



Module: Introduction

Page: Introduction

CC0.1

Introduction

Please give a general description and introduction to your organization.

CEMEX is a global building materials company that provides high-quality products and reliable services to customers and communities in more than 50 countries. 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.

Our company was founded in Mexico in 1906, and we have grown from a local player to one of the top global companies in our industry, with approximately 44,000 employees worldwide. Today, we are strategically positioned in the Americas, Europe, Africa, the Middle East, and Asia. Our operations network produces, distributes, and markets cement, ready-mix concrete, aggregates, and related building materials to customers in over 50 countries, and we maintain trade relationships in over 100 nations.

Key figures (as of December 31, 2014)

- Annual production capacity of approximately 94 million metric tons of cement
 - 2014 annual production levels of approximately 56 million cubic meters of ready-mix concrete and 168 million metric tons of aggregates
 - 55 cement plants, plus minority participation in 12 additional cement plants
 - 1,736 ready-mix concrete facilities, 341 aggregates quarries, 233 land-distribution centers, and 63 marine terminals
-

CC0.2**Reporting Year**

Please state the start and end date of the year for which you are reporting data.

The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.

We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.

Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed
Wed 01 Jan 2014 - Wed 31 Dec 2014

CC0.3**Country list configuration**

Please select the countries for which you will be supplying data. If you are responding to the Electric Utilities module, this selection will be carried forward to assist you in completing your response.

Select country
Austria
Bangladesh
Colombia
Costa Rica
Croatia
Czech Republic
Dominican Republic

Select country
Egypt
France
Germany
Guatemala
Hungary
Ireland
Latvia
Israel
Malaysia
Mexico
Nicaragua
Panama
Philippines
Poland
Puerto Rico
Spain
Thailand
United Arab Emirates
United Kingdom
United States of America

CC0.4**Currency selection**

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

USD(\$)

CC0.6**Modules**

As part of the request for information on behalf of investors, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sub-industries, companies in the oil and gas sub-industries, companies in the information technology and telecommunications sectors and companies in the food, beverage and tobacco industry group should complete supplementary questions in addition to the main questionnaire.

If you are in these sector groupings (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will not appear below but will automatically appear in the navigation bar when you save this page. If you want to query your classification, please email respond@cdp.net.

If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see <https://www.cdp.net/en-US/Programmes/Pages/More-questions.aspx>.

Further Information

Module: Management

Page: CC1. Governance

CC1.1

Where is the highest level of direct responsibility for climate change within your organization?

Board or individual/sub-set of the Board or other committee appointed by the Board

CC1.1a

Please identify the position of the individual or name of the committee with this responsibility

The highest level of responsibility is with the Board. The Board has established a Sustainability Committee which is comprised of 3 Board members (Armando J. García, President of the Sustainability Committee, Ian Christian Armstrong Zambrano, Roberto Luis Zambrano Villareal) and a secretary. The Sustainability Committee is responsible for ensuring sustainable development in our strategy; supporting the 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 endorse a model of sustainability, priorities and key indicators.

Within the Executive Committee Ignacio Madridejos, President for Northern Europe, has the specific responsibility for Energy and Sustainability on a global basis,

which includes Climate Change.

This responsibility is managed directly by the corporate Director for Sustainability, Vicente Saisó. The corporate sustainability function is in charge of day-to-day management of topics related to climate change, e.g. definition, monitoring, and reporting of KPIs; portfolio of emission allowances and credits; identification and registration of offset projects; it also proposes changes to CEMEX' climate change strategy.

CC1.2

Do you provide incentives for the management of climate change issues, including the attainment of targets?

Yes

CC1.2a

Please provide further details on the incentives provided for the management of climate change issues

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
Director on board	Monetary reward	Emissions reduction target Other: CC-related KPIs	Part of the variable compensation of at least one of the Directors on Board is directly linked to progress towards our sustainability goals (including our CO2 target).
Business unit managers	Monetary reward	Emissions reduction project Energy reduction project Efficiency project Behaviour change related indicator Other: CC-related KPIs	Examples for individually negotiated targets include progress towards our overall emission reduction targets or KPIs that are related to climate change (e.g. substitution rate of low-carbon alternative fuels) as well as accuracy of monitoring. Effective and timely execution of projects to reduce direct and indirect emissions can also be included, if applicable.

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
Energy managers	Monetary reward	Efficiency target Other: CC-related KPIs	Individually negotiated targets typically include progress towards our target for low-carbon alternative fuels. Energy efficiency targets are also found.
Environment/Sustainability managers	Monetary reward	Emissions reduction project Emissions reduction target Efficiency project Efficiency target Behaviour change related indicator Other: CC-related KPI	Individually negotiated targets cover a wide range of climate-change-related activities, including but not restricted to progress towards our overall emission reduction targets or KPIs that are related to climate change (e.g. substitution rate of low-carbon alternative fuels) as well as accuracy of monitoring, development of CC-related projects and projects to raise awareness regarding climate change.
Facility managers	Monetary reward	Emissions reduction project Efficiency project Other: CC-related KPI	Individually negotiated targets typically include progress towards our target for low-carbon alternative fuels. Project-specific targets are set where applicable and appropriate.

Further Information

Page: CC2. Strategy

CC2.1

Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities

Integrated into multi-disciplinary company wide risk management processes

CC2.1a

Please provide further details on your risk management procedures with regard to climate change risks and opportunities

Frequency of monitoring	To whom are results reported?	Geographical areas considered	How far into the future are risks considered?	Comment
Six-monthly or more frequently	Board or individual/sub-set of the Board or committee appointed by the Board	Global	> 6 years	Regulatory, scientific and other developments are constantly monitored; significant changes trigger a review of the strategy

CC2.1b

Please describe how your risk and opportunity identification processes are applied at both company and asset level

For Risks and Opportunities that potentially have a non-insurable impact on CEMEX the assessment process operates at 3 levels:

- a) Corporate: analysis and strategy development.
- b) Regional: monitoring, risk and opportunity identification and reporting up
- c) Country: local analysis, risk and opportunity identification and engagement.

In addition, the Corporate Risk Mgmt Dept assesses and manages insurable risks at asset level.

CORPORATE LEVEL

The Corporate Director Sustainability is responsible for climate change-related risk analysis at corporate level. In close collaboration with regional and country-level specialists as well as through his participation in key organizations such as the World Business Council for Sustainable Development, the Cement Sustainability Initiative and the Caring for Climate initiative within the UNGC he constantly assesses developments in the area of Climate Change. The findings and recommendations are reported twice yearly to the Sustainability Committee, a sub-set of the Board (see CC1.1a).

REGIONAL/COUNTRY LEVELS

The six regions within CEMEX follow regional developments and collaborate with both Corporate and Country levels. CEMEX Northern Europe, for example, monitor relevant bodies that are responsible for climate change policy. CEMEX also participates in the EU Parliament Intergroup on 'Climate Change, Biodiversity and Sustainable Development', and is a participating member of the EU Parliament branch of GLOBE International (known as the BEE Group). Similar processes are in place in the other regions and in individual countries.

CORPORATE RISK MANAGEMENT (ASSET LEVEL - insurable risk exposure)

The Corporate Risk Management Department provides support to the climate change risk management process in two principal areas:
a) Providing information and analysis on the potential impact of climate change on our current insurance based governance system and,
b) Monitoring developments in the insurance sector.

CC2.1c

How do you prioritize the risks and opportunities identified?

NON-INSURABLE RISKS / OPPORTUNITIES:

Risks and opportunities are prioritized based on a number of parameters; the most important ones are probability of occurrence and potential impact on our company. However, given the enormous uncertainty there is no straightforward algorithm for ranking risks and opportunities; the decision on prioritization always involves discussions and subjective judgment by experts.

Some of the criteria considered are:

- How probable is the occurrence of an event?
- Number of assets / production volume potentially affected in single events / at risk in general?
- Will an event potentially result in interruption of business activity? If yes, will interruption be permanent or temporary?
- How large is the monetary impact?
- How well is the company prepared to manage the risk / opportunity?
- What does it take to improve the company's capacity to react to that risk / opportunity?

INSURABLE RISKS:

The process follows the standards developed in the insurance sector and, in fact, is mostly carried out in close collaboration with our insurer. In general many of the criteria are very similar to those mentioned above, but risks can normally be much better quantified.

CC2.1d

Please explain why you do not have a process in place for assessing and managing risks and opportunities from climate change, and whether you plan to introduce such a process in future

Main reason for not having a process	Do you plan to introduce a process?	Comment
--------------------------------------	-------------------------------------	---------

CC2.2

Is climate change integrated into your business strategy?

Yes

CC2.2a

Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process

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 some years ago in a series of workshops, based on a thorough analysis of both internal (e.g. mitigation potential) and external (e.g. regulatory developments and market trends) circumstances; all CEMEX operations and key corporate VPs were represented in this process.

