C0. Introduction

C0.1

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

Holcim is the global leader in building materials and solutions and active in four business segments: Cement, Aggregates, Ready-Mix Concrete and Solutions & Products. Following our pledge to net zero, our ambition is to lead the industry in reducing carbon emissions and shifting towards low-carbon construction.

CEMENT

We offer an extensive line of sustainable and innovative cements and hydraulic binders. At a basic level, the market can be broadly segmented into bag and bulk cement, with emerging markets generally the largest consumers of bagged cement. Industrialized countries are mainly bulk markets, as cement is mainly consumed by larger business-to-business customers such as construction companies or building products manufacturers. We are constantly working on making ever-more sustainable cement, whether by reducing carbon emissions from its manufacture or by closing the building materials lifecycle. Our circular cement Susteno, for example, has 20% recycled concrete inside.

READY-MIX CEMENT

Customers value the quality and consistency of our ready-mix concrete products, the breadth of our portfolio, our expertise in large projects, and our flexibility and reliability. We also offer a range of innovative concretes including self-leveling concrete, architectural concrete, insulating concrete and pervious concrete. We also innovate for sustainable materials and are increasing our portfolio of low-carbon concrete solutions. In 2021 ECOPact, the industry's broadest range of green concrete, delivered high-performing, sustainable and circular benefits in 24 markets worldwide. DYNAMax, the ultimate performance concrete, is also being launched in Europe, Latin America, North America and Asia Pacific.

AGGREGATES

Our aggregates are used as raw materials for concrete, masonry and asphalt and as base materials for roads, landfills and buildings. As such, they are a key component of construction. Crushed stone, gravel and sand are all typical aggregates. Most aggregates are produced by blasting hard rock from quarries and then extracting and crushing it. Aggregate production also involves the extraction of sand and gravel from both land and marine locations. Increasingly, we supply recycled aggregates, which can be made from construction waste. These recycled aggregates replace the need for quarry extraction and contribute to a truly circular economy in the construction industry.

SOLUTIONS & PRODUCTS

Solutions & Products is our growth segment, with a target to generate 30% of net sales by 2025. Growing closer to our customers, we will expand our range of integrated solutions and systems from construction and energy efficiency to repair and refurbishment. This builds on our 2021 acquisition of Firestone Building Products, a global leader in roofing systems, as a new growth and innovation engine for our company. Roofing sales already delivered double-digit growth in the USD 50 billion global flat roofing market in 2021, and we aim to double that to USD 4 billion by 2025. This will be supported by Malarkey Roofing Products, a leader in the US residential roofing market, which we agreed to acquire at the end of 2021.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2021	December 31 2021	Yes	1 year

C0.3

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

Algeria
Argentina
Australia
Austria
Azerbaijan
Bangladesh
Belgium
Brazil
Bulgaria
Canada
China
Colombia
Costa Rica
Croatia
Czechia
Ecuador
Egypt
El Salvador
France
Germany
Greece
Hungary
India
Iraq
Italy
Jordan
Kenya
Lebanon
Mexico
New Zealand
Nicaragua
Nigeria
Philippines
Poland
Romania
Russian Federation
Serbia
South Africa
Spain
Switzerland
Uganda
United Arab Emirates
United Kingdom of Great Britain and Northern Ireland
United Republic of Tanzania
United States of America
Zimbabwe

C0.4

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

CHF

C0.5

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

Financial control

C-CE0.7

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

Limestone quarrying
Clinker production
Portland cement manufacturing
Blended cement
Belite cements
Alternative ‘low CO2’ cementitious materials production
Aggregates production
Concrete production
Concrete pavement / asphalt / tarmac

C0.8

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

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	CH0012214059

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual(s)	Please explain
Board-level committee	The Board of Directors has the ultimate responsibility for the Group strategy and overall governance of the company, including Holcim's climate strategy. The Holcim Board of Directors consists of 12 members, 11 all of whom are independent, were not previously members of the Holcim management, and have no important business connections with Holcim. Holcim keeps the functions of Chairman of the Board of Directors and Group CEO separate. Through the Audit Committee (AC) and the Health, Safety and Sustainability Committee (HSSC), the Board of Directors oversees Holcim risk management and Internal Control process, including sustainability and climate change related risks and opportunities. The HSSC reviews and approves the company's climate-related plans and targets. The HSSC consists of five Board members. The Chairman of the Board of Directors (unless they are a member of the HSSC), the Vice Chairman, the Group CEO, the Group Chief Sustainability and Innovation Officer (CSIO), the Group General Counsel, the Group Head of Security and the Group Head of Health, Safety and Environment participate as invited guests. The HSSC meets at least quarterly. The HSSC supports and advises the Board of Directors on the development and promotion of a healthy and safe environment for employees and contractors, as well as on sustainable development and social responsibility. In 2021 the main climate related focus areas were: • Holcim's net-zero pathway including the first in the industry with 2030 and 2050 targets validated by the Science-Based Targets initiative (SBTi) • Circular economy strategy including construction and demolition waste • "Say on Climate" – a non-binding shareholders' vote on corporate climate performance at the AGM. In 2021, the HSSC approved the net zero pathway to 2030 and 2050 as well as the "Say on Climate" report for the 2022 AGM. The "Say on Climate" report was additionally approved by the full Board of Directors prior to the non-binding shareholders' vote on corporate climate performance at the AGM.
Other C-Suite Officer	The Holcim Executive Committee consists of 10 members. Holcim aims to achieve a balanced relationship between management and control by keeping the functions of Chairman of the Board of Directors and CEO separate. The Holcim Executive Committee is ultimately responsible for the Holcim Climate and Energy strategy execution. On a quarterly basis, the Executive Committee is briefed on key climate related aspects as well as on performance against key climate performance indicators. The Group Executive Committee's key climate related responsibilities: - informs and reviews the Holcim's climate strategy framework and ambition review process - is briefed on a quarterly basis on key climate related aspects as well as on performance against key indicators - approves climate-related capital expenditures, acquisitions and /or divestitures.

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	<Not Applicable>	The Board of Directors has a dedicated Committee; the Health, Safety & Sustainability Committee (HSSC). The committee consists of five Board members and meets at least quarterly. This committee's mandate is to provide advice on strategic direction and the development and promotion of safety and sustainability, explicitly including Climate and Energy related topics. The entire Board of Directors is included in the Business Risk Management (BRM) process and is thus regularly updated on climate related risks and opportunities, as well as potential scenarios in carbon price regulation systems such as EU-ETS. In line with the Group's Delegated Authorities, major capital investments, including those that are climate related with other environmental and societal considerations require an assessment and ultimately approval by the Board. In 2021 the main climate related climate related focus areas of the HSSC were: • Holcim's net-zero pathway including the first in the industry with 2030 and 2050 targets validated by the Science-Based Targets initiative (SBTi) • Circular economy strategy including construction and demolition waste • "Say on Climate" – a non-binding shareholders' vote on corporate climate performance at the AGM

C1.1d

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

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	Yes. At least one of Holcim's board members is very experienced in climate related issues and has a variety of engagements including Past President of FICCI Sustainability, Energy and Water Council, The Shakti Sustainable Energy Foundation, Global Commission on Economy & Climate as well as Chair of the India Sanitation Coalition. The competency of our board-members on climate-related issues was assessed based on the following criteria: (1) Experience and past positions held (2) Membership in public/private organizations that address climate-change issues.	<Not Applicable>	<Not Applicable>

C1.2

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

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Other C-Suite Officer, please specify (Health and Safety and Sustainability Board Committee)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Sustainability Officer (CSO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Risks Officer (CRO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Public affairs manager	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Not reported to the board

C1.2a

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

1 - Health and Safety and Sustainability Board Committee (HSSC):

i), ii) The Board of Directors has a dedicated Committee; the Health, Safety & Sustainability Committee (HSSC).

