed in our concrete division

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

The scope is the cement and concrete division and it aims to increase our consumption of waste-derived sources from other industries in absolute value; it includes alternative fuels and cementitious materials consumed in cement and concrete as well as alternative raw materials consumed in raw meal (raw material to produce clinker)

Target reference number

Oth 2

Year target was set

2018

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

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

Land use change

Other, please specify

% active quarries with quarry rehabilitation plans, Biodiversity Action Plans (BAPs), and third party certification (% active target quarries for each KPI)

Target denominator (intensity targets only)

Other, please specify

Total number of active quarries in the scope of rehabilitation plans, BAPs and 3th party verification

Base year

2018

Figure or percentage in base year

65

Target year

2030

Figure or percentage in target year

100

Figure or percentage in reporting year

77

% of target achieved [auto-calculated]

34.2857142857

Target status in reporting year

Underway

Is this target part of an emissions target?

It is indirectly related as we are planning to account for all the emissions balance with our habitat restoration activities vs. disturbed land (hectareas)

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

The quarries targeted are all owned or controlled active quarries in the company (cement and aggregates). We are planning to implement a restoration/rehabilitation plan in 100% of our active quarries, a Biodiversity Action Plan in all quarries overlapped with high biodiversity value areas and a 3rd party verification in those quarries not overlapped with high biodiversity value areas and with a social or economic impact.

Target reference number

Oth 3

Year target was set

2018

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

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

Engagement with suppliers

Other, please specify

Sustainability assessment executed by an independent party for our critical suppliers (% spend)

Target denominator (intensity targets only)

Other, please specify

% critical suppliers' spend

Base year

2018

Figure or percentage in base year

44

Target year

2030

Figure or percentage in target year

80

Figure or percentage in reporting year

63

% of target achieved [auto-calculated]

52.7777777778

Target status in reporting year

Underway

Is this target part of an emissions target?

It is indirectly related

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

Since 2010, we have been rolling out CEMEX Supplier Sustainability Program, an effort that extends our commitment to sustainable practices and policies to our business partners through an evaluation executed by a specialized independent firm, including criteria such as Health & Safety, Community Relations, Human Rights, Employee Development and Diversity, and Environmental Compliance (including climate-related topics), among others. As part of our Sustainability 2030 Ambitions, we have decided to refine our former supplier assessment focus and our new plan is to assess at least 80% of the critical suppliers spend under our company's global procurement scope. By critical we refer to those business partners who can have significant impact on our three core businesses (cement, ready-mix concrete, and aggregates). Specifically,

this involves those who could affect the continuity of our operations, involve environmental risks, and/or contribute the highest spend. At year end we have evaluated 63% of the total procurement spend.

Target reference number

Oth 4

Year target was set

2018

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

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

Other, please specify

Other, please specify

Annual sales from cement and ready-mix concrete products with outstanding sustainable attributes (%)

Target denominator (intensity targets only)

Other, please specify

Total annual sales from cement and ready-mix concrete products (it is a %, not strictly an intensity but it has a denominator to build the percentage)

Base year

2018

Figure or percentage in base year

43

Target year

2030

Figure or percentage in target year

50.1

Figure or percentage in reporting year

53

% of target achieved [auto-calculated]

140.8450704225

Target status in reporting year

Achieved

Is this target part of an emissions target?

Yes, it is directly related to our scope 1 emissions reduction as it includes all low carbon products being developed and marketed.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

Target monitors for our cement and ready-mix businesses the % of annual sales with products with outstanding sustainable attributes

C4.2c

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

Target reference number

NZ1

Target coverage

Business division

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

Int1

Target year for achieving net zero

2050

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

Please explain (including target coverage)

In 2020 we set a new target to deliver Net-Zero CO2 concrete by 2050 to all our customers in a cradle to customer gate approach, so including all S1+S2+S3 emisssissions. We also participated in the public consultation of Net-Zero target setting launched by SBTi in early 2021 and we are following closely the developments in this field to engage as soon as the methodology is defined. We are also exploring to sign the Race to Zero commitment.

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	50	893,675

To be implemented*	18	433,712
Implementation commenced*	67	1,323,055
Implemented*	35	615,888
Not to be implemented		

C4.3b

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

Initiative category & Initiative type

Energy efficiency in production processes

Fuel switch

Estimated annual CO2e savings (metric tonnes CO2e)

363,559

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

2,331,000

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

6,527,000

Payback period

1-3 years

Estimated lifetime of the initiative

Ongoing

Comment

Fuel Switch: Alternative Fuel projects to increase percentage of substitution by displacing primary fossil fuels. Alternative fuels in our kilns to reduce scope 1 emissions. 19 new projects were completed along 2020 (5 in Spain to increase AF and reduce AF moisture, 1 in Caribbean, 1 in Panamá, 1 in Costa Rica for tire consumption, 1 in Germany, 2 in Poland and 5 projects in 3 different locations in Mexico). The shown figures represent annual savings.

Initiative category & Initiative type

Energy efficiency in production processes
Fuel switch

Estimated annual CO2e savings (metric tonnes CO2e)

185,687

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

4,948,000

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

10,391,000

Payback period

1-3 years

Estimated lifetime of the initiative

Ongoing

Comment

Hydrogen injection in all kilns in Europe and 1 unit in Egypt; along 2021 the initiative is extended to other geographies, like USA, Mexico and SCAC. The figure represent annualized savings

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Initiative category & Initiative type

Energy efficiency in production processes

Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

34,435

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

767,000

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

2,301,000

Payback period

4-10 years

Estimated lifetime of the initiative

Ongoing

Comment

4 thermal efficiency initiatives were implemented in 2020: 1 in Caribbean and 1 in Dominicana to improve specific kiln heat consumption by improving kiln efficiency, 1 in Nicaragua to recover Clinker Kiln Dust as raw material for raw meal, and 1 in Spain to reduce heat consumption by changing the raw meal composition (novel clinker). Figures are annual savings

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Initiative category & Initiative type

Energy efficiency in production processes
Product or service design

Estimated annual CO2e savings (metric tonnes CO2e)

32,207

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

403,000

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

685,000

Payback period

1-3 years

Estimated lifetime of the initiative

Ongoing

Comment

2 initiatives to reduce the clinker content in cement by displacing it with cementitious implemented in 2020: 1 in South-Central America to use sugar cane ash as cementitious and one in Poland to increase fly ash consumption. Figures are annual basis

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	This includes compliance with emissions trading schemes such as the EU ETS
Financial optimization calculations	These integrate the price of carbon induced by emissions trading schemes and offset programs.
Other Best practice sharing	Best practice sharing: CEMEX shares the success stories in the official meetings, Meeting Sustainability Regional Coordinations, Environmental Experts meetings, CO2 Taskforce meeting and CEMEX business units share success stories via intranet tools (teams platform). In 2020 we started a competition to evaluate environmental and climate related best practices and we recognized those projects with the highest innovation component, possibility of replication and impact.
Partnering with governments on technology development	CEMEX constantly participates in a number of R+D projects that are partly funded by governments, mainly EU funding (H2020 and others) and DOE funding (USA); many of these projects are related to emission reduction technologies.
Internal incentives/recognition programs	CEMEX sets targets not only for emission intensity, but also for individual key levers such as the percentage of low-carbon alternative fuels in our overall fuel portfolio and those targets are linked to the variable compensation. Additionally, we created in 2018 a recognition mechanism, recognizing two categories in the sustainability KPI: the best mover (best improvement) and the champion in each category (including climate change related targets (specific emissions per ton of cementitious, %AF, %clinker factor...))
Dedicated budget for low-carbon product R&D	There is a specific budget dedicated for low-carbon-products R&D or energy efficient products assigned to our Global R&D Center in Switzerland

Internal price on carbon	Starting in late 2020, we designed a mechanism to include the CO2 cost not only in our investment decisions, but also in any operational daily decision, as a CO2 price has been set for all geographies, regardless of whether a regulation on carbon in place. The price applied for the non-regulated countries (all but Europe and California) is 18 USD/CO2 ton (reference: carbon floor in California), and for Europe the Best estimate of the EU ETS (25 EUR/t in 2020 and 47 EUR/t in 2021). A price forecast is done for each geography for the next 10 years, but it is updated on a yearly basis. The performace of each operation is compared to its yearly target and the benefit or loss is reflected in its EBITDA. During 2021 we are calculating the impact for information purposes, but from 1st of January 2022, it will impact each operation results (EBITDA)
Marginal abatement cost curve	Starting in early 2021, all the investments decisions are made based on its abatement curve. All countries present to the Exco in a monthly basis their abatement curve for all the projects to be executed in the current year and in the following year.

C4.5

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

Yes

C4.5a

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

Level of aggregation

Group of products

Description of product/Group of products

In 2020 we launched to the European market (UK, Germany and France, and extended to other geographies in 2021) a new range of concrete products called Vertua ®. Vertua Ultra Zero ® reduce the CO2 footprint (cradle to customer gate) at least a 70% compared to a baseline concrete (Type I cement standard concrete), and the remaining emissions are compensated by acquiring offsets and we provide to the customer a “Carbon Neutral Product” Certificate. Vertua Classic and Vertua plus reduce the emissions at least 30% and 50% compared to the same baseline concrete, and there is an option for the customer to compensate the remaining emissions and being provided with a Carbon Neutral Product certificate. In Europe we work with NCP (Natural Capital Partners) to provide the offsets and the “Carbon Neutral Product” certificate. In 2021 we extended the Vertua trademark to other products like cement and asphalts.