The Corporate Director Sustainability is supported by the CO2 Coordination Group, formed by a number of local, regional, and corporate experts and executives; this group regularly analyzes both internal (e.g. progress towards our emission target) and external (e.g. regulatory developments) factors and elaborates changes to the strategy that are then formally proposed by the Corporate Director Sustainability. The wide geographical and functional variety of the members of the CO2 Coordination Group ensures that all qualitative developments are adequately addressed; in addition, institutional data management systems for energy and emissions (such as the CO2 protocol) provide the group with powerful quantitative analytical options.

ii. MAIN ASPECTS OF CLIMATE CHANGE

The predominant aspects are regulation triggered by climate change policies, e.g. carbon taxes or emissions trading schemes, and our voluntary carbon target.

However, other aspects such as reputation and consumer behavior have an increasing importance, particularly for the creation of opportunities.

Physical effects of climate change are not yet considered significant enough to trigger a strategic reaction; dealing with them is part of our normal risk management practices (e.g. insurance).

iii. SHORT-TERM STRATEGY

Particularly the regulatory risks have triggered additional efforts to improve our carbon balance by e.g.

- Technical measures (increased use of alternative fuels, particularly biomass; phase-out of old, inefficient kilns; increased use of clinker substitutes)
- Development of offset projects, both in our own operations and outside, particularly in our electricity supply chain
- Organizational measures such as awareness raising, monitoring and reporting of emissions, development and implementation of a carbon footprint tool
- Reduction of indirect exposure by sourcing low-carbon electricity

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 a number of 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: In order 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; heavy materials like concrete offer inherent advantages such as extended lifetime,

minimum maintenance or the benefits of thermal mass, to name just a few, that can have a significant positive impact on the life-cycle performance. In order to further improve our products we collaborate internally across our company to develop innovative products and solutions that address some of our customers' most significant environmental issues. Other efforts in this field include

- Communication of the life-cycle advantages of our products
- Development of new products such as insulating concrete forms (ICF) that allow clients to achieve additional emission reductions.
- 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 market place.

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 energy prices.

vi. BUSINESS DECISIONS

Some of the key decisions include:

- Development and implementation of a 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; this marks the start of a new era of transparency regarding our full responsibility for climate change. Through the use of this tool we can provide customers with the CO2 footprint of each one of the products we supply to them, so they in turn can calculate the CO2 footprint of their construction projects
- We have developed new challenging targets for a number of climate change-related KPIs. Our new target for the share of climate-friendly alternative fuels is 35% by 2020; in 2014 we have already reached a share of 28%.
- In each of the last years a number of decisions to invest in energy efficiency, renewable energy, or alternative fuels have been triggered by our Climate Change strategy and our voluntary goal to reduce emissions (see also 3.3b)
- As a next step to our past activities in renewable electricity CEMEX decided in 2014 to spin off CEMEX Energy, dedicated to the development of low-carbon power projects;
- Our consultancy for sustainable construction that will help to reduce emissions of GHG along the full value chain of construction and buildings is constantly being expanded to new markets;
- An increasing number of CEMEX operations uses our own Ecoperating seal to communicate to their clients which are our most sustainable products, and a lower carbon footprint is the preferred criterion. In 2014 CEMEX introduced Ecoperating for Buildings, a label for our clients' projects that go beyond BAU in terms of sustainable construction, including energy efficiency as a mandatory criterion.

CC2.2b

Please explain why climate change is not integrated into your business strategy

CC2.2c

Does your company use an internal price of carbon?

No, and we currently don't anticipate doing so in the next 2 years

CC2.2d

Please provide details and examples of how your company uses an internal price of carbon

CC2.3

Do you engage in activities that could either directly or indirectly influence public policy on climate change through any of the following? (tick all that apply)

Direct engagement with policy makers
Trade associations

CC2.3a

On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Other: EU-ETS	Support	Support principle of market mechanisms; oppose interference in the market in Phase 3 of the EU ETS, including , early introduction of the Market Stability Reserve (MSR). Engage in discussion of post 2020 policy and Phase 4 (EU Commission proposals on 2020-2030 issued). 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,	Leave Phase 3 alone, and discuss content of Phase 4 and its operation. Focus on carbon leakage and competitiveness of EU industry.

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
		EU Parliamentarians and Permanent Representation of several EU Member States including UK, Poland, Croatia, Latvia and Spain. Participate in consultations by the EU Commission on Carbon Leakage, the MSR and the post 2020 design of the EU ETS.	
Other: US legislation, particularly California (AB-32)	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: 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: US Water Resources Reform and Development Act (WRRDA)	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 WRRDA and all federally funded public infrastructure and housing programs.

CC2.3b

Are you on the Board of any trade associations or provide funding beyond membership?

Yes

CC2.3c

Please enter the details of those trade associations that are likely to take a position on climate change legislation

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
CEMBUREAU	Consistent	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.	Yes; via regular meetings of key TA Task Forces
Coalition for Sustainable Cement Manufacturing and Environment (CSCME)	Consistent	Support principle of market mechanisms; ensure fair burden sharing, particularly a level playing field in trade-exposed sectors	Active participation in CSCME work, including meetings with third parties.
California Large Energy Consumers Association (CLECA)	Consistent	Compensation for increased power prices in trade-exposed sectors, e.g. via output-based benchmarking for indirect power-related emissions.	Active participation in CLECA work, including meetings with third parties.
California Nevada Cement Association (CNCA)	Consistent	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.	Active participation in CNCA work, including meetings with third parties.

CC2.3d

Do you publicly disclose a list of all the research organizations that you fund?

CC2.3e

Do you fund any research organizations to produce or disseminate public work on climate change?

CC2.3f

Please describe the work and how it aligns with your own strategy on climate change

CC2.3g

Please provide details of the other engagement activities that you undertake

CC2.3h

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.

Clear, transparent communication includes e.g. the publication (both internal and external) of our position papers.

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.

CC2.3i

Please explain why you do not engage with policy makers

CC2.4

Would your organization's board of directors support an international agreement between governments on climate change, which seeks to limit global temperature rise to under two degree Celsius from pre-industrial levels in line with IPCC scenarios such as RCP2.6?

Yes

CC2.4a

Please describe your board's position on what an effective agreement would mean for your organization and activities that you are undertaking to help deliver this agreement at the 2015 United Nations Climate Change Conference in Paris (COP 21)

(i) WHAT WOULD AN EFFECTIVE AGREEMENT ENTAIL?

In summary, CEMEX believes that the following elements are absolutely indispensable for an effective agreement:

- a smart implementation of the principle of common but differentiated responsibility; the agreement must not choke off the development of less developed countries, and it should ensure that the leading role of industrialized nations goes beyond a mere net transfer of money;
- truly global coverage; particularly mechanisms to set a price on GHG emissions should be designed and/or linked in a way that they do not only ensure coverage in a geographic sense, but also of all competing sectors and phases of the full life cycle of products; countries and sectors that are not covered should be incentivised by offset mechanisms the credits of which should be universally accepted;
- CEMEX believes that a cap-and-trade mechanism is preferable to taxation;
- long-term visibility for business, combined with clearly defined and effective mechanisms to react to short-term price volatility such as a central carbon bank.

(ii) IMPLICATIONS ON CEMEX

CEMEX is convinced that a well-designed and effective agreement to limit the consequences of climate change will actually have positive impacts on our organization as it will give a competitive value to our well-established GHG reduction strategy, underline the long-term benefits of our products, and create new business opportunities in the development of necessary infrastructure.

(iii) CEMEX ACTIONS TO SUPPORT DELIVERY OF AN AGREEMENT

CEMEX has long and actively supported the development of a global carbon market. CEMEX has signed the Copenhagen Communiqué, the 2 Degree Communiqué ahead of the Durban COP, among other calls. Attached are our position papers on climate change in general and market mechanisms in particular. These can also be found on our website, www.cemex.com.

Further Information

Attachments

[https://www.cdp.net/sites/2015/86/2986/Climate Change 2015/Shared Documents/Attachments/ClimateChange2015/CC2.Strategy/CEMEX_POSITION_ON_Market_Mechanisms_for_Mitigating_Climate_Change.pdf](https://www.cdp.net/sites/2015/86/2986/Climate%20Change%202015/Shared%20Documents/Attachments/ClimateChange2015/CC2.Strategy/CEMEX_POSITION_ON_Market_Mechanisms_for_Mitigating_Climate_Change.pdf)
[https://www.cdp.net/sites/2015/86/2986/Climate Change 2015/Shared Documents/Attachments/ClimateChange2015/CC2.Strategy/CEMEX_POSITION_ON_Climate_Change.pdf](https://www.cdp.net/sites/2015/86/2986/Climate%20Change%202015/Shared%20Documents/Attachments/ClimateChange2015/CC2.Strategy/CEMEX_POSITION_ON_Climate_Change.pdf)

CC3.1

Did you have an emissions reduction target that was active (ongoing or reached completion) in the reporting year?