iii) This committee's mandate is to provide advice on strategic direction and the development and promotion of safety and sustainability, explicitly including Climate and Energy related topics. It consists of five Board members and meets at least quarterly. In 2021 the main climate related climate related focus areas of the HSSC were:

• Holcim's net-zero pathway including the first in the industry with 2030 and 2050 targets validated by the Science-Based Targets initiative (SBTi)

• Circular economy strategy including construction and demolition waste

• "Say on Climate" – a non-binding shareholders' vote on corporate climate performance at the AGM

2 - Chief Executive Officer (CEO):

i) The Group CEO reports to the Holcim Board of Directors, ii) He is the ultimate responsible for operational management of the company, including corporate climate strategy proposals and executing respective Boards resolutions.

iii) The Group CEO oversees the operational performance of the company against climate and energy targets. Their key climate related responsibilities:

- informs and reviews the Holcim's climate strategy framework and ambition review process

- is briefed on a quarterly basis on key climate related aspects as well as on performance against key indicators

- approves significant climate-related capital expenditures, acquisitions and /or divestitures, includes climate and other environmental and societal considerations

3 - Chief Sustainability Officer (CSIO):

i) Holcim uses Chief Sustainability and Innovation Officer (CSIO) as its official title for this position. Holcim Group's CSIO is a member of the Executive Committee and reports directly to the Group CEO. ii) She heads the Group Sustainability team, a cross-discipline department which is responsible for overseeing the deployment of the Holcim's Sustainability strategy including its Net-Zero Pledge.

iii) The CSIO is responsible for continuous reviews and guides climate-related items that could influence business strategy. In addition, she closely monitors any developments concerning climate-related issues by engaging with investors and analysts, NGOs, policy makers and trade associations. Her key climate related responsibilities:

- develops the Holcim's climate strategy framework and ambition review process

- briefs on a quarterly basis the Health, Safety and Sustainability Committee and Executive Committee on key climate related aspects as well as on performance against key indicators

- reviews the climate-related capital impact of expenditures, acquisitions and /or divestitures

- represents Holcim Group in a variety of climate related sectoral associations, such as the GCCA and WBCSD

4 - Chief Risks Officer:

i) Holcim uses Head Group Internal Audit & Risk Management as its official title for this position. Holcim's Head of Internal Audit & Risk Management is a member of the leadership team and reports directly to the Group CFO. He has direct access to the Audit Committee

ii) The Head of Internal Audit & Risk Management oversees the Group Holcim Enterprise Risk Management process, consolidates business risks and reports any relevant climate related risks to the Executive Committee and the Audit Committee of the Board.

iii) His key climate related responsibilities:

- develops and manages the Holcim Enterprise Risk Management process, ensuring the inclusion of all sustainability topics including climate and energy related aspects

- ensures proper implementation of the Holcim Enterprise Risk Management process throughout the Group

- briefs on a quarterly basis the Audit Committee on climate related risks and opportunities if necessary or if there were indications of high climate-related risk. A meeting is specifically dedicated to the Group Risk Report where sustainability and climate-related risks are presented and discussed

5 - Public Affairs Manager:

i) Holcim uses Public Affairs Head as its official title for this position. The Head of Public Affairs reports directly to the Group Head of Corporate Communications and ii) is responsible for the coordination of advocacy actions within Holcim and holds direct and specific responsibility for climate change related issues. As such, he ensures that the Group's long-term interests – in line with broader societal interests – are taken into account by public authorities. iii) He represents Holcim Group in a variety of climate related sectoral associations such as Cembureau and GCCA and monitors the evolving legislative environment on carbon pricing mechanisms in the countries where we operate.

C1.3

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

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	In recognition of the importance of mitigating the company's impact on the environment, the Nomination, Compensation and Governance Committee of the Board introduced a sustainability objective for the performance shares. The sustainability objective accounts for one-third of the performance share award and based on the three pillars of the sustainability strategy: • Climate and energy: reduction of CO2 emissions with a 50% weight • Circular economy: increased re-use of waste derived resources with a 25% weight • Environment: reduction of freshwater withdrawal with a 25% weight The specific targets will be determined based on the mid-term (2023) objectives communicated in the context of the sustainability strategy and reporting.

C1.3a

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

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Corporate executive team	Monetary reward	Emissions reduction target	The Holcim Group CEO and Executive Committee compensation is designed to reinforce the Holcim strategy. Its structure balances short-term and long-term performance, combines absolute and relative performance, and financial and non-financial metrics in measuring performance, and delivers compensation through a mix of cash and company shares. The compensation for members of the Executive Committee includes the following elements: - Fixed base salary - Pensions and benefits - Variable compensation: annual and long-term incentives In recognition of the importance of mitigating the company's impact on the environment, the Nomination, Compensation and Governance Committee of the Board decided to introduce a sustainability objective for the performance shares. The sustainability objective accounts for one-third of the performance share award and will encompass three pillars of the sustainability strategy: • Climate and energy: reduction of CO2 emissions with a 50% weight • Circular economy: increased re-use of waste derived resources with a 25% weight • Environment: reduction of freshwater withdrawal with a 25% weight The specific targets will be determined based on the mid-term (2022) objectives communicated in the context of the sustainability strategy and reporting.
Other, please specify (All employees entitled to a bonus)	Monetary reward	Emissions reduction target	The POWER Program is an Electrical Energy program, designed to accelerate the reduction of CO2 emissions (Scope 2) from the electricity we use in our operations: Increasing the use of Renewable Energy Rethinking the way we use electricity Eliminating any waste of energy Engaging everybody on new opportunities The POWER program is a mandatory part, across all countries, of the Health, Safety and Environment Improvement Plan (HSE-IP) that forms part of the Health, Safety and Environment objective representing 15% of the annual incentive.

C2. Risks and opportunities

C2.1

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

Yes

C2.1a

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

	From (years)	To (years)	Comment
Short-term	0	3	Our horizon for the risk management cycle is a 3 year time frame in alignment with the mid-term plan (MTP) as we define the risk as an uncertainty on the achievement of company objectives.
Medium-term	3	10	We extend the framework to 10 years in order to capture potential disruptions regarding sustainability as our targets aim at achieving a decrease in greenhouse emissions by 2030.
Long-term	10	40	In alignment with the International Energy Agency Low-carbon Technology Road Transition for the Cement Industry, our vision expands until 2050 to explore all opportunities of the scale-up phase of innovative technologies.

C2.1b

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

We define substantive impact as all major adverse events or missed opportunities that may impact our ability to achieve our financial and strategic objectives. We consider strategic objectives, **our financial objectives as well as our sustainability commitments and operational targets**, among which climate is a key element. **The risk horizon where climate risks are assessed** includes both the short- to medium-term, typically a 3 year period of time as for any other business risks and the medium- to long term (10 years) in alignment with our sustainability targets and CO2 roadmap (2030). Long term risks and opportunities (up to 2050) have been assessed as part of our scenario planning, where we've tested the resilience of our strategy as well as the opportunities offered by innovative technologies using externally recognized scenarios.

- At country level, the risk assessment involves all business areas. Involvement of the country ExCo and country CEO is required before submission (to Group). The objective is to make sure that all potential areas of concerns are included in the risk map, and also to ensure that the risk assessment follows a forward-looking approach integrating the potential risks arising from the strategic initiatives / projects that might occur in the next 3 years
- At Group level, we collect risk assessments from the countries, then all risks are consolidated and aggregated assessments adjusted in order to take into consideration insights from stakeholders at Group level. So both local and global impacts are considered.

Scope of value chain

- In the assessments **we considered both direct operations and supply chain** (especially as regards to business interruption, supplier qualification, compliance, availability of raw materials)

Definition of likelihood

We define the likelihood as the probability of occurrence of climate related events in the next 3 years.