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

Low-carbon product and avoided emissions

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

Other, please specify

The CarbonNeutral Protocol - Natural Capital Partners

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

2

Comment

The revenue is still low as we are still rolling out this Vertua range of concrete products into the different markets

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Level of aggregation

Company-wide

Description of product/Group of products

Our main products, cement and concrete, are absolutely indispensable for the transformation to a low-carbon society. The sectors where intelligent use of our products enables improvements in the CO2 intensity range from residential (new, more efficient buildings, use of concrete’s thermal mass and inherent long-term air tightness) to transport (rigid road surfaces, railway lines) to energy generation (foundations, towers, buildings for renewable energy systems such as wind turbines or solar power plants). Whether these emission reductions are in scopes 1, 2 or 3 of the third party depends on the circumstances. For example, if a building generates its own heat and/or cold, the energy savings would lead to

emission reductions in scope 1 of the building operator; if the building gets heat and cold from a local network the reductions would be in scope 2. CEMEX relies mostly on the tool of Life-Cycle Assessment (LCA) in order to determine net savings related to the use of our products; we both perform in-house analyses and analyze external studies (e.g. recent studies published by the Concrete Sustainability Hub (CSHub) at the Massachusetts Institute of Technology, http://web.mit.edu/cshub/); if applicable, GWPs used are those as reported by the IPCC for a 100 year horizon. The potential for reduction and the timescales are highly dependent on the application, design, and local circumstances; however, first internal estimates show that the time in which those reductions offset the initial emissions from the production of our products is typically well below the lifetime of the relevant buildings and structures. While we currently do not have detailed figures for total emission reductions due to the use of our products, we estimate that the products we sell in one year generate direct savings of at least several million years over the full lifetime of the structures (which is typically several decades). In addition, we include here cementitious products that fulfil certain minimum requirements in terms of CO2-related indicators.

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

Low-carbon product and avoided emissions

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

The EU Taxonomy for environmentally sustainable economic activities

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

53

Comment

CEMEX is working with other members of the Cement Sustainability Initiative, now an effort belonging to the Global Cement and Concrete Association, on a methodology that will allow us to quantify the downstream impacts of our products in a consistent way. We roughly estimate that at least 50% of our product sales lead to emission reductions in the in-use phase compared to potential substitutes. R&D expenses refer to product development, not process development.

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	94
Pre-calciner	60

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, 1990

Base year end

December 31, 1990

Base year emissions (metric tons CO2e)

41,850,890

Comment

Adjusted for recent divestments. Please note this covers only our cement operations as no data available for other business lines in 1990 (in 2020 these represented less than 1% of total scope 1 emissions)

Scope 2 (location-based)

Base year start

January 1, 1990

Base year end

December 31, 1990

Base year emissions (metric tons CO2e)

3,454,059

Comment

Adjusted for recent divestments. Please note this covers only our cement operations as no data available for other business lines in 1990 (in 2020 these represented less than 10% of total scope 2 emissions)

Scope 2 (market-based)

Base year start

January 1, 1990

Base year end

December 31, 1990

Base year emissions (metric tons CO2e)

3,454,059

Comment

Adjusted for recent divestments. Please note this covers only our cement operations as no data available for other business lines in 1990 (in 2020 these represented less than 10% of total scope 2 emissions)
Location- and market-based scope 2 emissions in the base year are the same because at the time there was practically no choice of options.

C5.2

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

WBCSD: The Cement CO2 and Energy Protocol
Other, please specify
Internal tools, see C5.2a

C5.2a

(C5.2a) Provide details of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

For ready-mix & aggregates operations, data for scope 1 and 2 have been extrapolated from data collected with the CEMEX CO2 footprint methodology from 2013 taking the production volume from 2019; this methodology assesses the total GHG footprint on a cradle-to-gate basis and is in compliance with most currently available standards for carbon footprints (PAS 2050, ISO 14040).

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)

37,489,660.1

Comment

C6.2

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

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

C6.3

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

Reporting year

Scope 2, location-based

3,488,211

Scope 2, market-based (if applicable)

3,436,595.3

Comment

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

Building Product Operations

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

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

Emissions are not relevant

Explain why this source is excluded

Very small emissions compared to other business lines

Source

Offices

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

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

Emissions are not relevant

Explain why this source is excluded

Very small emissions compared to plant operations

Source

Logistics Operations

Relevance of Scope 1 emissions from this source

No emissions excluded

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

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

Emissions are not relevant

Explain why this source is excluded

Emissions from logistics are included in scope 3 due to 1. their relatively small amount (compared to kiln operations) and 2. methodological issues (separating own fleet from third party transportation would be extremely data-intensive). This is in line with WBCSD-CSI guidance on scope 3 emissions in the cement sector.

C6.5

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

Purchased goods and services

Evaluation status

Relevant, calculated

Metric tonnes CO2e

5,052,651

Emissions calculation methodology

Purchases of clinker and cement from third parties are multiplied with generic emission factors from GNR (Getting the Numbers Right) Database.

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

100

Please explain

Capital goods

Evaluation status

Not relevant, explanation provided

Please explain

Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (sector-specific Scope 3 guidance).

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

Evaluation status

Relevant, calculated

Metric tonnes CO2e

1,955,447.1

Emissions calculation methodology

Calculated based on detailed energy consumption figures (taken from the protocol for Scope 1+2 emissions for cement, and from other internal data management systems for other businesses) and emission factors for cradle-to-gate GHG emissions from LCA database.

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

100

Please explain

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

1,689,144.9

Emissions calculation methodology

Calculated from data collected with the CEMEX CO2 Footprint methodology from 2013 taking the production volume from 2020; this methodology assesses the total GHG footprint on a cradle to gate basis and is in compliance with most currently available standards for carbon footprints. Scope is restricted to relevant purchased goods and services (normally purchased clinker and cement).

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

Please explain

Waste generated in operations

Evaluation status

Not relevant, explanation provided

Please explain

Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (sector-specific Scope 3 guidance).

Business travel

Evaluation status

Not relevant, explanation provided

Please explain

Determined as optional in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development; however, previous calculations in CEMEX show that business travel is not relevant for us.

Employee commuting

Evaluation status

Not relevant, explanation provided

Please explain

Determined as optional in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development; however, internal analyses show that emissions from employee commuting are likely to be in the range of 0.1% of our combined scope 1 and scope 2 emissions.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (sector-specific Scope 3 guidance).

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

1,655,556.9

Emissions calculation methodology

Seaborne transportation of clinker and cement by our trading operations, based on total distance traveled and assessment of specific fuel consumption.
Emissions from maritime transport of products are calculated by multiplying total fuel oil consumption with the corresponding emission factor. Where fuel oil consumption is not available this is estimated by extrapolating from existing data for similar vessels (i.e. vessels of similar size).
Land transportation of cement and aggregates was calculated using a rate of g CO2/t-km multiplied by the volume distributed and round trip distances.
Concrete distribution was calculated by multiplying total fuel consumption with the corresponding emission factor.

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

100

Please explain

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (sector-specific Scope 3 guidance).

Use of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Use of sold products is impossible to track, and there is no generally accepted methodology yet for calculating associated emissions. For the purpose of reporting we consider those emissions not relevant; however, we are aware of the potentially positive impact that the use of our

products has (see also C4.5). Besides, this category is determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (sector-specific Scope 3 guidance).

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (sector-specific Scope 3 guidance).

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (sector-specific Scope 3 guidance).

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (sector-specific Scope 3 guidance).

Investments

Evaluation status

Not relevant, explanation provided

Please explain

Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (sector-specific Scope 3 guidance).

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (sector-specific Scope 3 guidance).

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (sector-specific Scope 3 guidance).

C6.7

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

Yes

C6.7a

(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	1,732,997	

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

0.0032

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

40,926,255

Metric denominator

unit total revenue

Metric denominator: Unit total

12,970,000,000

Scope 2 figure used

Market-based

% change from previous year

2.61

Direction of change

Decreased

Reason for change

Reduction is due to: Divestment of Louisville plant (USA) in 2020 and several emissions reduction activities as for exaple: AF increase in Spain, Caribbean, Germany and Czech Republic, clinker factor initiatives in Dominicana and Poland and low intensity clinker production in two facilities in Spain.

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	0.858	0.808	0.076
Cement equivalent	0.667	0.628	0.059
Cementitious products	0.658	0.62	0.058
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?