Intensity target

CC3.1a

Please provide details of your absolute target

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions (metric tonnes CO2e)	Target year	Comment
----	-------	-------------------------	----------------------------	-----------	--	-------------	---------

CC3.1b

Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions	Target year	Comment
Int1	Scope 1	99.2%	25%	Other: Metric tonnes CO2 per metric tonne of cementitious product	1990	0.792	2015	Coverage is 100% of scope 1 emissions in our cement operations (corresponding to 99.2% of all our scope 1 emissions reported under the CDP). As scope 1 represents the vast majority of our emissions there are no targets for scopes 2 and 3.

CC3.1c

Please also indicate what change in absolute emissions this intensity target reflects

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment
Int1	Decrease	1	Decrease	3	Although our production has grown significantly in many countries latest projections show that our emission reduction efforts will result in a small net reduction of absolute scope 1+2 emissions. Scope 3 emissions for 1990 can only be roughly estimated. Key for achieving a net reduction in scope 3 emissions is the significant reduction of use of fossil fuels (that have a significant upstream footprint) due to improved energy efficiency and increased use of alternative fuels (that have a much smaller upstream footprint) that are both triggered by our emissions target.

CC3.1d

For all of your targets, please provide details on the progress made in the reporting year

ID	% complete (time)	% complete (emissions)	Comment
Int1	96%	90%	We expect to fulfill the target as 2014 emissions were driven up by a number of temporary effects (see also 12.1a).

CC3.1e

Please explain (i) why you do not have a target; and (ii) forecast how your emissions will change over the next five years

CC3.2

Does the use of your goods and/or services directly enable GHG emissions to be avoided by a third party?

Yes

CC3.2a

Please provide details of how the use of your goods and/or services directly enable GHG emissions to be avoided by a third party

Our main products, cement and concrete, are absolutely indispensable for the transformation to a low-carbon society.

Furthermore, CEMEX operates in an energy-intensive industry that accounts for around five percent of the world's carbon emissions. Our carbon strategy is designed to help reduce the environmental impacts of our operations, create economic value, advance new solutions and drive the development of a low-carbon economy.

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).

RESIDENTIAL STRUCTURES.

Single and multifamily concrete residences produce fewer greenhouse gas emissions than wood frame residences over a 60-year service life, CSHub researchers found. The biggest impact occurred in single-family homes, which represent 80% of residential energy consumption in the U.S.

- Concrete homes use 8% to 11% less energy than code-compliant wood frame construction.
- Concrete homes produce 5% to 8% fewer greenhouse gas emissions than best-practice wood frame homes and exceed code requirements. This results in overall savings of some 20 to 30 t CO₂ per home.

PAVEMENTS:

Based on various LCA studies (performed both internally and by third parties) CEMEX estimates that the use of concrete instead of asphalt for pavements of roads and highways will typically yield savings of 30 to 50 kg CO₂/m² over the lifetime of a typical concrete road (40 years). Apart from the construction and maintenance of the roads these studies include mainly two effects: firstly the rigidity of the material concrete leads to lower rolling resistance and therefore better fuel efficiency, particularly in heavy vehicles, and secondly a higher albedo of the lighter concrete surface (converted to equivalent emissions of CO₂ with the methodology developed at the University of Berkeley, i.e. 2.5 kg of CO₂-eq. per m² and an improvement of albedo by 0.01). According to our calculations the world could save on the order of 100 to 300 mln t CO₂ over the lifetime of the roads if during one year all asphalt pavement were replaced by concrete (other GHGs are considered of minor importance in this respect) (based on MIT CSH studies; recent studies indicate an even higher fuel savings potential than assumed in this estimate).

CEMEX has considered several CDM projects, e.g. related to energy-efficient low-income housing in Latin America, but has not yet registered any CDM or JI project based on the characteristics of its products.

As in most cases we do not know in what applications our products are used and / or what the baseline would be we cannot calculate the overall reduction that our goods and services directly enable. However, some back-of-the-envelope calculations indicate that they could be at least as large as our direct emissions.

CC3.3

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

Yes

CC3.3a

Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO₂e savings

Stage of development	Number of projects	Total estimated annual CO ₂ e savings in metric tonnes CO ₂ e (only for rows marked *)
Under investigation	17	1250000

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
To be implemented*	6	525000
Implementation commenced*	3	616000
Implemented*	9	301660
Not to be implemented	0	0

CC3.3b

For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Other	Alternative Fuel projects to increase percentage of substitution. Alternative fuels in our kilns to reduce scope 1 emissions. 4 Projects are carried out in different cement plants worldwide. The expected lifetime of single projects is typically in the range of a decade. All these projects are voluntary, although the existence of a carbon price (e.g. in the	300000	Scope 1	Voluntary	4000000	4200000	1-3 years	11-15 years	Our main purpose is to avoid CO2 emissions, however this represent economic benefits or saving.

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	European Union) sometimes adds to the profitability of these projects.								
Low carbon energy installation	Renewable electricity to reduce emissions in scope 1 and 2 - CEMEX has installed a 1.5 MW photovoltaic plant to supply its cement plant in the Dominican Republic. An expansion of the plant is under investigation.	1660	Scope 1 Scope 2	Voluntary	400000	0	<1 year	21-30 years	This project reduces emissions in scopes 1 and 2 because our cement plant is partly supplied by its own fossil power plant. No cash impact of investment in 2014 (sale-and-lease-back)

CC3.3c

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 CEMEX business units share success stories via intranet tools, but also in reunions (e.g. CO2 Coordination Group, meetings of environmental and / or sustainability executives at regional or global level).

Method	Comment
Partnering with governments on technology development	CEMEX constantly participates in a number of R+D projects that are partly funded by governments; many of these projects are related to emission reduction technologies.

CC3.3d

If you do not have any emissions reduction initiatives, please explain why not

Further Information

Projects not to be implemented (CC3.3): As projects can be rejected on different levels of the hierarchy we do not track rejected projects. VCS: In 2014, two new initiatives (in our Brooksville South and Demopolis cement plants in the US) were registered under the Verified Carbon Standard (VCS). These projects to substitute alternative fuels for conventional fossil fuels have the potential to reduce more than 80 kt CO₂-eq per year; implementation is under investigation. With these recent additions our total VCS portfolio grows to 4 projects with a total reduction potential of some 450 kt CO₂-eq per year.

Page: CC4. Communication

CC4.1

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	Status	Page/Section reference	Attach the document
In mainstream financial reports but have not used the CDSB Framework	Complete	17-19	https://www.cdp.net/sites/2015/86/2986/Climate Change 2015/Shared Documents/Attachments/CC4.1/CemexAnnualReport2014.pdf

Publication	Status	Page/Section reference	Attach the document
In mainstream financial reports but have not used the CDSB Framework	Complete	38, 39, 42, 95, 99	https://www.cdp.net/sites/2015/86/2986/Climate Change 2015/Shared Documents/Attachments/CC4.1/CEMEX SEC 20-F 2014.pdf
In voluntary communications	Complete	15-16, 18, 48, 50-53, 91	https://www.cdp.net/sites/2015/86/2986/Climate Change 2015/Shared Documents/Attachments/CC4.1/CX14sdr_eng.pdf

Further Information

Page numbers provided refer to the printed version and do not necessarily match with the way the reader numbers the pages.

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1

Have you identified any inherent climate change risks that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

- Risks driven by changes in regulation
- Risks driven by changes in physical climate parameters
- Risks driven by changes in other climate-related developments

CC5.1a

Please describe your inherent risks that are driven by changes in regulation

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Cap and trade schemes	<p>Cap and trade as such is not necessarily a risk; on the contrary, CEMEX perceives it as the preferred policy instrument when it comes to regulation of GHG emissions.</p> <p>However, if a cap and trade scheme is badly designed the consequences can be devastating for both the economy and our climate. Of particular concern is the maintenance of fair competition; this not only refers to competition between regulated and unregulated geographies (risk of so-called carbon leakage, i.e. the shift of GHG-intensive activities from regulated to unregulated geographies with no net environmental benefit), but also among potential substitute products</p>	Increased operational cost	Up to 1 year	Direct	About as likely as not	High	<p>Indicative numbers for three scenarios in the EU ETS: 1. Free allocation, no cross-sectoral reduction factor: 0 2. Free allocation, cross-sectoral factor: 9 mIn USD in 2020 3. No free allocation: 75 mln USD in 2020 Assumptions: - EUA price (6.8 EUR) and exchange rate (1.08 USD/EUR) as of end-March 2015 - No significant further reduction of specific emissions in our EU plants (which is a conservative estimate)</p>	<p>In order to mitigate the risk of a deficit CEMEX is using all available levers to reduce CO2 emissions in the corresponding operations that are economically feasible under the expected carbon price. This includes improvements to energy efficiency, switch to alternative fuels, particularly biomass, as well as the introduction of natural gas to some of our kilns where this fuel was previously considered not economic, and the use of clinker substitutes. CEMEX has also actively participated in the development of carbon capture and storage as a potential long-term solution. In addition, CEMEX has developed a portfolio of offset</p>	<p>The operational cost of activities described above is typically negative; the investment costs vary from almost 0 (improved operational practices) to several million USD. Since 2005 CEMEX has invested a total of more than 196 million USD in alternative fuel projects. The transaction costs for an offset project can reach a million USD over its lifetime. Public affairs activities are estimated to require a total of 2 person-years/y at a full cost of some 400 kUSD</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>(e.g. concrete vs. aluminum) and different phases of the life cycle of a good or service (e.g. production of many materials for the construction of a building is covered by the cap and trade scheme, but the combustion of heating oil during the use is not). Fortunately, policy maker have understood the risks related to carbon leakage, and the cap and trade schemes that will cover CEMEX operations over the next years (European Union, California) have included mechanisms (mainly free allocation; in California a border adjustment mechanism is being discussed) to avoid carbon leakage. However, in the EU the test of whether a</p>							<p>projects to reduce our exposure to the existing and emerging trading schemes. Finally, CEMEX maintains constant dialogue with policy makers to ensure that they understand our concerns regarding competitiveness and maintain or improve corresponding legislation.</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>sector is subject to international competition only partly reflects economic realities, so in the current review the sector might lose preferential free allocation although it is still subject to competition by imports from countries with less stringent carbon regulation. The resulting need to buy additional European Union Allowances in the market would increase our production cost and might reduce demand for our products, primarily due to loss of market share to imports. In addition, the cross-sectoral reduction factor will reduce free allocation by 12% for the rest of the third phase of the EU ETS.</p>								