- Virtually certain > 90%
- Very likely between 75% and 90%
- Likely between 60% and 75%
- More likely than not between 45% and 60%
- About as likely as not between 30% and 45%
- Unlikely between 15% and 30%
- Very unlikely between 5% and 15%
- Exceptionally unlikely <5%

Definition of significance

We define significance (substantive financial impact) based on:

a) The overall financial impact of the respective risk against the yearly average of the next 3 years of Group's operating EBIT.

- Impacts below 5% of operating EBIT are considered as Low

- Impacts between 5-10% of operating EBIT are considered as Medium

- Impacts between 10-15% of operating EBIT are considered as High

- Impacts above 15% of operating EBIT are considered as Very High

An impact would be considered as substantive for the Group as soon as it is High or Very high.

Aligned with our Risk Management process we consider risks below 10% of EBIT to be not substantive

b) A substantial strategic impact is defined as the risk that Holcim is unable to achieve its medium to long term strategic vision and become the global leader in innovative and sustainable building solutions and reach net zero by 2050 with intermediate targets for 2030. We consider that any risk that impairs the achievement of our long term target is substantive. Also considered is the impact on the Group's or local operations reputation, including impairment of reputation with investors, rating agencies, regulators and external stakeholders such as NGO or media.

C2.2

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

Value chain stage(s) covered
Direct operations
Upstream
Downstream

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

Frequency of assessment
More than once a year

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

Description of process
Process and frequency: To identify climate-related risks and/or opportunities within our direct operations, upstream and downstream operations, we use a top-down and bottom-up approach to gather information which considers a wide range of risks/opportunities to determine the following: (1) Risk/opportunities that are climate-related (2) Risks/opportunities that could have a substantive financial or strategic impact. This is consistently implemented through Holcim's Enterprise Risk Management (ERM) Framework.

The Group's risk profile is assessed both from top down and bottom up perspectives. These assessments are used as a basis for the Group risk map, which is updated every year and submitted to and analyzed by the Executive Committee. The bottom-up assessment is performed at country level. Entities have to use a shared risk library to ensure that all aspects of transition and physical risks have been addressed by the countries as per the TCFD risk framework. Countries assess climate-related risks and opportunities that have the potential to impact our financial and non-financial targets over a short- (0-3 years), medium- (3-10 years) time horizon. Long term risks (10-40 years) are considered in our scenario analysis at Group level.
At the top-down level, interviews with top management, function heads and experts, complement the aggregated country assessments. As part of the top-down risk assessments, the Group Risk team captures additional insights regarding the climate-related risks with regards to Group's Reputation, Policies & regulations, Technology, Product, services and market-related expectations and physical impacts of climate change. Same assessment methodology and scales as for the bottom-up are used.

Risk and opportunities are assessed according to their likelihood of occurring,potential magnitude of impact and potential financial impact and presented on a materiality matrix. Any risk that is considered to have a 'Likely' chance of occurring, with a 'High' potential magnitude and that exceeds our threshold for substantive financial or strategic impact of impacting at least 10% of operating EBIT is determined as having a substantive financial or strategic impact on the business.

Boundaries: Our risk universe takes into consideration our direct operations and upstream and downstream supply chain. Thus, the business assesses the risks arising from the failure of processes whose objectives are to our direct operations, secure our upstream and downstream supply chain from an operational, compliance, reputational or sustainability perspective.

Risk mitigation: Respective actions and/or controls are defined by the management.Risk transfer through insurance solutions an integral part of risk.
In case substantive risks and/or opportunities related to climate change are identified, specific actions to mitigate risks or capture identified opportunities are proposed to the HSSC and Executive Committee.

Monitor & Reporting: Regular progress on the actions/controls are followed up by risk leads and reported to the Group through the Holcim Risk Management tool. At least twice a year, progress on mitigating actions, controls and overall risk exposure is reported to the Group. On a quarterly basis, climate related risks and opportunities are discussed with the Group Board of Directors Health and HSSC.

Verification & Remediation: Group Internal Audit performs independent assessments of the effectiveness of mitigating actions and controls and on the risk assessment process.
The annual audit plan approved by the Audit Committee takes into account the various analyses described above. The results presented to the Group Executive Committee and Audit Committee can lead to more in-depth analyses and contribute to the continuous risk identification process.

Case study Transition risk/opportunity: During the interviews performed at the Group level (top-down approach) the major evolutions of the European regulatory framework (ETS phase IV) were anticipated 2 years in advance, enabling our Group to establish the decarbonization taskforce and design a specific short term response plan established to support the transition to the phase 4 of the new European Trading System which has been enforced in 2021. The new EU-ETS phase brings with it risks of stricter CO2 credit allocation systems, increased fossil fuel prices and scarcity of alternative mineral components. This risk was assessed according to our materiality framework and was determined as being "Virtually Certain" with a "High" potential magnitude over the medium- and long-term. The assessment found that it exceeded our threshold of substantive financial impact, as potential impacts could affect more than 10% of EBIT. The boundary of this risk was established as affecting our direct operations, upstream and downstream supply chain. To mitigate against this risk, a specific European decarbonization strategy was presented to the HSSC and Executive Committee which included a short-term response to improve our CO2 and energy performance and conduct a scenario analysis to evaluate impacts on profitability. CHF 160 million are invested until 2022 into 80 emissions reduction projects. Progress on these is monitored and reported to the Group regularly.

Case study Physical risk/opportunity: In the Spring of 2019 the Holcim team in the US identified and reported the increased risk of flooding down the Mississippi River that had the potential to impact our operations. Heavy rainfall was expected to lead the banks of the Mississippi River to burst, disrupting our operations as Holcim uses this route to transport Cement and Limestone filler to cities such as St. Louis and Memphis. This risk was therefore identified as having a 'Very Likely' chance of occurring with a financial impact (worst case scenario) of 5% on our EBIT in this region. On the inbound side, the entity had about 3 million USD in additional expense from having to truck in raw materials and fuels instead of the more efficient modes of barge and/or rail. On the outbound side, the entity incurred an additional 6 million USD of unplanned spend in network shifts directly due to the flood and 11 million USD due to increased shipping costs during the flooding. The rest of the losses resulted from business interruption and revenue losses. To mitigate this risk, our US division's logistics department implemented a response plan which consisted of changing the means of transportation and production sourcing, utilizing temporary seasonal floating storage and short term rail track. In 2020 and 2021, 1.4 million USD will be spent through offsite railcar storage and filling up a dome in St. Paul in the winter. This decision would provide about a 2 million USD benefit in case of another flood event. Should this risk reoccur with the same magnitude, this would represent less than 2% of our Group EBIT which is not considered to be a substantive impact to our company.