No

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Americas	24,706,758
Asia, Australasia, Middle East and Africa	2,452,822
Europe	1,416,107
United Kingdom of Great Britain and Northern Ireland	1,120,190
Spain	2,261,320
Poland	1,484,115
Germany	1,296,129
Philippines	2,752,218

C7.3

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

By business division

By activity

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
CEMEX LatAm Holdings, S.A. ('CLH')	2,972,932
CEMEX Holdings Philippines, Inc. ('CHP')	2,752,218
Rest of CEMEX	31,764,510

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Cement	37,205,075.4
Aggregates	134,391.2
Concrete and asphalt	150,193.4

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

(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	37,205,075.4	34,933,800.3	

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)
Americas	2,151,764	2,372,458	4,755,051	1,282,462.2
Germany	157,639	117,693	262,386.1	98,063.6
United Kingdom of Great Britain and Northern Ireland	73,787	12,356	230,970.8	230,970.8
Philippines	278,765	383,251	403,422.3	12,220.5

Other, please specify Rest of World	826,257	550,837	1,599,408.6	445,540.3

C7.6

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

By business division

By activity

C7.6a

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

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
CEMEX LatAm Holdings, S.A. ('CLH')	93,914.6	64,304
CEMEX Holdings Philippines, Inc. ('CHP')	278,764.8	383,251
Rest of CEMEX	3,115,531.6	2,989,040

C7.6c

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

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Cement	3,289,308.6	3,237,692.9
Aggregates	150,551.6	150,551.6
Concrete and asphalt	48,350.9	48,350.9

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	3,289,308.6	3,237,692.9	

C7.9

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

Decreased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	114,033	Decreased	0.27	To avoid double accounting divestment are excluded in this calculations (reported in line "divestments") and also changes in production volumes are excluded, as they are reported in the line "change in output". Renewable energy consumption decreased in cement due to Poland new 100% renewable power contract in 2020 (-202 ktons CO2) although we had an increase in the emission factor mainly in Philippines due to a increase in consumption from Limay Coal-Fired plant (950 kgCO2/MWh), which has a higher emission factor than

				Sual (844 kgCO2/MWh). The increase of Philippines and other minor grid intensity increases mean and increase of 88,703 tons of CO2. Electricity performance remains almost constant year over year. Calculation (in %): Variation (114,033 CO2 tons) / Total Emissions scope1+2 in 2019 (42,540,232) * 100
Other emissions reduction activities	554,299	Decreased	1.3	Emissions reduction calculation includes the ongoing projects which implementation started along 2019 and impacting in reductions in 2020 emissions (not fully implemented in 2019) + implemented projects in 2020 savings (real amounts from the implementation real date). Projects included are AF increase in Spain, Caribbean, Germany and Czech Republic, clinker factor initiatives in Dominicana and Poland and low intensity clinker production in two facilities in Spain. To avoid double accounting divestment is excluded in the calculations (as they are reported in line "divestments") as well as production variation, as it is included in the line "change in outputs". Calculation (in %): Variation (554,299 CO2 tons) / Total Emissions scope1+2 in 2019 (42,540,232) *100
Divestment	1,151,988	Decreased	2.71	Divestment in 2020 of the cement operation in Lousville-USA (it does not affect to concrete and aggregates businesses) reducing our scope 1 and scope 2 emissions. Lousville Scope 1+2 emissions 2019 = 1,151,988 tons of CO2. Calculation (in %): Variation (1,151,988 CO2 tons) / Total Emissions scope 1+scope 2 in 2019 (42,540,232)*100%
Acquisitions				
Mergers				
Change in output	182,526	Increased	0.43	Excluding Lousville (reported in "divestments"), production of cement increased by 0.8% in 2020 vs. 2019 (although clinker production declined -1.6%), meaning a increase in Scope 1+2 emissions of 225,478 tons of CO2. Additionally, concrete and aggregates production declined by 5.0% impacting also in the reduction of scope1+scope2 reducing emissions 42,952 tons of CO2.

				Calculation (in %): Variation (182,526 CO2 kton) / Total Emissions scope1+2 in 2019 (42,540,232) * 100
Change in methodology	75,507	Increased	0.18	The reporting methodology has been adapted to the GHG scope 2 hierarchy to report our market-based emissions more accurately from 2020 on. Main variations are included here: Spain reporting grid intensity in 2019 instead of residual mix in 2020 - effect increase of +53,230 tons of CO2 vs. 2019. Additionally Mexico was reporting Tuli and Helios solar generation as renewable (low carbon electricity) in 2019, but in 2020 these consumptions have been excluded since the unbundled clean energy certificates (CELs) are not bought, so these facilities are now not being reported as low-carbon electricity, although its generation is renewable (effect +22,277 tons of CO2 vs. 2019). Calculation (in %): Variation (75,507 tons of CO2) / Total Emissions scope1+2 in 2019 (42,540,232) * 100
Change in boundary				
Change in physical operating conditions				
Unidentified				
Other				

C7.9b

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

Market-based

C8. Energy

C8.1

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

More than 30% but less than or equal to 35%

C8.2

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

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

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	5,216,558	45,081,061	50,297,619

Consumption of purchased or acquired electricity		2,069,257	5,181,982	7,251,239
Consumption of self-generated non-fuel renewable energy		45,332		45,332
Total energy consumption		7,331,147	50,263,043	57,594,190

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)	LHV (lower heating value)	49,183,640
Consumption of purchased or acquired electricity		6,719,699.2
Total energy consumption		55,903,339.2

C8.2b

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

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	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)

Petroleum Coke

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

24,620,810

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

24,620,810

Emission factor

92.8

Unit

kg CO2 per GJ

Emissions factor source

Average emission factor for all petroleum coke used in our cement kilns according to the WBCSD CO2 protocol. Emission factors at plant level can be default factors (provided by the protocol, based on IPCC values and data from GCCA members) or plant-specific factors from sampling and testing of fuels.

Comment

Fuels (excluding feedstocks)

Bituminous Coal

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

8,053,401

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

8,053,401

Emission factor

95.4

Unit

kg CO2 per GJ

Emissions factor source

Average emission factor for all bituminous coals in our cement kilns according to the WBCSD CO2 protocol. Emission factors at plant level can be default factors (provided by the protocol, based on IPCC values) or plant-specific factors from sampling and testing of fuels.

Comment

Fuels (excluding feedstocks)

Lignite Coal

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

131,090

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

131,090

Emission factor

Unit

kg CO2 per GJ

Emissions factor source

Average emission factor for all lignite used in our cement kilns according to the WBCSD CO2 protocol. Emission factors at plant level can be default factors (provided by the protocol, based on IPCC values) or plant-specific factors from sampling and testing of fuels.

Comment

Please note that most of the lignite used in our kilns is provided as pulverized lignite that has lower CO2 emission factors than unprocessed lignite.

Fuels (excluding feedstocks)

Natural Gas

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

3,402,731

MWh fuel consumed for self-generation of electricity

408,344

MWh fuel consumed for self-generation of heat

2,994,387

Emission factor

56.1

Unit

kg CO2 per GJ

Emissions factor source

Average emission factor for all natural gas used in our cement kilns according to the WBCSD CO2 protocol. Emission factors at plant level can be default factors (provided by the protocol, based on IPCC values) or plant-specific factors from sampling and testing of fuels.

Comment

Fuels (excluding feedstocks)

Diesel

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

1,424,584

MWh fuel consumed for self-generation of electricity

23,402

MWh fuel consumed for self-generation of heat

1,401,182

Emission factor

74.4

Unit

kg CO2 per GJ

Emissions factor source

Average emission factor for all diesel used in our cement kilns according to the WBCSD CO2 protocol. Emission factors at plant level can be default factors (provided by the protocol, based on IPCC values) or plant-specific factors from sampling and testing of fuels.

Comment

Fuels (excluding feedstocks)

Alternative Kiln Fuel (Wastes)

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

12,286,664

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

12,286,664

Emission factor

48.9

Unit

kg CO2 per GJ

Emissions factor source

Average emission factor for all alternative fuels in our cement kilns according to the WBCSD CO2 protocol. Emission factors at plant level can be default factors (provided by the protocol, based on input from CSI member companies) or plant-specific factors from sampling and testing of fuels.

Comment

Fuels (excluding feedstocks)

Other, please specify

Gasoline and others

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

34,071

MWh fuel consumed for self-generation of electricity

7,129

MWh fuel consumed for self-generation of heat

26,942

Emission factor

65.9

Unit

kg CO2 per GJ

Emissions factor source

Average emission factor for all fuels reported as 'gasoline and others' used in our cement kilns according to the WBCSD CO2 protocol. Emission factors at plant level can be default factors (provided by the protocol, based on IPCC values) or plant-specific factors from sampling and testing of fuels.

Comment

Fuels (excluding feedstocks)

Fuel Oil Number 6

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

344,269

MWh fuel consumed for self-generation of electricity

68,824

MWh fuel consumed for self-generation of heat

275,445

Emission factor

77.7

Unit

kg CO2 per GJ

Emissions factor source

Average emission factor for all fuel oil number 6 used in our cement kilns according to the WBCSD CO2 protocol. Emission factors at plant level can be default factors (provided by the protocol, based on IPCC values) or plant-specific factors from sampling and testing of fuels.