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Carbon taxes	Carbon taxes can have a distorting impact on competition if they do not cover all competing goods/services in a similar way. Like with cap and trade this competition is not restricted to different geographies, but also includes potential substitutes and different phases of the life cycle. For a company like CEMEX this could translate into reduced competitiveness vs. e.g. imports or other building materials if those are not subject to similar regulation. In addition, taxes in general do not offer the option to actively manage and reduce compliance costs by e.g. trading or development of offset projects. Our estimates of	Increased operational cost	1 to 3 years	Direct	Unlikely	Medium-high	The net implication of a carbon tax without any measure to protect against carbon leakage would be the same as that of a cap-and-trade mechanism without free allocation, i.e. for the case of our EU operations a carbon tax of 5.4 EUR/t CO2 would translate into a financial impact of some 75 mln USD/y	In order to reduce potential exposure CEMEX is using all available levers to reduce CO2 emissions in the corresponding operations that are economically feasible under the expected carbon price. This includes improvements to energy efficiency, switch to alternative fuels, particularly biomass, as well as the introduction of natural gas to some of our kilns where this fuel was previously considered not economic, and the use of clinker substitutes. CEMEX has also actively participated in the development of carbon capture and storage as a potential long-term solution. In addition, CEMEX has developed a portfolio of offset	The operational cost of activities described above is typically negative; the investment costs vary from almost 0 (improved operational practices) to several million USD. Since 2005 CEMEX has invested a total of more than 196 million USD in alternative fuel projects. The transaction costs for an offset project can reach a million USD over its lifetime. Public affairs activities are estimated to require a total of 2 person-years/y at a full cost of some 400 kUSD

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	timeframe, likelihood, and magnitude of impact refer to enactment of carbon taxes for cement plants (our main emitters) at a moderate level in a number of countries.							projects to reduce our exposure to the existing and emerging trading schemes. Finally, CEMEX maintains constant dialogue with policy makers to ensure that they understand our concerns regarding competitiveness and maintain or improve corresponding legislation. The methods to manage this risk are practically the same as those related to cap-and-trade.	

CC5.1b

Please describe your inherent risks that are driven by change in physical climate parameters

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Tropical cyclones	Increased frequency and	Increased capital cost	>6 years	Direct	About as likely as	Low-medium	A common event of	CEMEX considers the most recent risk	The total annual cost of

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
(hurricanes and typhoons)	strength of tropical cyclones (as well as other extreme storms) can cause direct damage to our operations, particularly in some Latin American countries (Costa Rica, Nicaragua, Mexico, Dominican Republic, Puerto Rico), the US gulf coast, and southeast Asia (Bangladesh, Philippines)				not		hurricane, typhoon and flooding may be in the order of 100-320 kUSD of physical damage, although higher damage in the million USD range has been observed. However, quantification of those potential impacts under our Loss-Prevention Program (LPP) has not indicated any material impact of climate change on these risks yet.	criteria when designing new facilities or acquiring or modifying assets. Natural hazard risks such as storms and floods and extreme climatic conditions in areas where CEMEX operates, are monitored constantly using risk management tools, where we check for weather alerts on a daily basis. Contingency plans are in place to mitigate the impact of those events, and CEMEX's facilities insured against losses related to extreme weather events. Facilities are assessed annually for the progress of the action plans developed in order to reduce the physical risks associated with Natural Hazards	this protection is 29.6 mln USD. Please note that this insurance covers a wide range of physical risks, not only those related to climate change; detailed estimates for the latter are not available.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								<p>Exposure, among other, and the corresponding actions to minimize operation interruption, damages and consequences from natural events. CEMEX annually reviews its cement plants' exposure to weather related risks also through the LPP. This program is conducted by the engineering services of CEMEX's global property insurer (FM Global) and provides each plant with a grade score by which all plants can be assessed. All recommendations from the LPP are evaluated for decision making using three criteria: 1. Financial loss expectancy should the risk occur, 2. Risk improvement ratios defined as</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								the ratio of loss expectancy to the cost to complete the recommendation to mitigate or avoid the risk exposure, and 3. Specific catastrophe risks For more details on FM Global's scoring system please visit their website.	
Tropical cyclones (hurricanes and typhoons)	Extreme storm events can disrupt supply of crucial inputs; for example, in 2005, one of the most active hurricane seasons on record, hurricanes forced some major refineries on the US Gulf Coast to stop operation; as a consequence, supply of petcoke, the main fuel for many of our	Reduction/disruption in production capacity	Up to 1 year	Indirect (Supply chain)	About as likely as not	Medium	Based on work done in Egypt and the Philippines for those two countries the total potential risk was estimated at 250 – 300 mln USD	CEMEX regularly analyzes potential disruptions in its supply chain and develops strategies to cope with them. This can include diversification of suppliers, but also adjustments to the inventory policies. For example, following hurricane Katrina in 2005, our Mexican cement operations decided to maintain higher minimum inventory levels of its main fuel, petcoke, during hurricane season	These activities are included as part of existing operational policies and do not cause additional costs.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	cement plants, was disrupted, jeopardizing the operation of some of CEMEX' plants in Mexico and the US. As recent scientific studies have fuelled the debate on whether global warming will lead to more frequent and stronger tropical cyclones we have classified the likelihood as "about as likely as not".								
Sea level rise	Higher sea levels threaten CEMEX operations on the sea board, such as maritime terminals in various countries (e.g. Mexico, US, France), but potentially also	Other: Increased capital cost; Disruption of production capacity	>6 years	Direct	Likely	Medium	A common event of hurricane, typhoon and flooding may be in the order of 100-320 kUSD of physical damage, although higher damage in the	CEMEX considers the most recent risk criteria when designing new facilities or acquiring or modifying assets. Natural hazard risks such as storms and floods and extreme climatic conditions in areas where	The total annual cost of this protection is 29.6 mln USD. Please note that this insurance covers a wide range of physical risks, not only those related to climate

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>some plants that are close to the sea (e.g. Sv. Juraj cement plant in Croatia). The impacts range from additional investments (e.g. dams) to protect those assets to physical damage and reduced availability; in the worst case, sea-level rise could make those assets completely worthless, although the latter is considered extremely unlikely.</p>						<p>million USD range has been observed. However, quantification of those potential impacts under our Loss-Prevention Program (LPP) has not indicated any material impact of climate change on these risks yet.</p>	<p>CEMEX operates, are monitored constantly using risk management tools, where we check for weather alerts on a daily basis. Contingency plans are in place to mitigate the impact of those events, and CEMEX's facilities insured against losses related to extreme weather events. Facilities are assessed annually for the progress of the action plans developed in order to reduce the physical risks associated with Natural Hazards Exposure, among other, and the corresponding actions to minimize operation interruption, damages and consequences from natural events. CEMEX annually reviews its cement</p>	<p>change; detailed estimates for the latter are not available.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								<p>plants' exposure to weather related risks also through the LPP. This program is conducted by the engineering services of CEMEX's global property insurer (FM Global) and provides each plant with a grade score by which all plants can be assessed. All recommendations from the LPP are 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 For more details on FM Global's</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								scoring system please visit their website.	