C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Holcim operates in countries where carbon pricing mechanisms are already in place, in the form of both cap and trade systems and carbon taxes. The risk of carbon prices to increase in the short term under the current regulation is therefore considered in our risk management process and used to inform our short term strategy and yearly financial planning on a regular basis. In Europe under the transition from phase 3 to phase 4 of the EU-ETS, the CO2 price has increased from the range of 40 € / ton CO2 to reaching a record high of almost 90€ / ton in the 2021. This is being closely monitored and respective financial impacts assessed on a monthly basis for a number of years. Euro's EU-ETS carbon price together with the further decrease of allowances is a potential risk to Holcim where we could see an increase in direct costs (including associated fuel). Group level, the Public Affairs Department engages with policy representatives and monitors the evolving legislative environment on carbon pricing mechanisms. The Group Finance and Sustainability teams support the process with the development of different scenarios to quantify the potential impacts. This work is used to inform regional and country existing business plans and short term strategies when significant risks are identified. At the country level, Country Public Affairs Managers engage with local and regional policy representatives and associations. This informs representative groups of CEOs and functional managers, who regularly meet and monitor latest regulatory developments and activities influencing policy, that could have a material adverse effect on the current or future operation of the business. Updates on current carbon pricing regulations are regularly presented to our main governing bodies, mainly the Country and Group Executive Committees. The results of this work are also included in our Group Risk Report.
Emerging regulation	Relevant, always included	Holcim operates in countries where existing carbon pricing mechanisms are evolving, or new ones are being considered / being implemented. New or changes to existing carbon pricing regulations could have a significant impact on our operations, leading to additional operational and distribution costs, and reduced profitability of our business. The risks and opportunities incurred by legislative initiatives in the EU aiming to accelerate the transition to a lower carbon economy are continuously monitored. Consequently we were able to preempt policy trends included in the European Decarbonization Roadmap and optimise our decarbonization strategy as well as orient our advocacy positions towards a green future. A range of plausible scenarios of regulation developments (including the enactment of a CBAM and a reduction of free allowances) have been factored in the strategic and financial planning and considered in our decarbonization roadmap. In addition, we closely analyse the global regulatory landscape to identify a variety of climate-related legislation and regulation proposals that may impact our success in achieving our net-zero roadmap. Among such developments, we particularly follow changes in the construction standards, regulations impacting the efficiency of our main decarbonization levers (use of alternative fuels and co-processing) Finally, government mandated GHG reporting is a potential risk where we could see a negative perception and increased fees if Holcim does not accurately and frequently report on Holcim's emissions. At Group level, the Public Affairs Department monitors the evolving legislative environment on carbon pricing mechanisms in the countries where we operate. This is done in collaboration with Country Public Affairs Managers, who in their respective countries, monitor regulatory developments and activities influencing policy. Local and Group Finance and Sustainability teams support the process with the development of different scenarios to quantify the potential impacts. This work is used to inform regional and country business plans as well as our short and mid term strategies when significant risks are identified. The main outcomes of this process are used to inform the Group Risk Report. Updates on emerging carbon pricing regulations are regularly presented to our main governing bodies, mainly the Country and Group Executive Committees.
Technology	Relevant, always included	Innovation is a key pillar in our climate strategy. Risks and opportunities associated with technological innovations or improvements that help us to reduce our CO2 emissions and energy consumption are an integral part of our risk management process. An example of the risks being considered is the risk of the cost of carbon capture technology being significantly higher than existing carbon pricing mechanisms in place and the lack of integrated deployment of Carbon Capture and required supply chain ecosystems (transportation, sequestration, etc.), preventing a successful and economically viable implementation of carbon capture technologies. Holcim could face the risk of increased operating costs if we do not assess and incorporate lower-carbon, energy efficient processes into our operations. Their identification and assessment is centrally coordinated by our Group Cement Manufacturing Excellence team based in Holderbank and our R&D Center in Lyon, supported by regional and country teams. Technology related risks and opportunities have already been identified and respective mitigation measures and action plans have been considered in our Group-wide and Regional initiatives. These initiatives focus among others, on increasing the use of alternative fuels, the production of low carbon binders and the innovation of CO2 neutral technologies such as carbon capture and storage. With regards to increasing the use of alternative fuels and the production of low carbon binders, the availability of both levers has to be managed at regional and business unit level. This needs to be managed with the support of both, our Group Cement Manufacturing Excellence team based in Holderbank, our R&D Center in Lyon and our Group Strategy department. Risks related to carbon capture and storage technologies are directly assessed and managed by our Group Cement Manufacturing Excellence team based in Holderbank and our R&D Center in Lyon. As result of this work, in 2018 Holcim has launched a Group-wide initiative to future-proof its sites summarized under the flagship ambition, "The Plants of Tomorrow", which aims to create vertically integrated, intelligent and interconnected digital plants that harness disruptive technologies.
Legal	Relevant, always included	Climate change related litigation risk is an emerging phenomenon, with cases being brought before the courts in a limited number of jurisdictions in which we operate. As a large carbon emitter, the risk of Holcim being increasingly targeted, and potentially causing reputational damage and increased public scrutiny in this regard. This calls for management attention to mitigate possible risks. An example is the case in the Philippines where in 2017, the Human Rights Commission investigated whether the collective contribution to global warming by 47 coal, cement, oil and gas companies has violated Filipinos' basic rights to life, water, food, sanitation, adequate housing and self determination. Holcim subsidiaries were subject to investigation. Failure to account for regulatory and litigation risks that could potentially result in fines and non-monetary sanctions on Holcim if we do not properly consider and address legal operating requirements. Holcim maintains a comprehensive risk-based compliance program with dedicated resources at local, regional and Group level with central steering under the Group Legal and Compliance Team. Group Legal manages all competition investigations, information requests and enforcement cases through a central team of legal specialists. Group Legal also tracks all Group-relevant litigation cases, and provides support to the relevant operating companies in defense and dispute resolution.
Market	Relevant, always included	Evolution of market demands are considered in our risk process. As the carbon debate intensifies, our main products, cement and concrete could be challenged as the building material of first choice because of perceived high embodied CO2. An example being considered is the risk of changing building materials preferences by our customers. In France for instance, timber is increasingly being favored against concrete in public tenders. There is a potential risk of decreased market share if we do not continually progress towards products and services that customers are shifting towards. At Group level, our R&D center is responsible for development of new low carbon solutions, in response to Global and country specific market developments. At country level, Country Sustainability and Public Affairs Managers liaise regularly with respective Sales' teams to monitor trends in demands of these products. Holcim has an important range of products and brands which can be considered as low carbon products: ECOPact®, ECOPlanet®, Ductal®, Agilia®, Thermedia 6B®, Aether®, and other solutions that rely on reduced emissions intensity or enhanced performance in design to provide the best solutions to its customers, and developing new products with higher CO2 savings potential. In addition, our Group Sustainability Team engages regularly with relevant stakeholders to ensure sufficient transparency is provided on the environmental, social and economic responsibility of concrete, cement and aggregate companies' operations and their supply chains. Holcim is a founding member of the Concrete Sustainability Council (CSC) designed to provide the required transparency through a certification system. The CSC certification system consists of an operational manual and assessment criteria with guidance on their application. A typical certification process is applicable to all sizes of concrete companies, currently comprising three levels: bronze, silver and gold. Aggregate and cement suppliers can achieve a CSC supplier certificate to support their concrete clients with their CSC assessments.
Reputation	Relevant, always included	The risk of being perceived as a large carbon emitter could reduce our attractiveness to stakeholders such as customers, investors, and potential employees. Additionally, not meeting our CO2 reduction targets can have a negative impact on reputation, as stakeholder engagement and communication programs have been put in place. A recent example can be found in the Guardian publication where the concrete industry without clear distinction between respective players was subject to a series of articles pointing to concrete's responsibility in climate change. Such campaigns could lead to a negative perception of our products by our final customers, thus influencing building material preferences. Link: https://www.theguardian.com/cities/series/guardian-concrete-week Risks from failure to cater towards customers that demand energy-efficient products or services could impact Holcim where we could potentially lose market share if we do not implement an energy efficient process into our operations. Our Group Sustainability, Investors Relations and Corporate Communications teams run a regular process of monitoring and engaging with relevant stakeholders to assess and mitigate reputational risks

	Relevance & inclusion	Please explain
Acute physical	Relevant, always included	The risk of Holcim's operations to be affected by extreme weather conditions such as flooding or water shortages. Acute physical risks are included in our risk process. Countries assess and evaluate the impact and likelihood of potential supply chain interruptions plans in the event of natural disasters and build contingency plans. As an example, the flooding risk is on an upwards trend in terms of frequency and magnitude which makes it a recurring concern for the company. For instance, it directly impacted Holcim's suppliers who experienced significant and extraordinary water-related risks in Rhine and Mississippi in the years 2018 and 2019, respectively. Very low and high water levels had temporarily interrupted our supply chain, resulting in higher logistic costs and revenue losses. The financial impact is estimated based on the production volumes and revenues potentially affected. These risks are often part of insurance solutions. Additionally, our geographic and business diversification serves as a natural hedge.
Chronic physical	Relevant, sometimes included	Our broad geographical presence makes it more likely that at one or other of our operations we could be affected by chronic physical risks such as rising sea levels or water scarcity due to global warming. Chronic disciplinary collaboration including stronger regulations and effective carbon pricing mechanisms are and will be required. Rising mean temperatures poses a risk on our operations where we could potentially see an increase in operating costs as energy demands (and in turn, costs) would increase to cool facilities.