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)

Petroleum Coke

Heating value

LHV

Total MWh fuel consumed for cement production activities

24,620,810

MWh fuel consumed at the kiln

24,620,810

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

0

MWh fuel consumed for the self-generation of electricity

0

Fuels (excluding feedstocks)

Bituminous Coal

Heating value

LHV

Total MWh fuel consumed for cement production activities

8,053,401

MWh fuel consumed at the kiln

7,974,425

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

78,976

MWh fuel consumed for the self-generation of electricity

0

Fuels (excluding feedstocks)

Lignite Coal

Heating value

LHV

Total MWh fuel consumed for cement production activities

131,090

MWh fuel consumed at the kiln

131,090

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

0

MWh fuel consumed for the self-generation of electricity

0

Fuels (excluding feedstocks)

Natural Gas

Heating value

LHV

Total MWh fuel consumed for cement production activities

3,402,731

MWh fuel consumed at the kiln

2,974,834

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

19,553

MWh fuel consumed for the self-generation of electricity

408,344

Fuels (excluding feedstocks)

Diesel

Heating value

LHV

Total MWh fuel consumed for cement production activities

310,605

MWh fuel consumed at the kiln

79,798

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

207,405

MWh fuel consumed for the self-generation of electricity

23,402

Fuels (excluding feedstocks)

Alternative Kiln Fuel (Wastes)

Heating value

LHV

Total MWh fuel consumed for cement production activities

12,286,664

MWh fuel consumed at the kiln

12,286,664

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

0

MWh fuel consumed for the self-generation of electricity

0

Fuels (excluding feedstocks)

Other, please specify

Gasoline and others

Heating value

LHV

Total MWh fuel consumed for cement production activities

34,071

MWh fuel consumed at the kiln

0

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

26,942

MWh fuel consumed for the self-generation of electricity

7,129

Fuels (excluding feedstocks)

Fuel Oil Number 6

Heating value

LHV

Total MWh fuel consumed for cement production activities

344,269

MWh fuel consumed at the kiln

250,647

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

24,798

MWh fuel consumed for the self-generation of electricity

68,824

C8.2d

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

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	258,949	224,456	76,171	45,332
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C-CE8.2d

(C-CE8.2d) 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	258,949	224,456
Heat	0	0
Steam	0	0

C8.2e

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

Sourcing method

Power purchase agreement (PPA) with on-site/off-site generator owned by a third party with no grid transfers (direct line)

Low-carbon technology type

Solar

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

Dominican Republic

MWh consumed accounted for at a zero emission factor

2,036

Comment

Solar PV plant in our cement operation in San Pedro, Dominican Republic. All these facilities are hosted but not controlled or operated by the company.

Sourcing method

Power purchase agreement (PPA) with a grid-connected generator with energy attribute certificates

Low-carbon technology type

Wind

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

United States of America

MWh consumed accounted for at a zero emission factor

8,900

Comment

Wind power projects in two of our US plants. All these facilities are hosted but not controlled or operated by the company.

Sourcing method

Power purchase agreement (PPA) with a grid-connected generator with energy attribute certificates

Low-carbon technology type

Other, please specify

Hydropower + Biomass (bagasse)

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

Colombia

MWh consumed accounted for at a zero emission factor

145,555.9

Comment

PPA to provide 100% renewable energy to our operations in Colombia Hydropower (114,172 MWh) and Biomass power (bagasse) (26,930 MWh)

Sourcing method

Power purchase agreement (PPA) with a grid-connected generator with energy attribute certificates

Low-carbon technology type

Hydropower

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

Panama

MWh consumed accounted for at a zero emission factor

55,337

Comment

PPA to provide 100% renewable energy to our operations in Panamá (full plant's supply and Readymix business)

Sourcing method

Power purchase agreement (PPA) with a grid-connected generator with energy attribute certificates

Low-carbon technology type

Wind

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

Mexico

MWh consumed accounted for at a zero emission factor

399,125

Comment

PPAs with wind power plants in Mexico (EURUS, Ventika I and II).

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

United Kingdom of Great Britain and Northern Ireland

MWh consumed accounted for at a zero emission factor

230,971

Comment

UK Power supply 100% renewable. PPA signed with ENGIE in August 2018 for UK Operations. Consuming 100% renewable electricity in over 320 of our sites in the UK in 2020. All supplies are REGO backed (Renewable Energy Guarantees of Origin). The reported amount is the total consumption in UK.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

Poland

MWh consumed accounted for at a zero emission factor

297,587

Comment

Poland 100% renewable power supply in 2020 in all sites (cement and concrete). All supplies are REGO backed (Renewable Energy Guarantees of Origin). The reported amount is the total consumption in Poland.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

Croatia

MWh consumed accounted for at a zero emission factor

52,049

Comment

The electricity supplied to our operations have a renewable electricity mix indicated by the grid operator/country (residual mix for European Operations) or indicated by the specific supplier.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

Czechia

MWh consumed accounted for at a zero emission factor

24,756

Comment

The electricity supplied to our operations have a renewable electricity mix indicated by the grid operator/country (residual mix for European Operations) or indicated by the specific supplier.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

Egypt

MWh consumed accounted for at a zero emission factor

45,818

Comment

The electricity supplied to our operations have a renewable electricity mix indicated by the grid operator/country (residual mix for European Operations) or indicated by the specific supplier.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

Germany

MWh consumed accounted for at a zero emission factor

101,036

Comment

The electricity supplied to our operations have a renewable electricity mix indicated by the grid operator/country (residual mix for European Operations) or indicated by the specific supplier.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

Philippines

MWh consumed accounted for at a zero emission factor

12,220

Comment

The electricity supplied to our operations have a renewable electricity mix indicated by the grid operator/country (residual mix for European Operations) or indicated by the specific supplier.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

Spain

MWh consumed accounted for at a zero emission factor

20,584

Comment

The electricity supplied to our operations have a renewable electricity mix indicated by the grid operator/country (residual mix for European Operations) or indicated by the specific supplier.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

United Arab Emirates

MWh consumed accounted for at a zero emission factor

1,775

Comment

The electricity supplied to our operations have a renewable electricity mix indicated by the grid operator/country (residual mix for European Operations) or indicated by the specific supplier.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

Mexico

MWh consumed accounted for at a zero emission factor

273,705

Comment

The electricity supplied to our operations have a renewable electricity mix indicated by the grid operator/country (residual mix for European Operations) or indicated by the specific supplier.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

Costa Rica

MWh consumed accounted for at a zero emission factor

74,168

Comment

The electricity supplied to our operations have a renewable electricity mix indicated by the grid operator/country (residual mix for European Operations) or indicated by the specific supplier.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

Dominican Republic

MWh consumed accounted for at a zero emission factor

21,348

Comment

The electricity supplied to our operations have a renewable electricity mix indicated by the grid operator/country (residual mix for European Operations) or indicated by the specific supplier.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

Guatemala

MWh consumed accounted for at a zero emission factor

14,312

Comment

The electricity supplied to our operations have a renewable electricity mix indicated by the grid operator/country (residual mix for European Operations) or indicated by the specific supplier.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

Jamaica

MWh consumed accounted for at a zero emission factor

12,473

Comment

The electricity supplied to our operations have a renewable electricity mix indicated by the grid operator/country (residual mix for European Operations) or indicated by the specific supplier.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

Nicaragua

MWh consumed accounted for at a zero emission factor

29,837

Comment

The electricity supplied to our operations have a renewable electricity mix indicated by the grid operator/country (residual mix for European Operations) or indicated by the specific supplier.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

Puerto Rico

MWh consumed accounted for at a zero emission factor

466

Comment

The electricity supplied to our operations have a renewable electricity mix indicated by the grid operator/country (residual mix for European Operations) or indicated by the specific supplier.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

Trinidad and Tobago

MWh consumed accounted for at a zero emission factor

32

Comment

The electricity supplied to our operations have a renewable electricity mix indicated by the grid operator/country (residual mix for European Operations) or indicated by the specific supplier.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

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

United States of America

MWh consumed accounted for at a zero emission factor

245,167

Comment

The electricity supplied to our operations have a renewable electricity mix indicated by the grid operator/country (residual mix for European Operations) or indicated by the specific supplier.

C9. Additional metrics

C9.1

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

Description

Waste

Metric value

12.4

Metric numerator

Waste-derived consump. Mln t from other industries

Metric denominator (intensity metric only)

Does not apply

% change from previous year

7.46

Direction of change

Decreased

Please explain

Consumption of waste-derived fuels from other industries in million tons.
Monitoring "waste" or sub-products consumption from other industries, like Alternative Fuels and additions to cement (fly ash or GBFS) - We set this as target in 2018 for 2030. Decrease due to less clinker production in 2020

Description

Energy usage

Metric value

29.3

Metric numerator

Power consump. of energy energy in cement (MWh)

Metric denominator (intensity metric only)

Total Power consumption in cement (MWh)

% change from previous year

2.01

Direction of change

Decreased

Please explain

Monitoring the consumption coming from renewable sources, regardless of the origin (self-generation or external sources). This year we decreased our %clean energy due to a change in criteria to report the according the GHG Scope 2 guidelines (Solar generation in Mexico accounted for zero renewable as we do not own the Renewable Electricity Certificates and Spain accounted as residual mix instead of grid-intensity average. We set this as target in 2018 for 2030

Description

Land use

Metric value

77

Metric numerator

BAP and 3rd certification

Metric denominator (intensity metric only)

Total number of active quarries needing a plan

% change from previous year

6.9

Direction of change

Increased

Please explain

Metric value is a percentage. We set this as a target in 2018 for 2030. As we were about to finish our roadmap to implement a BAP (Biodiversity Action Plan) in quarries, we extended the scope of our goal to all quarries not-overlapped with high biodiversity value areas, to implement a 3rd party certification including any conservation action (or educational) with Wildlife Habitat Council (WHC).

Description

Other, please specify

Sustainability assessment executed by an independent party for our critical suppliers (% spend)

Metric value

63

Metric numerator

Critical suppliers assessed (spend)

Metric denominator (intensity metric only)

Critical suppliers' spend

% change from previous year

43.2

Direction of change

Increased

Please explain

Since 2010, we have been rolling out CEMEX Supplier Sustainability Program, an effort that extends our commitment to sustainable practices and policies to our business partners through an evaluation executed by a specialized independent firm, including criteria such as Health & Safety, Community Relations, Human Rights, Employee Development and Diversity, and Environmental Compliance (including climate-related topics), among others. As part of our Sustainability 2030 Ambitions, we have decided to refine our former supplier assessment focus and our new plan is to assess at least 80% of the critical suppliers spend under our company's global procurement scope. By critical we refer to those business partners who can have significant impact on our three core businesses (cement, ready-mix concrete, and aggregates). Specifically, this involves those who could affect the continuity of our operations, involve environmental risks, and/or contribute the highest spend. At year end we have evaluated 63% of the total procurement spend.