CC5.1c

Please describe your inherent risks that are driven by changes in other climate-related developments

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Reputation	The reputational risk for CEMEX has a number of facets, both in terms of the potential causes and the implications. It is therefore crucial to manage this risk accordingly. The main risk is certainly related to the relatively large carbon footprint of our products; stakeholders might blame us for climate change in general.	Wider social disadvantages	>6 years	Direct	Unlikely	Medium-high	The reputational risk is difficult to quantify; some competitors have estimated that a serious reputational issue could reduce sales by as much as 10% in a specific country operation. If we take our operations in the USA as an example, this would mean that our sales could be	The pillars of our approach to manage reputational risks are a responsible and ambitious climate strategy, and transparency. Our climate change strategy includes a commitment to reduce our specific emissions from cement production by 25% by 2015 (compared to the 1990 baseline); active	The costs for the technical measures to reduce our emissions is the following: The operational cost of activities described above is typically negative; the investment costs vary from almost 0 (improved operational practices) to several million USD. Since 2005 CEMEX has invested a total of

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>However, the risks go beyond this and are also related to the way we manage our position in the fight against climate change. As an example, in the beginning of emissions trading many stakeholders did not understand the concept of carbon leakage and the associated risks. As a consequence, when the cement industry tried to achieve a protective mechanism against this effect it was accused of trying to avoid its fair share of emission reductions. After long years of open debate many of those stakeholders now support free allocation or other</p>						<p>reduced by around 250 million USD per year. Given the local nature of the market for building materials, any reputational issue would only have an effect in a specific country operation or relatively small region.</p>	<p>participation in the discussion on the future political framework; support for fair, ambitious, and efficient regulation; monitoring of our emissions; and development of new processes and products that are less GHG-intensive in their production or enable our clients to reduce their carbon footprint. Transparency means for us regular reporting about our emissions; a clear position on climate change regulation; regular dialogue with our stakeholders; and increased efforts to inform all our stakeholders on how our products can help achieve GHG reductions over the full life-cycle of a building</p>	<p>more than 196 million USD in alternative fuel projects. The transaction costs for an offset project can reach a million USD over its lifetime. The cost for the carbon footprint calculator was in the range of 200 kUSD. Other activities mentioned do not lead to material additional costs.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>measures for protection of trade-exposed sectors. Reputational damage can have a number of severe consequences for the company, including, but not restricted to, reduced demand for our products, reduced market valuation, more difficult access to finance, or even a threat for our license to operate.</p>							<p>or structure. CEMEX' activities in the field of carbon footprints are an excellent example of open and transparent communication with stakeholders. In 2010, CEMEX UK was the first cement producer to present a product carbon footprint that was certified by the Carbon Trust. In the same year CEMEX developed a methodology that is compatible with the most relevant standards for carbon footprint and implemented it in all countries where we are present. Last year, coverage of our Carbon Footprint tool reached 100% of our cement, aggregates, and ready-mixed production.</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Changing consumer behaviour	Increased awareness of climate change, coupled with misperceptions or lack of information regarding the full life-cycle impact of different materials, might drive consumers to substitute other materials that they perceive as more climate-friendly for our products. We see that particularly in markets with a well developed environmental awareness such as Western Europe and the US some of our competitors (typically from other sectors) try to play this card, often neglecting essential phases in the life-cycle of a building or a structure . Such a shift in customer preferences would have direct	Reduced demand for goods/services	>6 years	Direct	Unlikely	Medium-high	We currently estimate that a massive consumer shift could reduce demand for our products by as much as 10% in a specific country operation in the worst case. If we take our operations in the USA as an example, this would mean that our sales could be reduced by around 250 million USD.	CEMEX is engaged in a number of efforts to provide its stakeholders with factual information about the environmental performance of its products. The most important examples are: CEMEX, as a member of the US Portland Cement Association (PCA) and the National Ready-Mix Concrete Association (NRMCA), supports the Concrete Sustainability Hub, a research project at the MIT that, among other topics, analyzes GHG emissions of structures and buildings made of concrete. CEMEX has started to provide Carbon Footprint data on a cradle-to-gate basis to its	Our financial contribution to the MIT Concrete Sustainability Hub is indirect, via membership in both PCA and NRMCA. In-kind contributions (expertise, data etc.) are immaterial. The one-off cost for the development and implementation of the Carbon Footprint tool was in the range of 200 kUSD

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>consequences for the demand for our products. However, given that there are no objective reasons for this shift (for example, a recent study by the MIT shows that concrete houses emit less GHG over the full life cycle than wooden ones) we believe that this is rather unlikely (less than 33% probability) to have a material impact. In theory the potential for such a substitution is significant; however, CEMEX believes that various factors such as price and availability of competing materials as well as the emergence of an enlightened customer who wants to see and understand the</p>							<p>stakeholders. In the last year, coverage of our Carbon Footprint has reached 100% of our total production.</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	facts behind the claims in ads will limit the potential impact to a relatively small fraction of that potential impact.								

CC5.1d

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1e

Please explain why you do not consider your company to be exposed to inherent risks driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1f

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Page: CC6. Climate Change Opportunities

CC6.1

Have you identified any inherent climate change opportunities that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

- Opportunities driven by changes in regulation
- Opportunities driven by changes in physical climate parameters
- Opportunities driven by changes in other climate-related developments

CC6.1a

Please describe your inherent opportunities that are driven by changes in regulation

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Cap and trade schemes	A well designed cap and trade scheme will reward the most GHG efficient producers.	Other: Competitive Advantage	Up to 1 year	Direct	Virtually certain	Medium-high	Our CO2 target implies a reduction of around 200 kg CO2 per metric tonne of product from 1990 to 2015; this means for our operations in Germany (where we produce around 4 mln tonnes of cement per year) a yearly reduction of 800'000 t CO2 or at the current price of EUAs (5.4 EUR) and exchange rate (1.38 USD/EUR) a positive impact of	In order to improve the carbon balance CEMEX is using all available levers to reduce CO2 emissions in	The operational cost of activities described above is typically negative; the investment

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	At CEMEX we are convinced that with our commitment to and leadership in sustainability, our experience and progress in emission reductions as well as our ingenuity we are in an excellent position to profit from this opportunity. CEMEX is well on track to reduce its specific emissions by 25% by 2015 (compared to our 1990 baseline).						almost 6 mln USD per year; at higher EUA prices the savings will increase accordingly	the corresponding operations that are economically feasible under the expected carbon price. This includes improvements to energy efficiency, switch to alternative fuels, particularly biomass, as well as the introduction of natural gas to some of our kilns where this fuel was previously considered not economic, and the use of clinker substitutes. CEMEX has also actively participated in the development	costs vary from almost 0 (improved operational practices) to several million USD. Since 2005 CEMEX has invested a total of more than 196 million USD in alternative fuel projects. The transaction costs for an offset project can reach a million USD over its lifetime. Public affairs activities are estimated to require a total of 2 person-years/y at a full cost of

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	For example, with less GHG-intensive alternative fuels making up more than 28% of our kiln fuel needs in 2013, we are the industry leader in fuel substitution. Under a cap and trade scheme (or likewise a carbon tax) the resulting lower carbon footprint will directly translate into a cost advantage							of carbon capture and storage as a potential long-term solution. In addition, CEMEX has developed a portfolio of offset projects to reduce our exposure to the existing and emerging trading schemes. Finally, CEMEX maintains constant dialogue with policy makers to ensure that they understand our concerns regarding competitiveness and maintain or improve corresponding legislation.	some 400 kUSD
Product	A number	New	Up to 1	Indirect	Very	High	A French study ("Carbon	In our public	Public

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
efficiency regulations and standards	of 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.	products/business services	year	(Client)	likely		Constrained Scenarios" by FONDDRRI, http://www.iddri.org/Publications/Rapports-and-briefing-papers/08_Fondddri_summary-for-industrial-decision-makers.pdf) finds that demand for cement in 2050 would increase by 4.5% to 16% compared to BAU in scenarios of massive decarbonization of the economy, and energy efficiency in buildings has been identified as one of the major drivers for this increase. Based on these numbers the additional sales volume for CEMEX is estimated to be in the range of several bln USD per year.	and institutional relations efforts, we highlight the large and relatively low-cost potential for emission reductions in the building sector, e.g. in position papers, marketing materials, but also in direct interaction with political and other decision makers. In parallel, CEMEX is developing new products and constructive solutions to address the future challenges. These include, for instance, our recently launched	affairs activities are estimated to require a total of 2 person-years/y at a full cost of some 400 kUSD. The cost of developing a new product will depend on a number of circumstances and are difficult to quantify in a generic way. On top of the R&D there are expenses for e.g. certification and market introduction that are typically higher than the actual development cost. While total cost for

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>This will open a number of opportunities for CEMEX: *Significantly lowering total energy consumption of buildings will most likely require an increased replacement 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-</p>							<p>FORTIS concrete that reduces the cost of Insulated Concrete Forms (ICF) and makes this energy-efficient building solution more attractive financially</p>	<p>a new product can be as low as a few kUSD it can also reach a million USD range if the product is complex and introduced in many markets.</p>

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>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</p>								

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	edge and will allow for higher margins on these new products.								