C2.3

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

Yes

C2.3a

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

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation	Carbon pricing mechanisms

Primary potential financial impact

Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Cement production is a process which emits a significant amount of CO2 from the raw materials and fuels (direct) as well as the electricity (indirect). Consequently existing and emerging carbon pricing mechanisms are a key component of our risk management process and are used to inform our strategy and financial planning on a regular basis.

For example, in Europe, we are regulated by the EU-ETS for all of our European operations, which includes 15 countries and impacts 33 integrated cement plants.

The Phase IV of the EU-ETS entered into force in 2021, leading to an increase in direct costs to Holcim through:

a) Reduced number of free EU CO2 allowances (EUAs) granted
b) Increased price of EUAs on the market associated with the mechanism (as a result of reduced number of EUAs)

This led to imports of clinker and cement from outside the EU not subject to the EU-ETS to become more cost competitive at the EU borders.

During the interviews performed at Group level (top-down approach) the major evolutions of the European regulatory framework (ETS phase IV) were anticipated two years in advance, enabling our Group to establish the decarbonization taskforce and accelerate our decarbonization efforts by implementing a specific short term response plan, in addition to our long term strategy.

If no mitigation strategies had been put in place, we could have had a yearly financial impact of up to CHF 200,000,000.

As a result of this risk, in 2019 Holcim decided to put in place a regional-wide decarbonization roadmap and to invest CHF 160,000,000 until the end of 2022 into 80 emissions reduction projects across Europe. This will result in an annual CO2 emission reduction in Europe by a further 15 percent like-for-like, equivalent to 3 million tons of avoided CO2 emissions by 2022.

Holcim continues to monitor the emergence of new CO2 regulatory developments. Free EUAs are expected to decline at an accelerated pace as of 2026. The EU Commission recently announced the establishment of a Carbon Border Adjustment Mechanism to ensure an equivalent carbon price for domestic and imported cement volumes. This will form an essential policy to continue building the "low-carbon business case" in the long run and secure continued investments in low-carbon technologies across Holcim's European assets. Holcim is confident it will remain competitive and retain its leading position in Europe. For the purpose of this case study, only the effect of Phase IV has been illustrated.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact
Low

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

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
50000000

Potential financial impact figure – maximum (currency)
200000000

Explanation of financial impact figure
To estimate the potential of future CO2 costs we have estimated the yearly EU Allowances requirements based on EU production levels and free allowance allocation.

To arrive at our financial impact figures, we have applied a sensitivity analysis as part of our scenario modelling. The financial impact provided in this example aims to represent one of many results from our sensitivity analysis and should not be considered as a financial forecast.

In the model, we have assumed a CO2 price between 50 CHF / EUA (low) and 100 CHF/ EUA (high) to determine the range of the impact. In our sensitivity analysis we have also considered different scenarios of EU Allocation that included both, being in deficit and / or surplus. Purely for the purpose of the financial figures calculation we have used a scenario that considers between 1 Mio (low) and 2 Mio (high) EU Allowances needs per year if no mitigating actions are included after 2021, and at constant production volumes. The minimum and maximum financial impacts were estimated to range between 50'000'000 and 200'000'000 (Minimum: 1,000,000 EUAs x 50 CHF = 50,000,000 CHF; Maximum: 2,000,000 EUAs x 100 CHF = 200,000,000 CHF).

In any case the magnitude of this scenario is considered low since it is < 5% of Group operating EBIT. Note this calculation does not factor variations in product sales prices.

Cost of response to risk
1500000

Description of response and explanation of cost calculation
An example of company-specific activities to manage the risk:

Ahead of the implementation of Phase IV of the EU-ETS, Holcim recognized that it must implement further emissions reduction activities to reduce the financial impact of increased costs of fossil fuels.

As a result of this risk, in 2019 Holcim decided to put in place a regional-wide decarbonization roadmap for all of our facilities in this region such as our Austrian Cement Plant in Retznei, where we have achieved more than 90% of fuel substitution.

The roadmap focuses on 4 key areas;

i) Energy efficiency improvements and acceleration of Alternative Fuel usage
ii) Enhanced product portfolio optimization to accelerate the production of low carbon products
iii) Network optimization
iv) and innovation of CO2 neutral technologies such as CCUS

This program is executed by respective countries, supported by Group functions and closely monitored by the Executive Committee.

How the figure for the cost is calculated:
Assuming that 10 people at regional level are dedicated to coordinate the initiative and regional average management cost for senior staff of CHF 150k, the total cost could be in the range of CHF 1 million: 10 FTEs x 150'000 CHF = 1'500'000 CHF

The respective capital expenditures as part of the European Decarbonization roadmap, have not been included in the cost of response.

Comment
No additional comments

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Technology	Unsuccessful investment in new technologies

Primary potential financial impact
Increased capital expenditures

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

Company-specific description
Beyond its 2030 targets and journey to net-zero, Holcim is preparing the future today by piloting more than thirty CCUS projects in Europe and North America. Working with other multinationals and start-ups, the pilots are evaluated in terms of cost, technical feasibility, compatibility with CO2 usage opportunities, and aspects of viability and scalability. Our objective is to develop a handful of solutions for use and storage that can be combined in different ways and environments. However, no single solution will be perfectly scalable as different environments present different conditions, from local partners to geological conditions favorable for storage. In order to catalyze the investment required for operating carbon-capture, a widespread multi-disciplinary collaboration including stronger regulations and effective carbon pricing mechanisms are required.

Holcim is engaged in several initiatives which require large investments and others that are still under evaluation.

In Europe, based on the extensive research undertaken by the European Cement Research Academy (ECRA), the project Westküste100, CO2 from our Lägerdorf cement plant in Germany will be transformed into synthetic fuel. This nine-company consortium is focused on the creation of low-carbon solutions and the development of end-to-end sustainable business practices.

In North America, Canada, we initiated a project partnership with Svante and Total to develop and demonstrate the first full-cycle solution to capture and reuse CO2 from a cement plant while reducing greenhouse gas emissions. This project CO2MENT will demonstrate and evaluate Inventys' CO2 Capture System and a selection of CO2 utilization technologies at Holcim's Richmond, BC plant.

Large-scale deployment of CCU/S will require the development of large-scale CO2 transportation and storage networks, going beyond specific industrial clusters. It is highly dependent on political and regulatory support that is necessary to build the investment business case (e.g. recognition and compensation for carbon removal in installations where carbon is captured for use as a feedstock or for storage).

The risk of the cost of technology being significantly higher than existing carbon pricing mechanisms and the lack of integrated deployment of carbon capture and required supply chain ecosystems (e.g. transportation), could hence prevent Holcim from a successful and economically viable implementation of carbon capture technologies.

Time horizon
Medium-term

Likelihood
More likely than not

Magnitude of impact
Low

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

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
30000000

Potential financial impact figure – maximum (currency)
60000000

Explanation of financial impact figure
The potential financial impact figures relate only to the capital expenditure required, and it is consistent with Holcim's recent projects and assessments.