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

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

	Investment in low-carbon R&D	Comment
Row 1	Yes	Yes, CEMEX has a proprietary R&D department, based in Switzerland, which evaluates and assess new climate-change technologies (proprietary or external), with and a dedicated multidisciplinaty team to evaluate low carbon technologies in the market together with CEMEX Ventures for the start-ups assessment. The R&D investment is a key in our short, med and long term strategy for all our cement and concrete operations worldwide. According different studies, like the IEA-CSI Technology Roadmap 2018, the Cembureau Roadmap 2050, one of the major contributors to our emissions reduction from 2030 on will be the capture and subsequent storage or utilization of CO2 emitted from our processes, including concrete re-carbonation (capacity to naturally absorbCO2 during concrete's lifetime or through accelerated carbonation), so CEMEX is committed to R&D in this field with its participation in different consortiums in EU and US. CEMEX works normally under the H2020 EU scheme and new EU Innovation Fund, and is also collaborating with NPC in USA in Carbon Capture, Utilization and Storage (CCUS) technologies,

		which can help us to manage transition risks. Examples of this R&D projects where CEMEX participates are LEILAC, GENESIS, EcoCO2... Additionally, there is also a need to research into non-traditional operating levers and this task is also leaded by R&D. An example is the development and roll-out of our new low-carbon clinker (that shows an emission reduction of over 15% compared to traditional Portland cement clinker) was speed up mainly in Mexico, SCAC and Europe. R&D is also adapting our portfolio to the new demand of products with sustainability attributes (like energy efficiency, resource efficiency, low CO2 footprint) and an example of this adaptation is Vertua, a range of products with low or neutral CO2 footprint developed by R&D in 2019 and launched to the market globally in 2020.

C-CE9.6a

(C-CE9.6a) Provide details of your organization's low-carbon investments for cement production activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Alternative low-CO2 cements/binders	Small scale commercial deployment	≤20%		An example is the development and roll-out of our new low-carbon clinker (that shows an emission reduction of over 15% compared to traditional Portland cement clinker) was speed up mainly in Mexico, SCAC and Europe. Additionally, in 2020 we launched to the market Vertua Ultra zero concrete, which is a geopolymer clinker-free concrete that has up to 70% CO2 reduction versus a standard concrete (CEM I). The Geopolymer, traditional cement alternative, was developed at our global research and development centre in Switzerland to achieve further carbon reductions. Vertua Ultra can be used for a wide variety of applications including foundations, roads, groundworks and more. This new product launched in the UK, Germany, France in 2020 and being rolled-out in 2021 in the rest of the countries, has been the result of research and high innovation. The

				percentage is calculated as follows: Total investment in low CO2 clinker divided by Total investment in low carbon technologies (including Alternative Fuels facilities, facilities to improve clinker factor, new product development and any other activity related to lowering our carbon footprint, CCUS consortium participation...)
Carbon capture and storage (CCS)	Applied research and development	≤20%		CEMEX is working in different geographies in geological studies and feasibility studies to storage CO2 captured from our facilities. For example, through the cement spanish association (OFICEMEN) we participate with PETCO2. Additionally in 2020 and 2021 we have been awarded with two DOE funding to explore Carbon Capture in two of our facilities in US. The percentage is calculated as follows: Total investment in Carbon Capture and Storage studies divided by Total investment in low carbon technologies (including Alternative Fuels facilities, facilities to improve clinker factor, new product development and any other activity related to lowering our carbon footprint, CCUS consortium participation...)
Carbon capture, utilization and storage (CCUS)	Applied research and development	≤20%		CEMEX participates in different capture projects like LEILAC, GENESIS and one of the most important one in the context of utilization is EcoCO2, where CEMEX is the only cement partner aiming to produce biofuels derived from CO2 captured in industrial processes. Additionally, we have announce our collaboration with Synhelion, the first solar driven calcination process that at the same time capture the process CO2 to produce syngas; we are planning a pilot to be built in 2022, but off-site our cement plants to first check the techonology. The percentage is calculated as follows: Total investment in Carbon Capture and Utilization studies and investments divided by Total investment in low carbon technologies (including Alternative Fuels facilities, facilities to improve clinker factor, new product development

				and any other activity related to lowering our carbon footprint, CCUS consortium participation...)
Waste heat recovery	Small scale commercial deployment	≤20%		CEMEX has already a WHR facility in Solid plant - Philippines and about to start up a new facility in Apo plant - Philippines in 2021. Additional several studies to participate in a H2020 funding to build new facilities in nothern europe operations. In 2021, we've been granted an EU funding to develop supercritical CO2 WHR in our facility in Czech Republic (the stage of this specific project is "applied research and development" as we are still starting with this new technology and we are even planning a pilot before 2024. The percentage is calculated as follows: Total investment in WHR facilities and studies divided by Total investment in low carbon technologies (including Alternative Fuels facilities, facilities to improve clinker factor, new product development and any other activity related to lowering our carbon footprint, CCUS consortium participation...)
Other, please specify Accelerated recarbonation	Pilot demonstration	≤20%		CEMEX is involved in the working group focused on the transition to concrete and applications to prefabricated parts and structures and understanding of the accelerated carbonation mechanism for recycled concrete aggregates. CEMEX was recently assigned to evaluate the physical and mechanical properties of the concrete carbonated aggregates when used in ready-mix concrete. FastCarb will allow us to develop the circular economy of concrete by improving the quality of recycled concrete aggregates. The FastCarb Project works to design and implement an accelerated carbonation process at pre-industrial scale to store CO2 in the aggregates of recycled concrete, and to characterize the environmental and economic viability of the process industrial recycling envisaged. The percentage is calculated as follows: Total investment in accelerated carbonation pilots and studies divided by Total investment

				in low carbon technologies (including Alternative Fuels facilities, facilities to improve clinker factor, new product development and any other activity related to lowering our carbon footprint, CCUS consortium participation...)

C10. Verification

C10.1

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

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

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

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

English_Independent assurance report_Cemex_Sust_Report_2021_FINAL.pdf

Page/ section reference

All (1-5)

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

99

C10.1b

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

Scope 2 approach

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

English_Independent assurance report_Cemex_Sust_Report_2021_FINAL.pdf

Page/ section reference

All (1-5)

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

94

C10.1c

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

Scope 3 category

Scope 3: Purchased goods and services

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

English_Independent assurance report_Cemex_Sust_Report_2021_FINAL.pdf

Page/section reference

All (1-5), part. 1 (please note that the WBCSD Cement CO2 and Energy Protocol also includes emissions from purchased clinker, not only scopes 1 and 2). The purchased clinker is part of scope 3 emissions and the verification of the CO2 protocol for scope 1 and 2 emissions also includes the revision of this purchased clinker.

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

15.4

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

No, but we are actively considering verifying within the next two years

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

California CaT - ETS
Colombia carbon tax
EU ETS
Mexico carbon tax
Poland carbon tax

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

California CaT

% of Scope 1 emissions covered by the ETS

5.34

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2020

Period end date

December 31, 2020

Allowances allocated

2,246,003

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO2e

2,002,169

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

EU ETS

% of Scope 1 emissions covered by the ETS

19.84

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2020

Period end date

December 31, 2020

Allowances allocated

8,949,683.5

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO2e

7,439,018

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

C11.1c

(C11.1c) Complete the following table for each of the tax systems you are regulated by.

Colombia carbon tax

Period start date

January 1, 2020

Period end date

December 31, 2020

% of total Scope 1 emissions covered by tax

0

Total cost of tax paid

156,598

Comment

The figure shown here are the net taxes after compensation projects (see C11.2) (offset mechanism). The tax is for all liquid and gases fuels consumed in the operations, but other fossil fuels (petcoke, coal…) are not taxed. The majority of the taxed emissions (44 ktons) are reported as scope 3 emissions (transportation)

Mexico carbon tax

Period start date

January 1, 2020

Period end date

December 31, 2020

% of total Scope 1 emissions covered by tax

10.77

Total cost of tax paid

1,283,300

Comment

Tax on all fossil fuels (but for natural gas). It is calculated as CO2 emissions related to petcoke to calculate the % covered by the tax over scope1

Poland carbon tax

Period start date

January 1, 2020

Period end date

December 31, 2020

% of total Scope 1 emissions covered by tax

3.31

Total cost of tax paid

96,476

Comment

Please note that the tax is paid over the total allocation instead of total emissions

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

EMISSIONS REDUCTION STRATEGY: We developed a "CO2 Reduction Roadmap" plan for all the cement sites that we started to revisit in late 2020 to increase our 2025 and 2030 ambition. There is a designated leader in each Region from Operations and another leader from the Strategic planning side. This effort is leaded globally by the Director of Sustainability in coordination with the VP of Operations and Technology. There is a dedicated resource to consolidate all the information at global level.

This plan aims to identify, evaluate from the technical point of view and evaluate the economical feasibility of each and every initiative listed in each site. According this economical feasibility, the initiatives are classified in short, middle and long term execution. The roll-out in each country started with a kick-off workshop, leaded by Global Ops and Tech (GO&T) and Corporate Sustainability, where the goal is presented together with the available global solutions. The Workshop is comprised of local members from Operations (production, quality and maintenance), Sustainability, Procurement, Sales and Planning.