CC6.1b

Please describe the inherent opportunities that are driven by changes in physical climate parameters

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in precipitation extremes and droughts	Extreme rainfall can cause significant damage to infrastructure and buildings. More frequent and more extreme weather events will very likely increase demand for our products as both structures for water management (such as dams)	Increased demand for existing products/services	>6 years	Indirect (Client)	Very likely	Medium-high	The potential opportunities related to physical impacts of climate change can only be roughly estimated at the moment. If we take as an example the US: Given CEMEX' presence in those areas that are most	The methods to manage these opportunities are stakeholder information (about our products) as well as the development of new products and constructive solutions that better cope with physical consequences of climate change. For	There are virtually no additional climate change-related costs for stakeholder information as this is part of our normal marketing activities. The cost of developing a new product will depend on a number of circumstances

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	as well as more flood-resistant construction in general are likely to require more concrete. In the case of our current markets we consider that the Southern US, Latin America, and south-east Asia are most likely to be hit by these developments.						likely to be hit by extreme weather events a massive switch from wooden houses to concrete solutions could boost sales of our US operations by more than 10% or 250+ million USD per year.	example, CEMEX has developed low-cost concrete houses that are resilient to disaster.	and are difficult to quantify in a generic way. On top of the R&D there are expenses for e.g. certification are market introduction that are typically higher than the actual development cost. While total cost for a new product can be as low as a few kUSD it can also reach a million USD range if the product is complex and introduced in many markets.
Other physical climate opportunities	Every year tropical cyclones and other extreme wind events destroy numerous houses; many of these houses were built in lightweight construction and would most likely	Increased demand for existing products/services	>6 years	Indirect (Client)	About as likely as not	Medium-high	The potential opportunities related to physical impacts of climate change can only be roughly estimated at the moment. If we take as an example the	The methods to manage these opportunities are stakeholder information (about our products) as well as the development of new products and constructive solutions that	There are virtually no additional climate change-related costs for stakeholder information as this is part of our normal marketing activities. The cost of

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>have survived had they been built as a massive construction in concrete. Increased frequency and severity of those events would therefore drive a change in construction patterns and lead to an increased demand for our products. In the case of our current markets we consider that the Southern US, Latin America, and south-east Asia are most likely to be hit by these developments if they materialize.</p>						<p>US: Given CEMEX' presence in those areas that are most likely to be hit by extreme weather events a massive switch from wooden houses to concrete solutions could boost sales of our US operations by more than 10% or 250+ million USD per year.</p>	<p>better cope with physical consequences of climate change. For example, CEMEX has developed low-cost concrete houses that are resilient to disaster.</p>	<p>developing a new product will depend on a number of circumstances and are difficult to quantify in a generic way. On top of the R&D there are expenses for e.g. certification and market introduction that are typically higher than the actual development cost. While total cost for a new product can be as low as a few kUSD it can also reach a million USD range if the product is complex and introduced in many markets.</p>

CC6.1c

Please describe the inherent opportunities that are driven by changes in other climate-related developments

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Reputation	<p>CX is committed to being a leader in delivering a low carbon economy and developing resilience in the built environment to cope with the increased frequency of weather extremes resulting from climate change. A positive reputational spillover would bring a number of benefits for CEMEX: *</p> <p>Increased demand as a preferred provider: CEMEX perceives that construction professionals around the world increasingly consider sustainability aspects, including the track record and reputation of the provider, when</p>	Wider social benefits	>6 years	Direct	Likely	High	<p>Experience shows that a negative reputation typically has larger financial implications than a positive reputation. We therefore estimate that the opportunity (potential upside in sales) is roughly half of the risk (potential downside in sales) discussed under the reputational risk in 5.1c, i.e. a potential increase of sales by 5% (the equivalent of 125 mln USD per year in a country like the US).</p>	<p>All of the elements in CEMEX' climate change strategy are supposed to contribute to the seizure of this opportunity, i.e. technical reduction measures, interaction with stakeholders, information about the life-cycle performance and other characteristics of our products, development of new products and solutions.</p>	<p>Total cost is the sum of the costs discussed in 6.1. However, it is difficult to sum them up as many of the items are not only related to climate change and in addition show significant variability from year to year. A cost breakdown in a TYPICAL year may look like the following:</p> <ul style="list-style-type: none"> - Investments in new technology (e.g. alternative fuels handling): several tens of million USD - Development of new products and solutions: several million USD - Public Affairs: ca. 400 kUSD

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>choosing materials. Although this is currently a niche, we see clear signs that the market segments where sustainability credentials in general and a credible and responsible position on climate change are relevant factors is supposed to grow. * License to operate: Companies that manage climate change and sustainability issues well have a better reputation and are more trusted by political policy makers; this can facilitate the dialogue on concrete projects, but also on legislative proposals. * Access to capital:</p>								

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	A good reputation will increase attractiveness of the company for both shareholders and lenders. A growing number of initiatives and activities such as the Carbon Disclosure Project show clearly that the financial community increasingly considers sustainability-related information in the investment process.								
Changing consumer behaviour	A number of studies have underlined the value of concrete as a sustainable material in general; many of them have also found that buildings and structures made of concrete often perform better in	Increased demand for existing products/services	>6 years	Direct	Likely	High	We estimate that the positive impact of this opportunity could be of a similar size than that of the reputational opportunity described in the previous line, i.e. some	CEMEX is engaged in a number of efforts to provide its stakeholders with factual information about the environmental performance of its products. The most important examples are:	Our financial contribution to the MIT Concrete Sustainability Hub is indirect, via membership in both PCA and NRMCA. In-kind contributions (expertise, data etc.) are immaterial. The

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>terms of GHG emissions over their whole life cycle than alternatives made of other materials. Nonetheless many stakeholders still perceive concrete as an unsustainable construction material. The correction of this misperception would increase demand for our products from environmentally conscious customers the share of which is constantly growing, particularly in developed markets such as the US or Europe .</p>						125 mln USD for the US.	<p>CEMEX, as a member of the US Portland Cement Association (PCA) and the National Ready-Mix Concrete Association (NRMCA) Similarly CX supports, via membership of CEMBUREAU, the European Concrete Platform which seeks to 'promote concrete as the material of choice providing building solutions for sustainable development and sustainable construction.' CEMEX has started to provide Carbon Footprint data on a cradle-to-gate basis to its stakeholders. In the last year, coverage of our</p>	<p>one-off cost for the development and implementation of the Carbon Footprint tool was in the range of 200 kUSD</p>

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								Carbon Footprint has reached 100% of our total production.	

CC6.1d

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1e

Please explain why you do not consider your company to be exposed to inherent opportunities driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1f

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading

Page: CC7. Emissions Methodology

CC7.1

Please provide your base year and base year emissions (Scopes 1 and 2)

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Mon 01 Jan 1990 - Mon 31 Dec 1990	41002736
Scope 2	Mon 01 Jan 1990 - Mon 31 Dec 1990	1800964

CC7.2

Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use
WBCSD: The Cement CO2 and Energy Protocol
Other

CC7.2a

If you have selected "Other" in CC7.2 please provide details of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 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 2014; 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).

CC7.3

Please give the source for the global warming potentials you have used

Gas	Reference
CO2	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	IPCC Fourth Assessment Report (AR4 - 100 year)
PFCs	IPCC Fourth Assessment Report (AR4 - 100 year)
SF6	IPCC Fourth Assessment Report (AR4 - 100 year)

CC7.4

Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data at the bottom of this page

Fuel/Material/Energy	Emission Factor	Unit	Reference
Other: Cement Clinker	0.525	metric tonnes CO2e per metric tonne	WBCSD Cement CO2 & Energy Protocol v3

Further Information

Please note: Our baseline emissions in the year 1990 refer to scope 1 and scope 2 of our cement operations only (estimated 99.2% of total scope 1 and 87.5% of scope 2, respectively, in 2014). They do not include direct or energy-related indirect emissions from readymix concrete, aggregates, and asphalt businesses that are reported in sections 9 and 10 of this document. Re CC7.4: - The emission factor given refers to process emissions only (calcination of raw meal) - Fuel-related emission factors are given in the attached xls file. Please note: These default factors from the WBCSD Cement CO2 & Energy Protocol are indicative; in many cases plant-specific factors (based on chemical composition and lower heating value) are used

Attachments

[https://www.cdp.net/sites/2015/86/2986/Climate Change 2015/Shared Documents/Attachments/ClimateChange2015/CC7.EmissionsMethodology/CSI CO2 Emission Factors.xlsx](https://www.cdp.net/sites/2015/86/2986/Climate%20Change%202015/Shared%20Documents/Attachments/ClimateChange2015/CC7.EmissionsMethodology/CSI%20CO2%20Emission%20Factors.xlsx)

Page: **CC8. Emissions Data - (1 Jan 2014 - 31 Dec 2014)**

CC8.1

Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Financial control

CC8.2

Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e

43122401

CC8.3

Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e

4095375

CC8.4

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

CC8.4a

Please 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	Relevance of Scope 1 emissions from this source	Relevance of Scope 2 emissions excluded from this source	Explain why the source is excluded
Building Product Operations	Emissions are not relevant	Emissions are not relevant	Small emissions compared to other business; however, future reporting envisaged.
Logistics Operations	No emissions excluded	Emissions are not relevant	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