Some of our projects, including the two featured in this example, are subject to public funding (i.e: EU Innovation Fund). The positive impact of this potential funding has not been factored in this example.

Cost of response to risk
3000000

Description of response and explanation of cost calculation
Holcim realizes that it must implement emissions reduction activities to achieve its Net Zero target by 2030. Holcim is investing in a number of pilot CCUS projects to refine the process and increase efficiency, as well as working with partners. We have also initiated a project partnership with Svante to develop and demonstrate the first full-cycle solution to capture and reuse CO2 from a cement plant. This is a joint partnership and Holcim invested 50% in the research at a cost of CHF 200 million. The project, CO2MENT, is expected to result in 80% of carbon being reduced at our Richmond, British Columbia facility.

The costs of the management actions have been estimated assuming a project management cost of approximately 10% of the investment effort per initiative. These has been estimated under the explanation of the total financial impact figure at 30 Mio CHF:

0.1 x 30'000'000 CHF = 3'000'000 CHF

Comment
No additional comments

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Acute physical	Flood (coastal, fluvial, pluvial, groundwater)

Primary potential financial impact
Decreased revenues due to reduced production capacity

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

Company-specific description
Being present in more than 60 countries increases Holcim's exposure to meteorological and geological events such as natural disasters or climate hazards which could damage Holcim's property or lead to business interruption with a material adverse effect on the Group's operations.

We have operations in locations that are at particular risk of extreme variability in weather patterns. For instance in The Philippines, where increased flooding is projected to have an impact on our cement and grinding operations.

If one of our sites were impacted by a flooding event this could result in a decrease in our revenues from reduced production capacity.

According to our risk assessment, interruption from flooding in just one facility in the Philippines could impact revenues by up to 20,000,000 CHF.

Previously, Holcim has been impacted by flooding in regions where we operate, and this has impacted our revenues. For example, in 2018 and 2019 heavy rainfall led to flooding of the Mississippi River which affected our ability to transport Cement and Limestone filler to ongoing projects in St. Louis and Memphis and led to an estimation of the impact on EBIT up to 5%.

Through scenario modelling, we have estimated the financial impact of a potential sales volume decrease resulting from meteorological conditions or geological events, considering a number of variables like: (demand forecasts, cement price development, length of business interruption).

Time horizon
Short-term

Likelihood
More likely than not

Magnitude of impact
Low

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

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
10000000

Potential financial impact figure – maximum (currency)
20000000

Explanation of financial impact figure
For the potential financial impact range, we have estimated a Holcim cement plant located in The Philippines, with an annual sales volume of 1 million tons of cement that suffers a business interruption due to severe weather conditions.

We have estimated the period required to overcome the interruption and be fully operational in the range of 3 to 6 months. The derived loss of volume sold will be [250’000 - 500’000] tons of cement.

The calculation of the potential financial impact is completed by assuming a commercial margin of 40 CHF per tonne of product leads to a potential financial impact of [10 - 20] CHF million.
Minimum: 250,000 t / year x 40 CHF / t cement = 10,000,000 CHF
Maximum: 500,000 t / year x 40 CHF / t cement = 20,000,000 CHF

The magnitude of this scenario is considered low since it is < 5% of Group operating EBIT.

Cost of response to risk
1500000

Description of response and explanation of cost calculation
Holcim's crisis Management System sets out the requirements for each operation to respond against physical risks, including Emergency Response Plan, Crisis Management Plan, Business Continuity Plan, Evacuation Plan. Our leading positions worldwide and a balanced portfolio serves as a buffer against sales variations in the markets where we operate. In case of this event to occur, we foresee production level adjustments in business operations that are in the proximity of the affected site combined with ad-hoc delivery routes to mitigate the impact.

For example, as part of our bottom-up risk assessment, in the Spring of 2019 the Holcim team in the US identified and reported the increased risk of flooding down the Mississippi River. Heavy rainfall was expected to lead the banks of the Mississippi River to burst, disrupting our operations as Holcim uses this route to transport Cement and Limestone filler to cities such as St. Louis and Memphis. This risk was noted as having a 'Very Likely' chance of occurring with a maximum financial impact of 5% on our EBIT in this region. On the inbound side, the entity had about 3 million USD in additional expense from having to truck in raw materials and fuels instead of the more efficient and cost-effective modes of barge and/or rail. On the outbound side, the entity incurred an additional 6 million USD of unplanned spend in network shifts directly due to the flood and 9 million USD due to increased shipping costs. Our US division implemented a response plan which consisted of changing the means of transportation and production sourcing, utilizing temporary seasonal floating storage and short term rail track. Between 2020 and 2021, 1.4 million USD were spent through offsite railcar storage and filling up a dome in St. Paul in the winter. This decision will provide about a 2 million USD benefit in case of another flood event. Should this risk reoccur with the same magnitude, this would represent less than 2% of our Group EBIT which is not considered to be substantive.

The costs associated to amend transportation routes are an estimate of the resources involved in the decision making process. Assuming that a team of 15 FTEs at Group level is dedicated to ensuring the coverage of volume demands through logistics and trading routes and assuming a global management cost of CHF 100k per manager, the total cost is in the range of 1,5 Mio CHF on management costs:

15 FTEs x 100’000 CHF = 1’500’000 CHF

Comment
No additional comments

C2.4

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

C2.4a

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

Identifier
Opp1

Where in the value chain does the opportunity occur?
Downstream

Opportunity type
Products and services

Primary climate-related opportunity driver
Development and/or expansion of low emission goods and services

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

Company-specific description
One of Holcim's main products, concrete, is an intrinsically low-carbon, resilient, recyclable and versatile material, and it is used across our built environment. It is an essential material for resilient infrastructure and for responding to societal expectations.

Buildings consume 90% of their total energy during usage through heating, lighting and air-conditioning; only 10% of consumption is linked to the manufacture of building materials and the construction phase.

As a growing market opportunity, Holcim focuses on developing products and solutions that contribute to improving buildings' energy efficiency. Half of our resources and 40% or our patents are aimed at finding sustainable solutions, with a strong focus on low carbon construction.

Holcim is continuously developing low and ultra-low carbon products, such as:

Susteno 3R, which saves up to 20% CO2 compared to an average cement type, and which is the world's first cement that is upcycling construction and demolition waste materials.

Our green concrete ECOPact is meeting an increasing customer interest, as construction projects are putting a focus not only on their operational carbon emissions but also want to reduce their embodied carbon footprint. Here we have a tailored offer with at least 30% carbon reduction and the offer to offset the remaining carbon footprint with the ECOPact ZERO line.¨

https://www.holcim.com/ecopact-the-green-concrete

Beyond material carbon emissions, we are offering products and services which help customers to reduce their life cycle carbon footprint. Our insulating foam AIRIUM™ is a high performance insulating product, fully recyclable, fireproof, with one of the lowest carbon footprints in the industry. https://www.holcim.com/airium

Our ORIS tool is a digital platform for holistic data-driven decisions on road sustainability. https://www.holcim.com/oris

Currently 25% of Holcim net sales are derived from low carbon products. We expect a growth in low-carbon product demand of 5% to 10% on a yearly basis. Therefore a short-term time horizon is considered for this opportunity to materialize.

The Group's strategy will further focus now on expanding the deployment of our existing low and carbon-neutral concrete in other markets and continue to grow our portfolio of low carbon products.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Low

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

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
335425000

Potential financial impact figure – maximum (currency)
670850000

Explanation of financial impact figure
By investing in R&D and the development of new low carbon products we aim to cover the expected increase in low carbon construction products demand, anticipating the shift in regulatory environments, building standards and customer preferences that will further incentivize greater and faster market uptake of low-carbon products. We expect a growth in low-carbon product demand of 5% to 10% on a yearly basis.