We identified 290 initiatives including improvements to energy efficiency, switch to alternative fuels (biomass) or natural gas, the use of clinker substitutes and decarbonated raw materials (local availability) and novel clinker development. CEMEX global is also actively participating in the development of CCUS tech. as a potential long-term solution, together with open constant dialogue with policy makers.

CARBON ALLOWANCES: The strategy in Europe and California is to keep sufficient number of allowances in our balance to facilitate the transition to a lower clinker emissions, minimizing the financial impact while we execute the investments to reduce our emissions.

OFFSETS PROJECTS: In addition to the optimization of emissions in regulated installations, CEMEX seeks registration of emission reduction projects that go beyond business as usual and achieve CO2 mitigation at reasonable costs. A particularly good example is the offsetting of all CO2 emissions from our truck fleet in Colombia by investing into eligible reforestation measures in that country. In 2020 we also started to compensate a range of low carbon concrete Vertua with reforestation offsets with our partner NCP (Natural Capital Partners) for Europe and CO2Cero in Colombia.

MONITORING: In addition to the mandatory monitoring, reporting, and verification required by the EU ETS and CAL ETS, all cement plants track their CO2 emissions using the CSI protocol (see also Q12). All monitoring activities are subject to internal control and third-party verification in a yearly basis. SCOPE 2 EMISSIONS: There is a specific department in charge of energy supplies at corporate level, and also a responsible at Regional Level to ensure all contracts and self generation are including low-carbon generation as part of the decision making process when investing or contracting power supply.

Case Study for monitoring our emissions and track performance vs. monthly/yearly goal, so to comply with the systems we are regulated or to comply with our internal metrics:
Situtation: CEMEX needs to have visibility of its emissions performance on a more frequently basis than the annual CO2 Protocol we develop.
Task: CEMEX goal is to daily monitor the CO2 intensity and absolute emissions in a monthly/daily basis
Action: In late 2019, CEMEX included in the DOR tool (Daily Operations Report) a CO2 monitoring for absolute direct emissions and intensity direct emissions in our cement plants. The calculation follows the criteria established in the CSI-GCCA CO2 cement protocol, son consider fuel emisisons as well as process emissions coming from the decarbonation of our raw materials. CEMEX connected the report to the operational databases to perform the calculation automatically.
Result: CEMEX implemented in January 2020 a CO2 module in the "Daily Operations Report" for 100% of the cement plants. As a result we get all CO2 related KPIs in a daily basis and for both, clinker and cement products. Thanks to this automatic tracking, the monthly monitoring in the Exco is faster and more effective. The new automatic daily monitoring facilitates the follow-up process at site level, as well as the impact of the implemented initiatives.

C11.2

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

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase

Credit purchase

Project type

Forests

Project identification

CEMEX Colombia earned in 2017 the Sello Verde de Verdad (True Green Label) certification for the neutralization of greenhouse gas emissions linked to transport activities. This makes CEMEX the first company in the country with carbon neutral certification on its entire vehicle fleet. Sello Verde de Verdad certification guarantees that the 1,000 vehicles that comprise CEMEX Colombia's total fleet are carbon-neutral thanks to offsets from the CO2CERO® forestry project. Through this project, CEMEX is committed to plant and maintain approximately 480,000 trees in Orinoquia, a post-conflict zone and one of Colombia's six natural regions. With more than 400 hectares from which the emissions offset will be achieved, this forestry project will not only capture around 120,000 tons of CO2, but also protect the region's native forests. It is voluntary but credits can be used for compliance (mitigation of the total carbon tax)

Verified to which standard

Other, please specify

ICONTEC

Number of credits (metric tonnes CO2e)

43,771

Number of credits (metric tonnes CO2e): Risk adjusted volume

43,771

Credits cancelled

Yes

Purpose, e.g. compliance

Other, please specify

Voluntary offsetting but valid for compensating the carbon colombian tax (so to compensate compliance)

Credit origination or credit purchase

Credit purchase

Project type

Forests

Project identification

Sustainable Teak Afforestation/Reforestation in Mexico used to compensate "Vertua Ultra Zero" concrete emissions in Germany and UK. Project description: Located across the States of Chiapas, Nayarit and Tabasco, the project covers 4,270 hectares and will expand by an additional 1,200 hectares each year. This afforestation project creates plantations to obtain high-value, long-lived timber products and to sequester large amounts of carbon dioxide on land that is adjacent to cattle farming. This contributes to climate change mitigation while simultaneously meeting the growing demand for quality wood products from well managed plantation forests. The sustainable timber plan is for Teak, a species that has the best growth of tropical wood, and it has resistance to fire and pests. No irrigation will be used, since all of the water required by the plantation will be obtained through rainfall. The project seeks to demonstrate that forest plantations are a viable instrument to encourage private investment in the forestry sector and afforestation projects in local communities, especially on degraded lands.

Verified to which standard

VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)

2,000

Number of credits (metric tonnes CO2e): Risk adjusted volume

2,000

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

C11.3

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

Yes

C11.3a

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

Objective for implementing an internal carbon price

Navigate GHG regulations
Change internal behavior
Drive energy efficiency
Drive low-carbon investment
Stress test investments
Identify and seize low-carbon opportunities

GHG Scope

Scope 1
Scope 2

Application

The carbon price is integrated into our mid-term business planning process to better understand the impacts of carbon pricing on our business, to evaluate the impact of a potential regulation (risk) and to properly evaluate investments and acquisitions. In late 2020 we updated the reference prices in all geographies, and we extended the application of a carbon price to monitor monthly performance, with a new scheme called “CEMEX ETS”.
Example of Internal Carbon Price:
1. Carbon price is used to evaluate all investments (short, middle and long term). Example, Altern. Fuel facility in Panama (no compliance regulation): to get the financial KPI we apply a CO2 cost of 18 USD/CO2 ton.
2. From late 2020 on, we monitor in a monthly basis the YTD performance vs.YTD goal for each cement site. Example, Panama has a monthly/YTD target for Net kgCO2/cementitious ton and it is compared to its monthly/YTD performance. The difference is multiplied by 18 USD/ton impacting its monthly EBITDA.

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

30

Variance of price(s) used

In 2020 we updated the CO2 prices to be applicable for EBITDA impact calculation and investment decision, based on the analysts' prices forecast:
Reference price in Europe (regulated): 2020: 30 USD/ton / 2021: 42 USD/ton / 2022: 46 USD/ton … 2025: 65 USD/ton / 2030: 87 USD/ton
Reference price outside Europe (non-regulated + California ETS): the reference price for all non-regulated countries, as well as for California ETS is the carbon floor in California. 2020: 17 USD/ton / 2021: 18 USD/ton / 2022: 19 USD/ton … 2025: 23 USD/ton / 2030: 33 USD/ton
For investment decision making, we are also calculating the initiatives "abatement curves", so the CO2 price breakeven point is calculated for each investment we analyse.

Type of internal carbon price

Shadow price
Internal fee
Implicit price

Impact & implication

The internal price on carbon allows to CEMEX to:
1. Identify cost-effective CO2 reduction opportunities in those countries where there is no a compliance carbon price in place, but are exposed to increased risks under a scenario of external carbon pricing.
2. Additionally, it raises the awareness among all organization of CEMEX's potential exposure to external carbon pricing (financial impact of the risk)
3. The internal carbon price applied to our monthly results (EBITDA impact) raise awareness of the importance of the CO2 strategy for the company, and at the same time, facilitates the understanding of the site management team of the potential impact of their daily decisions.
4. Drives a culture of constantly reducing our carbon footprint regardless of the existence of a local regulation. Carbon prices based on external mechanisms (taxes, emissions trading) allow us to better evaluate the profitability of daily decisions, projects and strategies.
Example of the impact and implications: Alternative Fuel increase investment in a site in Colombia: the evaluation of the investment w/o considering a CO2 price show a payback of 6 years. The execution of the project provides a carbon intensity reduction of 25 kgCO2/clinker ton; considering the CO2 2020 reference price for non-regulated countries of 17 USD/ton we get to improve the payback to 4 years.

C12. Engagement

C12.1

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

Yes, our suppliers

Yes, our customers

Yes, other partners in the value chain

C12.1a

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

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

13

% total procurement spend (direct and indirect)

80

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

30

Rationale for the coverage of your engagement

We continue to develop a strong relationship with our supplier network. Since 2010, our Supplier Sustainability Program (SSP) has made an extensive commitment to sustainability across our value chain, communicating and promoting responsible practices. As part of this global program, a third-party evaluator performs this assessment based on ISO 26000, covering Social, Environmental, Health & Safety (H&S), Business Ethics, Stakeholder Relationships, and Financial Performance standards. Climate related issues are evaluated as part of this assessment to our suppliers. As part of our Sustainability 2030 Ambitions, we have decided to refine our former supplier assessment focus and our new plan is to assess at least 80% of the critical suppliers spend under our company's global procurement scope. By critical we refer to those business partners who can have significant impact on our three core businesses (cement, ready-mix concrete, and aggregates). Specifically, this involves those who could affect the continuity of our operations, involve environmental risks, and/or contribute the highest spend. At year end we have evaluated 63% of the total procurement spend.