Source	Relevance of Scope 1 emissions from this source	Relevance of Scope 2 emissions excluded from this source	Explain why the source is excluded
			party transportation would be extremely data intensive).
Offices	Emissions are not relevant	Emissions are not relevant	Small emissions compared to other businesses

CC8.5

Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions figures that you have supplied and specify the sources of uncertainty in your data gathering, handling and calculations

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	More than 2% but less than or equal to 5%	Extrapolation Sampling Other: Emission Factors	In our cement plants accuracy is reasonably high since most input values (clinker production, fuel consumption) are routinely recorded for other purposes. The main source of uncertainty are the emission factors. For non-cement operations (that make up 1.3% of total scope 1 emissions, the uncertainty is higher (10% - 20%), mainly due to extrapolation from aggregate data and potential issues with organizational scopes (e.g. inclusion or exclusion of fuel consumption for downstream delivery). The level of certainty in 2013 has increased in accordance with the applicable accreditation and verification regulations for those countries covered by the European Union Emissions Trading System (EU ETS), which factor and results are matching with our CSI main outputs. The cement operation in represents 98.7 of the total CEMEX Scope 1 emissions for 2014.
Scope 2	More than 2% but less than or equal to 5%	Extrapolation Sampling Other: Emission Factors	All our facilities meter electricity consumption so the main source of uncertainty are the published factor CO2/MWh, since those are taken from external sources. The cement operation in represents 87.1 of the total CEMEX Scope 2 emissions for 2014.

CC8.6

Please indicate the verification/assurance status that applies to your reported Scope 1 emissions

Third party verification or assurance complete

CC8.6a

Please provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements

Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
Limited assurance	https://www.cdp.net/sites/2015/86/2986/Climate Change 2015/Shared Documents/Attachments/CC8.6a/Assurance Report - CEMEX 2014 Auditor Letter v4.pdf	1-2	ISAE3000	99

CC8.6b

Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emissions Monitoring Systems (CEMS)

Regulation	% of emissions covered by the system	Compliance period	Evidence of submission
------------	--------------------------------------	-------------------	------------------------

CC8.7

Please indicate the verification/assurance status that applies to your reported Scope 2 emissions

Third party verification or assurance complete

CC8.7a

Please provide further details of the verification/assurance undertaken for your Scope 2 emissions, and attach the relevant statements

Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)
Limited assurance	https://www.cdp.net/sites/2015/86/2986/Climate Change 2015/Shared Documents/Attachments/CC8.7a/Assurance Report - CEMEX 2014 Auditor Letter v4.pdf	1-2	ISAE3000	87

CC8.8

Please identify if any data points have been verified as part of the third party verification work undertaken, other than the verification of emissions figures reported in CC8.6, CC8.7 and CC14.2

Additional data points verified	Comment
Other: KPIs not related to climate change	Verification has also covered health & safety-related and non-GHG emissions-related KPIs

CC8.9

Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

Yes

CC8.9a

Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2

2037420

Further Information

Page: CC9. Scope 1 Emissions Breakdown - (1 Jan 2014 - 31 Dec 2014)

CC9.1

Do you have Scope 1 emissions sources in more than one country?

Yes

CC9.1a

Please break down your total gross global Scope 1 emissions by country/region

Country/Region	Scope 1 metric tonnes CO2e
Americas	27147434
Asia, Australasia, Middle East and Africa	6885890
Europe	1977860
United Kingdom	1132260
Spain	2672020
Poland	1416410
Germany	1890527

CC9.2

Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By business division

CC9.2a

Please break down your total gross global Scope 1 emissions by business division

Business division	Scope 1 emissions (metric tonnes CO2e)
Cement	42764470
Ready-Mix Concrete	91429
Aggregates	221631
Asphalt	44871

CC9.2b

Please break down your total gross global Scope 1 emissions by facility

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
----------	--	----------	-----------

CC9.2c

Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 emissions (metric tonnes CO2e)
----------	--

CC9.2d

Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 emissions (metric tonnes CO2e)
----------	--

CC9.2e

Please break down your total gross global Scope 1 emissions by legal structure

Legal structure	Scope 1 emissions (metric tonnes CO2e)
-----------------	--

Further Information

Page: CC10. Scope 2 Emissions Breakdown - (1 Jan 2014 - 31 Dec 2014)

CC10.1

Do you have Scope 2 emissions sources in more than one country?

Yes

CC10.1a

Please break down your total gross global Scope 2 emissions and energy consumption by country/region

Country/Region	Scope 2 metric tonnes CO2e	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted for in CC8.3 (MWh)
Rest of world	1083670	2322214	0
Americas	2544527	5036000	0
Germany	274469	512198	0
United Kingdom	192709	406513	0

CC10.2

Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

By business division

CC10.2a

Please break down your total gross global Scope 2 emissions by business division

Business division	Scope 2 emissions (metric tonnes CO2e)
Cement	3582613
Ready-Mix Concrete	109823
Aggregates	402939

CC10.2b

Please break down your total gross global Scope 2 emissions by facility

Facility	Scope 2 emissions (metric tonnes CO2e)
-----------------	---

CC10.2c

Please break down your total gross global Scope 2 emissions by activity

Activity	Scope 2 emissions (metric tonnes CO2e)

CC10.2d

Please break down your total gross global Scope 2 emissions by legal structure

Legal structure	Scope 2 emissions (metric tonnes CO2e)

Further Information

Page: CC11. Energy

CC11.1

What percentage of your total operational spend in the reporting year was on energy?

More than 45% but less than or equal to 50%

CC11.2

Please state how much fuel, electricity, heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year

Energy type	MWh
Fuel	54586037

Energy type	MWh
Electricity	8276925
Heat	0
Steam	0
Cooling	0

CC11.3

Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Petroleum coke	20889527
Bituminous coal	12002311
Lignite	175153
Natural gas	1696123
Diesel/Gas oil	387446
Other: Alternative Fuels	14597622
Motor gasoline	5525
Shale oil	8889
Distillate fuel oil No 6	4823441

CC11.4

Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the Scope 2 figure reported in CC8.3

Basis for applying a low carbon emission factor	MWh associated with low carbon electricity, heat, steam or cooling	Comment
No purchases or generation of low carbon electricity, heat, steam or cooling accounted with a low carbon emissions factor	0	As a conservative approach CEMEX takes a system view and uses average grid factors for all power consumption, even if contractual and / or physical supply is from low-carbon sources.

Further Information

Page: CC12. Emissions Performance

CC12.1

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

Increased

CC12.1a

Please 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

Reason	Emissions value (percentage)	Direction of change	Comment
Emissions reduction activities	0.5	Decrease	Emission reduction activities partly offset the emission increases by change in output and other effects as mentioned below. Without those emission reduction activities our GHG emissions would have been higher by some 216 kt CO2-eq or 0.5%.
Divestment			
Acquisitions			
Mergers			

Reason	Emissions value (percentage)	Direction of change	Comment
Change in output	5.9	Increase	Global output (weighted with emissions intensity) of cementitious materials, aggregates and concrete grew by 5.4% compared to the previous year, resulting in an emissions increase of close to 2.4 mln t CO ₂ -eq; in addition, unusually high build-up of clinker inventories and increased clinker exports mean an additional production that – converted to cementitious materials at the average clk/cementitious factor for CEMEX – corresponds to an additional production of cementitious materials of 0.5% or 219 kt CO ₂ -eq. (Note: In the methodology chosen every ton of clinker inventory buildup or export is accounted for as 1 ton of cementitious material although – in future years or outside CEMEX – typically around 1.3 tons of cementitious materials are produced from it (with no additional scope 1 emissions); this means that total cementitious production from our clinker production in 2014 grows more than what is reflected in the methodology. This effect has been estimated in order to ensure comparability of 2014 and 2013 figures using the following approach: - only net increases in clinker inventory buildup and clinker exports are considered; - the clinker-to-cementitious ratio used is that of CEMEX in 2014 (76.5%); - additional scope 2 emissions (electricity for finish grinding) in the production of this cementitious material are calculated; the emission increase reported above is already net of this effect)
Change in methodology			
Change in boundary	0.1	Increase	The inclusion of scope 1 emissions from our asphalt plants in the UK increased total emission levels by around 45 kt CO ₂ -eq or 0.1%.
Change in physical operating conditions			
Unidentified			
Other	0.9	Increase	Two additional effects have been identified: 1. A shift of production to countries where specific emissions are higher (due to e.g. market conditions or availability of low-carbon fuels) led to an increase of some 270 kt CO ₂ -eq or 0.6%. 2. An increase in the average emission factor for power (scope 2) of some 4% led to additional emissions of 154 kt CO ₂ -eq or 0.3%.

CC12.2

Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO₂e per unit currency total revenue

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
0.003006	metric tonnes CO2e	unit total revenue	3.2	Increase	- Subdued prices in markets that increased volume more than average. Divestment of activities in the value chain with negligible scope 1 and 2 emissions (e.g. precast concrete business in Germany).

CC12.3

Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per full time equivalent (FTE) employee

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
1074	metric tonnes CO2e	FTE employee	2.0	Decrease	Year-on-year fluctuations in number of FTEs. Emission reduction activities.