The financial impact has been estimated by computing this expected growth to the Holcim 2021 net sales derived from low carbon solutions representing about 25% of our total 26'834 mCHF.

Minimum: 26'834 mCHF x 0.25 x 0.05 CHF = 335,425,000 CHF
Maximum: 26'834 mCHF x 0.25 x 0.10 CHF = 670,850,000 CHF

These figures are to be seen as annual net sales derived from low carbon solutions as opposed to the cost of realising this opportunity.

Holcim 2025 Strategy is focused on accelerating our Solutions and Low carbon Products offering across all markets

The magnitude of this scenario is considered low since it is < 5% of Group operating EBIT. For the computation of the 'magnitude', we have factored in the associated

operating costs. Low carbon solutions are Products and solutions - primarily Green Cement types and Green Concretes such as ECOPlanet and ECOPact.

Cost to realize opportunity
237000000

Strategy to realize opportunity and explanation of cost calculation
Holcim continues to focus on developing new low carbon products and further deploy the existing ones.

Our innovation Center in Lyon acts as a hub in a network of local laboratories and country-level innovation teams. The innovation organization counts more than 200 researchers within Holcim. Thanks to this networked approach, customers around the world have benefited from tailormade solutions to build more quickly and efficiently, and even to reduce their impact on the environment.

i) Some examples: Holcim's subsidiary, Holcim Mexico, launched an innovative insulating concrete Ecoterm® that can bring energy consumption savings up to 25% compared to regular concrete. ii) Another example is the Thermedia® range of structural, insulating concrete, and our Efficient Building™ construction systems, such as double-skin concrete walls or UHPC lightweight insulated facades.

The annual cost associated with developing this opportunity is Included in the Group's operating profit are the research and development costs of CHF 237 million (2020: CHF 171 million) (annual report 2021 page 203).

Comment
No additional comments

Identifier
Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Development and/or expansion of low emission goods and services

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description
It is during the production of clinker, the main component of cement, when most CO2 emissions associated with cement occur. The majority of these emissions are unavoidable, as they result from the chemical reaction that occurs when the raw material (limestone) calcinates into clinker in the kiln. This decarbonation process is our largest source of CO2 emissions, accounting for 68 percent of our total Scope 1 emissions in cement production.

One of the key Holcim levers to reduce the carbon emissions from our operations is by replacing the volumes of clinker in our final cement products with alternative mineral components such as pozzolan, slag or fly ash that reduces the carbon intensity of the cement.

A significant portion of these constituents come from waste or byproducts recovered from other industries.

This is a company-wide initiative. Currently, Holcim products use an average of 29 percent of constituents to replace clinker, resulting in one of the lowest levels of clinker content in the sector.

However, in markets where these factors are favorable, our replacement rates have reached 50 percent, presenting this as a great opportunity to further scale up this level of performance.

Thanks to the replacement of clinker in our final cement products among other levers, Holcim Net emissions per ton of cementitious products are roughly 5 percent lower than the industry average (see Getting the Number Rights report 2018).

Time horizon
Short-term

Likelihood
Likely

Magnitude of impact
Low

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

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
16100000

Potential financial impact figure – maximum (currency)
32200000

Explanation of financial impact figure
To estimate the potential to save future CO2 costs we have assumed the scenario of reducing our clinker factor by 1 percentage point a year in our business operations in Europe. We have estimated the impact of a 1% improvement in the clinker factor equals a reduction in our carbon intensity of 7 kg CO2 / cementitious.

Assuming an EUA price in the range of 50 to 100 CHF/t of CO2 impacting our European production, the financial range estimate is [16,100,000 CHF - 32,200,000 CHF]. Assuming a volume of cementitious of 46,000,000 t cem:

Minimum: 1 x 46,000,000 t cem x 50 CHF / t cem x 0.007 tCO2 / t cem = 16,100,000 CHF
Maximum: 1 x 46,000,000 t cem x 100 CHF / t cem x 0.007 tCO2 / t cem = 32,200,000 CHF

The estimated figure shows the potential of reducing CO2 costs by reducing the clinker factor. It does not include the required investment and additional operating costs as this is competitively sensitive information.

The magnitude of this scenario is considered low since it is < 5% of Group operating EBIT.

Cost to realize opportunity
500000

Strategy to realize opportunity and explanation of cost calculation
As part of the decarbonization roadmap launched in Europe, a dedicated team of experts oversees and regionally coordinates the strategy of clinker factor reduction of the region, managing our product portfolio against saturation/norms compliance and quality standards. The team also manages relevant capex projects on selected kilns across the region.

In Switzerland, the average cement has a clinker content of around 75%, but recent efforts from Holcim Switzerland, in partnership with the Swiss Federal Institute of Technology (ETH) Zürich, have yielded a mass cement with less than 50% clinker. To replace the clinker, a combination of high-quality limestone, calcined shales and fly ash were used. A natural activator that was developed by ETH, as well as specially adapted admixtures from Sika, ensure that this low-clinker cement still retains its quality as a building material. This new cement is currently undergoing practical trials, being used for a construction project in Vorarlberg, Austria.

Cost: The annual cost associated with developing this opportunity represents the cost of the Regional Cement Manufacturing Excellence resources to identify and implement the respective projects to reduce our clinker factor. Assuming that a team of 5 FTE in the region is dedicated to coordinating these activities and assuming a regional average management cost for senior staff of 100k CHF, the total cost could be in the range of CHF 0,5 million: 5 FTEs x 100,000 CHF = 500'000 CHF

It does not include the required investment and additional operating costs as this is competitively sensitive information.

Comment
No additional comments

Identifier
Opp3

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Energy source

Primary climate-related opportunity driver
Use of lower-emission sources of energy

Primary potential financial impact
Reduced direct costs

Company-specific description
Another key lever to reduce the carbon intensity of our cement production is to use pretreated waste and low-carbon fuels. These serve as a replacement for fossil fuels that provide the energy needed to operate a cement kiln.

Globally, Holcim currently sources 21% of its energy from alternative fuels, low-carbon fuels and biomass.

In some of our operations, we have been able to meet more than 90% of our energy requirements with alternative fuels, thus we are convinced of the potential to increase this rate significantly in the coming years.

Using these alternative energy sources diverts waste from incineration or landfill, providing a solution to the growing waste disposal problems faced by society, and helping to keep fossil fuels in the ground. At the same time they help to reduce our CO2 emissions, as most of them emit less CO2 than traditional fuels. Other sources, such as biomass, are considered carbon neutral.

Holcim is exploring alternative fuels to replace conventional fossil fuels in its operations. Globally, we currently source 21% of our energy from alternative fuels such as biomass which accounts for 7%. In some of our operations such as Reztnei in Austria we have been able to meet more than 90% of our energy requirements with alternative fuels. We are expecting to see the use of alternative fuels in operations increase by 75% in the next 5-years.

Time horizon
Short-term

Likelihood
Likely

Magnitude of impact
Low

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

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
16100000

Potential financial impact figure – maximum (currency)
32200000

Explanation of financial impact figure
To estimate the potential to save future CO2 costs we have assumed the scenario of increasing our substitution rate of alternative fuels by 2 percentage points a year in our business operations in Europe.

We have estimated the impact of a 1% improvement in the TSR equals a reduction in our carbon intensity of 3.5 kg CO2 / cementitious. Assuming an EUA price in the range of 50 to 100 CHF/t of CO2 impacting our European production, the financial range estimate is [16,100,000 CHF - 32,200,000 CHF].

Minimum: 2 x 46,000,000 t cem x 50 CHF / t cem x 0.0035 tCO2 / t cem = 16,100,000 CHF
Maximum: 2 x 46,000,000 t cem x 100 CHF / t cem x 0.0035 tCO2 / t cem = 32,200,000 CHF

The estimated figure shows the potential of reducing CO2 costs by reducing the clinker factor. It does not include the required investment and additional operating costs as this is competitively sensitive information.