Impact of engagement, including measures of success

AFNOR, the specialized consultancy firm we have partnered for SSP, prepares a consolidated report, including findings and conclusions from the assessment and identified opportunity areas, proposing an action plan to close gaps. This evaluation is periodically updated, and suppliers are expected to continuously improve their score (if the company is equal or above the average of their industry-average provided by AFNOR, it needs to be evaluated every 2 years; otherwise the supplier is invited to be evaluated again the next year). This grade is integrated into the supplier's scorecard to track and reward those that demonstrate advanced sustainability practices. Every year, we recognize our best-performing suppliers of the Program. Process: identification of critical supplier; invitation to be evaluated; signing up of the supplier into a platform where they answer a questionnaire focused in the 4 main topics that CEMEX address: Social, Environmental, Suppliers and Policies. Answers need to have documentation that proves current progress in the self-assessment. AFNOR review the answers and back-up provided to elaborate report and recommendations. Main impact and measurement: suppliers have recognized CEMEX's sustainability priority areas, understanding their importance. As companies are provided with a recommendation plan to improve, when being evaluated in a next round, the expected result tends to be higher than it was. This is how we evaluate the success of the implementation, by evaluating the interest increase and scoring vs. previous round assessment. After CEMEX implemented this Program some suppliers started looking for some opportunities where they could be more efficient and sustainable. Example: raw material freight supplier in Mexico's central area with a Diesel truck fleet started testing some routes using CNG (Compressed Natural Gas) trucks to evaluate the energy efficiency, autonomy, climate impact and related costs. He is planning to increase CNG trucks fleet to use them in some of our raw material freight routes. And CEMEX is doing another pilot of CNG trucks in our own fleet in Mexico City.

Comment

Since 2010, we have been rolling out CEMEX Supplier Sustainability Program, an effort that extends our commitment to sustainable practices and policies to our business partners through an evaluation executed by a specialized independent firm, including criteria such as Health & Safety, Community Relations, Human Rights, Employee Development and Diversity, and Environmental Compliance, among others.

Type of engagement

Innovation & collaboration (changing markets)

Details of engagement

% of suppliers by number

100

% total procurement spend (direct and indirect)

100

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

80

Rationale for the coverage of your engagement

We are constantly evolving in order to become more flexible in our operations, more creative in our commercial offerings, more sustainable in our use of resources, more efficient in our capital allocation, and more innovative in conducting our global business. We believe that fostering innovation alongside our suppliers is fundamental: a win-win process that promotes continuous improvement for our supply chain, benefiting both CEMEX and our suppliers. Our “INTEGRATE Your Ideas” Innovation Program encourages suppliers to share their disruptive ideas to continuously improve our products, processes, and services and this includes the possibility of proposing disruptive ideas to mitigate the supply chain CO2 footprint. Moreover, some of the most relevant benefits of this invitation to innovate together with our business partners are: ›Strengthen collaboration, › Promote innovation as a win-win process, › Generate new thinking processes, › Improve supply chain practices, › Contribute to cost-reductionstrategies, › Replicate winning ideas across CEMEX, › Promote the supplier’s brand name throughout CEMEX operations, › Provide value for their clients, › Enhance thequality and image of their company, among others.

Impact of engagement, including measures of success

Through the Global Edition of INTEGRATE Your Ideas Innovation Program, suppliers can share with CEMEX one or several transforming ideas. During 2019, we merged our Supplier Innovation Program with our company's global Smart Innovation Model. As a result, we are participating in strategic Smart Innovation Model events both globally and in our Mexico, USA, SCA&C, Europe, and AMEA regions since this year. We measure the impact of the engagement by the number of ideas shared by suppliers and reviewing the rate of their implementation we can ensure the success of this engagement with suppliers. As part of this program, in 2020 we recognized Dispersible Paper Packaging from Klabin and Green Energy for Mixer Trucks from Sinotruk. We received 30 ideas, from which two proposals will undergo a business case process that may lead to a pilot project in our operations.

Comment

All CEMEX suppliers are invited to participate in the INTEGRATE Your Ideas Innovation Program

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Type of engagement

Compliance & onboarding

Details of engagement

Code of conduct featuring climate change KPIs

% of suppliers by number

100

% total procurement spend (direct and indirect)

100

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

100

Rationale for the coverage of your engagement

Aligned with our principles, policies, and values, we are committed to having our suppliers understand and comply with the CEMEX Code of Ethics and Business Conduct and with the 12 principles of our Code of Conduct When Doing Business with Us—which are rooted in our

membership in, and commitment to, the Global Cement and Concrete Association (GCCA). In which one of these principles is management of environmental impacts, where climate change-related issues are one of the main subject to focus. Launched in 2011 and redefined in 2019 globally to all our suppliers.

Impact of engagement, including measures of success

This CEMEX Code of Ethics and Business Conduct is a requirement for all our suppliers, and this helps us align our principles, policies, and values with them. In it, we included our Environmental policy where we ask them to support us in making strategic efforts to maximize our energy and resource efficiency, lower our carbon intensity and reduce emissions by managing our usage of energy, water consumption and waste generation.

Comment

C12.1b

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

Type of engagement

Collaboration & innovation

Details of engagement

Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number

100

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

0

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

Customer Centricity is one of our top priorities same as Climate Action is and this engagement effort merges these two strategic company objectives and targets 100% of clients since our paperless campaign and implementation has decided to go global and cover all business lines. As part of our digitalization process starting with CEMEX Go, our industry-first platform for purchasing products, tracking deliveries, and managing orders seamlessly — all while keeping safety top of mind, we have continuously worked to identify additional opportunities to better serve our customers ensuring their expectations are always fulfilled while minimizing environmental impacts. And precisely, based on the feedback we obtained from our customers through the different communication mechanisms we use to engage with them, together we identified an additional opportunity to adapt our administrative processes to become more efficient but more importantly to eliminate the contribution that paper order confirmations, invoices and tickets have in the climate change challenge. Going paperless has allowed CEMEX together with our customers to contribute to carbon emissions mitigation through natural resources conservation by avoiding trees cut, elimination of fossil fuel consumption for transportation of the documents to get the customers signature, decrease in energy consumption required to create the paper and to process it (e.g. copies, filing, etc.) and also avoid the emissions that would be generated from the eventual paper disposal frequently in landfills.

Impact of engagement, including measures of success

This engagement effort is directed to all of our customers and as of now we have already reached more than 80% paperless adoption across the globe. Our target is to achieve 100% and we continue to adapt our processes, systems, and strenghten the climate change education with our customers in order to facilitate their adoption of the paperless administative tracking considering the positive impact derived from their decision to accept and support going paperless.

Type of engagement

Education/information sharing

Details of engagement

Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

% of customers by number

50

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

0

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

This engagement effort targets our customers from all over the world across the different business units. For years, CEMEX has being developing products with superior sustainability performance that aim to fulfill our clients construction needs while minimizing the environmental impact. We are committed to enhancing the sustainable attributes of our building solutions in order to contribute to modern life while addressing climate change and other global challenges. Among our 2030 sustainability targets we have committed to annually achieve at least 50% of our sales from cement and ready-mix products with outstanding sustainable attributes

Impact of engagement, including measures of success

In 2020, 53% of our cement and ready-mix concrete sales were linked to products with outstanding sustainability attributes including resource and energy efficiency, resilience, low CO2 footprint, H&S benefits,
among others. This represents an increase in 10 p.p. in comparison to the share registered in 2018.

C12.1d

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

We invest considerable time and effort into building strong, personal partnerships with our stakeholders. Consistent with this commitment, we strive to build transparent and trusting relationships with our customers across every business in which we engage.
Architects constitute an influential group who inspire and constantly challenge the possibilities of our cutting-edge building materials. Accordingly, we continually foster collaborative relationships with this important constituency, from academic outreach to our annual CEMEX Building Award. To communicate the advantages of concrete pavement, we convey information to engineers, architects, and the community in general about its attributes, including the results obtained by research institutions around the world.
Throughout 2020, we collaborated with universities and architecture firms to identify and explore new ways in which we can use concrete to continue building better societies while creating a symbiotic relationship with nature. Our collaborative relationships included the Massachusetts Institute of Technology, University of Pennsylvania, Syracuse University, the Politecnico di Torino, the International University of Catalonia, Tec de Monterrey, Universidad de las Américas, Universidad Rosario, Universidad de Monterrey, University of Edinburgh, McGill University, University of Nantes, Kaunas Technical University, Universidad Comillas, Lodz University of Technology, and Ecole Polytec'Nantes.
Through our annual CEMEX Building Award, one of the most renowned competitions in the construction field, we not only honour engineers, architects,

and other building professionals, but also encourage creativity in the application of new concrete technologies to improve our communities. For the first time in its 30 -year history and as part of our measures to mitigate the impact of the COVID-19 pandemic, the company decided to suspend the 2020 edition. We look forward to recognizing the most acclaimed architectural and construction projects in Mexico and the world, completed during 2019 and 2020, in the 2021 event.

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
Funding research organizations
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
Other, please specify EU ETS	Support	Support principle of market mechanisms; oppose interference in the market in Phase 3 of the EU ETS. Engage in discussion of post 2020 policy and Phase 4 (EU Commission proposals for 2020-2030). In addition ensure continued Carbon Leakage Support principle of market mechanisms; and ensure continued Carbon Leakage Status for Cement Industry. Details of engagement: Direct dialogue with EU Commission officials including in DG CLIMA and DG GROW, EU Parliamentarians and Permanent Representation of several EU Member States including UK,	Focus on carbon leakage and competitiveness of EU industry. Maintain carbon leakage status and avoid introduction of a cross-sectoral correction factor. Update benchmarks based on real data, Ensure innovation fund supports CCS and CCU in a wide range of relevant sectors.