CC12.4

Please provide an additional intensity (normalized) metric that is appropriate to your business operations

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
0.709	metric tonnes CO2e	Other: metric tonne of cementitious product	1.0	Increase	Regional shift - higher percentage of production in markets with higher per unit emissions. Higher emission factor for scope 2. Emission reduction activities partly offset this effect.
0.00361	metric tonnes CO2e	Other: cubic meters of readymix concrete	1.5	Increase	Regional shift - higher percentage of production in markets with higher per unit emissions. Normal year-to-year fluctuations. Note: Considers only scope 1+2 of readymix operations, not emissions from production of cement used.
0.00463	metric tonnes CO2e	Other: metric tonne of aggregate	4.6	Decrease	Emission reduction activities (e.g. energy efficiency, optimization of plant logistics): -0.5% (estimate). Normal year-to-year fluctuations: -4.1% (estimate).

Further Information

Page: CC13. Emissions Trading

CC13.1

Do you participate in any emissions trading schemes?

Yes

CC13.1a

Please complete the following table for each of the emission trading schemes in which you participate

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership
European Union ETS	Wed 01 Jan 2014 - Wed 31 Dec 2014	9971891	0	8826186	Facilities we own and operate
European Union ETS	Tue 01 Jan 2013 - Tue 31 Dec 2013	11694717	0	7953048	Facilities we own and operate
European Union ETS	Sun 01 Jan 2012 - Mon 31 Dec 2012	14359826	0	7988055	Facilities we own and operate

CC13.1b

What is your strategy for complying with the schemes in which you participate or anticipate participating?

Emissions Reductions: CEMEX implements projects to reduce its emissions (including the use of alternative fuels or clinker substitutes) wherever this is economically justified, considering current and expected future prices of CO2 emission allowances.

Offset 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; these projects, primarily registered under the UNFCCC's CDM and the US' VCS, are not only implemented in our own plants, but can be upstream (e.g. wind power for our Mexican plants, fuel switching) or downstream (use of our products for more CO2-efficient buildings or infrastructure; no project registered yet).

Trading: CEMEX actively participates in trading in order to optimize its position and ensure compliance.

Monitoring: In addition to the mandatory monitoring, reporting, and verification required by the EU 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.

CC13.2

Has your organization originated any project-based carbon credits or purchased any within the reporting period?

Yes

CC13.2a

Please provide details on the project-based carbon credits originated or purchased by your organization in the reporting period

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits cancelled	Purpose, e.g. compliance
Credit Origination	Other: Alternative Fuel Substitution	3706	CDM (Clean Development Mechanism)	27467	27467	No	Compliance

Further Information

Page: CC14. Scope 3 Emissions

CC14.1

Please account for your organization's Scope 3 emissions, disclosing and explaining any exclusions

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Relevant, calculated	5485877	Calculated from data collected with the CEMEX CO2 Footprint methodology from 2013 taking the production volume from 2014; 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).	0.00%	
Capital goods	Not relevant, explanation provided				Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (development of sector-specific Scope 3 guidance).
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Relevant, calculated	2015130	Calculated based on detailed energy consumption figures (taken from the protocol for Scope 1+2 emissions) and emission factors for cradle-to-gate GHG emissions from LCA database.	0.00%	
Upstream transportation and distribution	Relevant, calculated	1888738	Calculated from data collected with the CEMEX CO2 Footprint methodology from 2013 taking the production volume from 2014; 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).	0.00%	
Waste generated in operations	Not relevant, explanation provided				Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (development of sector-specific Scope 3 guidance).
Business travel	Not relevant,				Determined as potentially relevant in

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
	explanation provided				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	Not relevant, explanation provided				Determined as potentially relevant 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	Not relevant, explanation provided				Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (development of sector-specific Scope 3 guidance).
Downstream transportation and distribution	Relevant, calculated	849619	Seaborne transportation of clinker and cement by our trading operations, based on total distance traveled and assessment of specific fuel consumption	0.00%	
Processing of sold products	Not relevant, explanation provided				Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (development of sector-specific Scope 3 guidance).
Use of sold products	Not relevant, explanation provided				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

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					consider those emissions not relevant; however, we are aware of the potentially positive impact that the use of our products has (see also 3.2).
End of life treatment of sold products	Not relevant, explanation provided				Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (development of sector-specific Scope 3 guidance).
Downstream leased assets	Not relevant, explanation provided				Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (development of sector-specific Scope 3 guidance).
Franchises	Not relevant, explanation provided				Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (development of sector-specific Scope 3 guidance).
Investments	Not relevant, explanation provided				Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (development of sector-specific Scope 3 guidance).
Other (upstream)	Not relevant, explanation provided				Determined as not relevant in assessment by Cement Sustainability Initiative within the World Business Council for Sustainable Development (development of sector-specific Scope 3 guidance).
Other	Not relevant,				Determined as not relevant in assessment

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
(downstream)	explanation provided				by Cement Sustainability Initiative within the World Business Council for Sustainable Development (development of sector-specific Scope 3 guidance).

CC14.2

Please indicate the verification/assurance status that applies to your reported Scope 3 emissions

No third party verification or assurance

CC14.2a

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of Scope 3 emissions verified (%)

CC14.3

Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?

Yes

CC14.3a

Please identify the reasons for any change in your Scope 3 emissions and for each of them specify how your emissions compare to the previous year

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Purchased goods & services	Emissions reduction activities	0.6	Decrease	E.g. lower clinker-to-cement ratio, lower cement-to-concrete ratio Note: Scope 3 emissions in this category for the previous year were corrected upwards to account for the omission of cements purchases in one region in the CDP 2014 report.
Fuel- and energy-related activities (not included in Scopes 1 or 2)	Change in output	5.9	Increase	Change in output is the main driver.
Fuel- and energy-related activities (not included in Scopes 1 or 2)		3.7	Increase	Change in fuel mix to fuels with higher upstream footprint
Upstream transportation & distribution	Change in output	5.9	Increase	
Upstream transportation & distribution	Change in methodology	44	Decrease	Correction of overestimated emission factors for road transport.

CC14.4

Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)

Yes, our suppliers
Yes, our customers

CC14.4a

Please give details of methods of engagement, your strategy for prioritizing engagements and measures of success

CEMEX recognizes that significant emission reductions cannot be achieved by focusing on one link of the value chain only. Therefore CEMEX has played a leading role in the engagement of the full value chain.

The strategy for engaging our value chain is characterized by our goal to get the maximum positive impact out of available resources; some of the key positive impacts considered when prioritizing are:

- Commercial side benefits such as development of low-cost fuels or generation of carbon credits
- Emission reduction potential in the whole value chain
- Other environmental or wider sustainability benefits (e.g. health and safety)
- Potential for roll-out in other business units

A key tool for engaging the whole value chain is our Carbon Footprint calculator; in this context this software serves various purposes:

- Identify hot spots in our supply chain (--> prioritization of engagement)
- Benchmark operations against each other (--> identification of reduction potential)
- Measure progress
- Inform clients about the full carbon footprint of our products (--> optimization of downstream processes)

Some examples of our activities:

Some of our business units, e.g. Spain, have started sustainability programs for their suppliers; these pilot programs cover a variety of topics, including climate change, and aim at sharing best practices, defining minimum standards etc.

Another success story is the collaboration with (mostly local) companies to source alternative fuels; over more than a decade CEMEX has worked with many of those companies to collaboratively explore markets of e.g. agricultural and municipal wastes, establish and implement quality standards, and develop joint projects.

In order to reduce scope 2 emissions CEMEX has developed and continues to develop (together with supplier Acciona) a number of wind power projects in Mexico that have a combined emission reduction potential of 1.2 mln t CO₂/yr.

CEMEX has also started closer collaboration with the downstream value chain. Our consultancy service for sustainable construction enables our customers, among others, to build more energy-efficient buildings.

CC14.4b

To give a sense of scale of this engagement, please give the number of suppliers with whom you are engaging and the proportion of your total spend that they represent

Number of suppliers	% of total spend	Comment
300	25%	Numbers are estimates as a large fraction of our purchases are decentralized and we do not yet centrally track all climate change-related activities with our suppliers at local level.

CC14.4c

If you have data on your suppliers' GHG emissions and climate change strategies, please explain how you make use of that data

How you make use of the data	Please give details
Identifying GHG sources to prioritize for reduction actions	Information (where available) is integrated into our Carbon Footprint Tool that servers, among other purposes, to identify hotspots.

CC14.4d

Please explain why you do not engage with any elements of your value chain on GHG emissions and climate change strategies, and any plans you have to develop an engagement strategy in the future

Further Information

Module: Sign Off

Page: CC15. Sign Off

CC15.1

Please provide the following information for the person that has signed off (approved) your CDP climate change response

Name	Job title	Corresponding job category
Ignacio Madridejos	President CEMEX Northern Europe, Energy and Sustainability	Board/Executive board

Further Information

[CDP 2015 Climate Change 2015 Information Request](#)