		Poland, Croatia, Latvia and Spain. Participate in consultations.	
Other, please specify US legislation, particularly California	Support	Support principle of market mechanisms; ensure fair burden sharing, particularly a level playing field in trade-exposed sectors. Compensation for increased power prices in trade-exposed sectors. Assessment of GHG emissions over the full life cycle. Acting to build climate resilience and reduce building emissions with concrete construction. Details of engagement: Direct dialogue with state and federal officials.	Complement existing output-based benchmarking for allocation of free allowances by a border carbon adjustment mechanism that minimizes leakage; compensation for increased power prices from auctioning allowances. Adoption of life-cycle analysis (LCA) to determine GHG impact of buildings and pavements, based on latest scientific findings (e.g. Concrete Sustainability Hub at the MIT).
Other, please specify CCS-related legislation	Support	Support legislation that enables the development and deployment of Carbon Capture and Storage (CCS) as a potentially crucial technology to limit GHG emissions in the long run.	Policy support and financing for RD&D into CCS. Clear and pragmatic rules for deployment of CCS. Stable political and financial framework to enable timely development.
Other, please specify US Water Resources Development Act WRDA	Support	Support principle of adapting to extreme climate related effects by building to resilient construction standards, which are those that allow a structure to resist hazards brought on by a major storm or disaster and continue to perform its primary function after such an event	Resilient construction principles infused into policy of WRDA and all federally funded public infrastructure and housing programs.
Other, please specify Mexican ETS	Support	Support principle of market mechanisms; avoid locking in teething problems due to precipitated implementation of the ETS.	Learn from the EU ETS: take sufficient time to monitor installations and thoroughly analyze results before proceeding to the implementation of the ETS, including allocation.

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

CEMBUREAU

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Support principle of market mechanisms; oppose interference in the market in Phase 3 of the EU ETS Encourage discussion of post 2020 policy and Phase 4. In addition ensure continued Carbon Leakage Status for Cement Industry.

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

Yes; via regular meetings of key TA Task Forces

Trade association

GCCA (Global Cement and Concrete Association)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

GCCA recognized Climate Change and the need to take inmmediate global action. We are developing the 2050 Carbon Neutral Ambition for the whole industry worldwide.

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

Being funding members of GCCA our CEO is part of the board. We are co-leading several working groups and acively participating in them, i.e. we are working on the detailed 2050 roadmap, we are developing KPIs for concrete business and the protocol to measure the emissions in this business.

Trade association

Portland Cement Association (PCA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

PCA is currently assessing the implications of current and potential proposals to regulate the cement industry under existing statutory authorities or new legislative authority. Additionally, from late 2020 on, we actively participate in the New 2050 carbon-neutral ambition that PCA is developing and we are participating in the revision of the public position (i.e. public position on carbon pricing)

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

USA Regional President is a member of the PCA board, and several other members are actively participating in the different taskforces in place (i.e. concrete, recarbonation, clinker and cement…). We are now revisiting the public position on carbon pricing, and we are trying to get a consensus to support a market-driven carbon pricing, and we are participating in the 2050 Carbon Neutral roadmap development.

Trade association

Cámara Nacional de Cemento México (CANACEM)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Support principle of market mechanisms to design the new ETS that is being developed. Association wants to help Mexico to cover the NDC committed

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

CEMEX is participating as a key player in the revision of the new ETS design: CEMEX provides very valuable inputs to the association as we have the experience already of other ETS in other geographies. We are now trying to include biomass as carbon neutral, as it already happen in all geographies.

Trade association

Federación Interamericana de Cemento (FICEM)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Close collaboration in the design of carbon mechanism in all countries where we have operations, to align our objectives with the NDC of each country

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

Participating in all meetings as key players: we actively participated in the development of the 2050 carbon neutrality Roadmap, providing valuable inputs as we already released our company ambition and we wanted for both positions to converge.

Trade association

California Nevada Cement Association (CNCA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Use of life cycle analysis of GHG emissions associated with different pavement design options. With a price of carbon now in the California market, life cycle GHG emissions can be directly incorporated into a life cycle cost model for making pavement investment decisions.

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

Active participation in CNCA work, including meetings with third parties.

Trade association

Federación Interamericana de Cemento (FICEM)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Close collaboration in the design of carbon mechanism in all countries where we have operations, to align our objectives with the NDC of each country

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

Participating in all meetings as key players

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

No

C12.3e

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

The most important of our other engagement activities are the following:

- CEMEX has signed the Paris Pledge for Action, by which we commit our full support to the Paris Agreement;

- In 2015, CEMEX has joined the Carbon Pricing Leadership Coalition (CPLC), a World Bank initiative that unites business, governments, and civil society in an effort to promote pricing emissions of GHG; we have shown particular leadership and commitment by accepting the CPLC's invitation to co-chair one of its working groups;
- CEMEX was one of the founding members of the Cement Sustainability Initiative (CSI); this sector project within the World Business Council for Sustainable Development (WBCSD), whose initiatives are now managed by the Global Cement and Concrete Association (GCCA) since 2019, is also working on a number of climate-related topics; the most important ones are:
1. The global Getting the Numbers Right (GNR) database that is based on a standardized monitoring protocol: this global database has provided accurate and reliable information about the cement sector's energy consumption and GHG emissions for almost a decade now;
2. In 2015 the CSI started the cement project within the Low-Carbon Technology Partnerships initiative (LCTPi) and has coordinated it ever since. CEMEX has taken a leading role in this project.

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?

The consistency is ensured by integration, involvement, and clear, transparent communication.
Integration means that the development and update of both our carbon strategy and our communication messages are coordinated by the same function, the Corporate Sustainability Direction, and that the people involved are the same.
Involvement implies that important decisions are prepared by consulting the whole organization. For example, all our operations are routinely participating in the update of our climate change-related position papers and internal material for Public Affairs purposes, to ensure that our positions are well-aligned across all the company. To ensure the correct training of our teams, Sustainability (global and regional) is in charge of training Public Affairs and Communications teams in the technicalities of the climate actions to be all in the same level of understanding.
We have a Public Affairs and Communication professional network of people who operates in our regions and participates in committees and working groups, as for example, Cembureau (EU), FICEM (SCAC) and CSCME (USA). These members, consulting the experts in each climate change related topic, gather the contents for our public policies proposal, aligned with the corporate strategy.
Clear, transparent communication includes e.g. the publication (both internal and external) of our position papers and our Integrated Report. In addition, the CO2 Coordination Group, made up of specialists and decision-makers at corporate, regional, and local levels, regularly convenes to exchange latest developments and discuss CEMEX response, incorporating our public policy proposals to the strategy, that then is used to refine the strategic actions plans in climate change, that are communicated afterwards in our Integrated Report.

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

IntegratedReport2020.pdf

Page/Section reference

All our sustainability report is related to our climate position and actions, but summarizing the most relevant pages:
17 Contribution to the SDGs
18 2020 Performance and 2030 Targets
30-39 Climate Action, including alignment to TCFD (39)
44-49 Innovation in Our Product and Solutions Portfolio and CEMEX Ventures
64-66 Responsible Sourcing
67-75 Social Impact
89 Climate related risks

Content elements

Governance
Strategy
Risks & opportunities

Emissions figures
Emission targets
Other metrics

Comment

Publication
In voluntary communications

Status
Complete

Attach the document

cemex-position-climate-change-2020.pdf

Page/Section reference
Whole document

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

Comment

In 2019 we updated our Climate Change Position Paper, making it available to the public at the beginning of 2020. We published a new Climate Action strategy, which outlines the company's vision to advance towards a carbon-neutral economy and to address society's increasing demands more efficiently. In CEMEX, we believe that climate change is one of the biggest challenges of our time and support the urgency of collective action. To complement this strategy with a longer-term vision, CEMEX also established a new ambition to deliver net-zero CO2 concrete by 2050. In our business, we believe concrete—our end product—has a key role to play in the transition to a carbon-neutral economy, and is an essential component in the development of climate-smart urban projects, sustainable buildings, and resilient infrastructure. Furthermore, our new net-zero CO2 concrete aspiration for 2050 sets us on a path of open innovation that requires strategic partnerships and cross-industry collaboration in the development of breakthrough technologies like carbon capture, utilization, and storage; novel clinkers with low heat consumption, alternative decarbonated raw materials, carbonation of concrete waste for use as recycled aggregates, and the promotion of circular economy models that transform waste into fuel. Our Position Paper provides detail in our Climate Change strategy, ambitions and roadmap to achieve our targets.

C15. Signoff

C-FI

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

C15.1

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

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

SC. Supply chain module

SC0.0

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

SC0.1

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

	Annual Revenue
Row 1	

SC0.2

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

SC1.1

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

SC1.2

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

SC1.3

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

Allocation challenges	Please explain what would help you overcome these challenges

SC1.4

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

SC2.1

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

SC2.2

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

SC4.1

(SC4.1) Are you providing product level data for your organization’s goods or services?

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I am submitting to	Public or Non-Public Submission	Are you ready to submit the additional Supply Chain questions?
I am submitting my response	Investors Customers	Public	No, I will complete the Supply Chain questions and return to submit them by the deadline shown on my dashboard. I understand that if I do not return to submit my additional Supply Chain questions by the deadline, they will not be submitted to customers.

Please confirm below

I have read and accept the applicable Terms