The magnitude of this scenario is considered low since it is < 5% of Group operating EBIT.

Cost to realize opportunity
500000

Strategy to realize opportunity and explanation of cost calculation
Through Holcim's business Geocycle, we offer safe and ecological waste solutions, applying the highest international standards – including the German development agency GIZ guidelines on co-processing waste and the Basel Convention.

Geocycle offers strategic waste assessment and expertise regarding local regulations. It also provides logistics to transport waste to its state-of-the-art pre-processing facilities, where it is transformed into fuel and raw materials. In 2021, 21 percent of our thermal energy demand for clinker production was covered by alternative fuels.

Our Austrian cement plant based in Retznei continued to operate with more than 90% of thermal substitution rate leading to negative fuel cost. In Retznei, the preheater kiln was replaced by a precalciner, bringing a major advantage to the kiln feeding and enabling total thermal energy costs to be reduced significantly. Retznei is seen as a role model for other plants within the Group and industry.

The timescale for the implementation of this project is immediate. We are continuously upgrading our cement plants located in Europe and other regions. These investments led to reaching a 61% thermal substitution rate across our plants in Europe in 2021.

The annual cost associated with developing this opportunity represents the cost of the Regional EU Geocycle resources dedicated to manage these projects to increase the substitution rate of alternative fuels.

Assuming that a team of 5 FTE in the region is dedicated to coordinating these activities and assuming a regional average management cost for senior staff of 100k CHF, the total cost could be in the range of CHF 0,5 million:

5 FTEs x 100,000 CHF = 500,000 CHF

It does not include the required investment and additional operating costs as this is competitively sensitive information.

Comment
No additional comments

C3. Business Strategy

C3.1

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

Row 1

Transition plan
Yes, we have a transition plan which aligns with a 1.5°C world

Publicly available transition plan
Yes

Mechanism by which feedback is collected from shareholders on your transition plan
Our transition plan is voted on at Annual General Meetings (AGMs)

Description of feedback mechanism
<Not Applicable>

Frequency of feedback collection
<Not Applicable>

Attach any relevant documents which detail your transition plan (optional)
20220504_press_holcim_agm_2022_en.pdf
08042022-holcim-climate-report-2022.pdf

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

Explain why climate-related risks and opportunities have not influenced your strategy
<Not Applicable>

C3.2

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

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

C3.2a

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

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios: IEA NZE 2050	Company-wide	<Not Applicable>	For this scenario the following assumptions were taken: Cement demand: Growth until 2030 in emerging markets; from 2030–2050 demand decreases due to smart design. CO2 price (USD / tCO2): - Advanced economies: 2030: 130, 2050: 250 - Selected emerging markets (incl. China, Russia, Brazil, South Africa): 2030: 90, 2050: 200 - Other emerging markets: 2030: 15, 2050: 55 For transitional risks, the time horizons considered were 2030 and 2050. The analysis was either qualitative, quantitative or both, depending on the assessed risk.
Transition scenarios: IEA STEPS (previously IEA NPS)	Company-wide	<Not Applicable>	For this scenario the following assumptions were taken: Cement demand (up to 2030, this assumption was based on the IEA Reference Technology Scenario - RTS - due to lack of information on this parameter in the STEPS scenario. After 2030 assumptions are based on our internal roadmaps): Growth until 2030 in emerging markets; marginal growth after 2030. CO2 price (USD / tCO2): - EU: 2030: 65; 2050: 90 - Canada: 2030: 55; 2050: 75 - Colombia: 2030: 15; 2050: 30 - China: 2030: 30; 2050: 55 The time horizons considered were 2030 and 2050. The analysis was either qualitative, quantitative or both, depending on the assessed risk.
Physical climate scenarios: RCP 2.6	Company-wide	<Not Applicable>	The analysis was quantitative for a number of representative locations. The results were extrapolated to extend the assessment for a company-wide scope. Three climate scenarios (representative concentration pathways 2.6, 4.5 and 8.5) were considered based on the Intergovernmental Panel on Climate Change Fifth Assessment Report. The scenarios consider greenhouse gas concentration trajectories in the atmosphere and relate to a 1.5°C–2°C, 2°C–3°C and >4°C increase in the global average surface temperature in 2100. For each location the changes to acute physical climate hazards such as flood, wind, precipitation, wildfire and hail and chronic hazards such as heat and drought were assessed for each scenario and the years 2025, 2030, 2050 and 2100.
Physical climate scenarios: RCP 8.5	Company-wide	<Not Applicable>	The analysis was quantitative for a number of representative locations. The results were extrapolated to extend the assessment for a company-wide scope. Three climate scenarios (representative concentration pathways 2.6, 4.5 and 8.5) were considered based on the Intergovernmental Panel on Climate Change Fifth Assessment Report. The scenarios consider greenhouse gas concentration trajectories in the atmosphere and relate to a 1.5°C–2°C, 2°C–3°C and >4°C increase in the global average surface temperature in 2100. For each location the changes to acute physical climate hazards such as flood, wind, precipitation, wildfire and hail and chronic hazards such as heat and drought were assessed for each scenario and the years 2025, 2030, 2050 and 2100.

C3.2b

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

Row 1

Focal questions

Holcim seeked to address the following focal question:
What is the resiliency of Holcim's strategy in different climate change futures?

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

In order to determine the impact of climate-related risks and opportunities on Holcim, we used various scenarios such as IEA NZE 2050, IEA STEPS, RCP 2.6, and RCP 8.5 to address the focal question, "What is the resiliency of Holcim's strategy in different climate change futures?"

Results of the scenario analysis show that the 1.5°C scenario is a favorable outlook in the short and medium term, and is particularly optimistic for the low-carbon products and solutions that we are developing such as the Susteno 3R, ECOPact, ECOPlanet and many others, increasing our market share in the range of green cement, concrete and sustainable solutions. This supports our decision to continue to invest in product development, and expanding the deployment of our existing portfolio to more locations in Europe and North America.

A Business-as-usual scenario is not Holcim's strategic direction. However, the group will adapt to cover the market needs while continuing to drive circular and low carbon construction.

In all cases, Holcim is well positioned for the future, with its leadership in Ready-Mix Concrete and the expansion in Solutions & Products. Concrete is versatile, affordable, insulating and infinitely recyclable. In addition, it is resilient, durable, fire and earthquake resistant, protecting our cities and infrastructure from natural disasters. For all these reasons concrete is a must for climate change adaptation and currently there is no viable substitute at scale.

C3.3

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

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Risks and opportunities related to the growing demand for low carbon products in the construction sector have influenced our product-related strategy and product portfolio (as reported under C2.4a). These are generating substantial revenues and their demand in the markets where we operate continue to increase. We expect a growth in low-carbon product demand of 5% to 10% on a yearly basis. Therefore a short-term time horizon is considered for this opportunity to materialize. This opportunity has influenced Holcim's product portfolio strategy. Since 2017, Holcim has developed low carbon products and brands such as Susteno®, ECOPact®, ECOPlanet®, or AIRIUM® that enable us to reduce both CO2 emissions generated by the production process and CO2 emissions for our clients in the building sector. The Group's strategy has a clear focus on expanding the deployment of our existing low and carbon-neutral concrete in other markets and continuing to grow our portfolio of low carbon products. In 2020, Holcim made the most substantial decision to launch ECOPact, the industry's broadest range of low carbon concrete for high-performing, sustainable and circular construction. After a successful initial market adoption in Germany and Switzerland, ECOPact is now available across 24 markets in all regions. As part of its new Group 2025 Strategy - Accelerating Green Growth, Holcim aims to reach 25% of RMX net sales from ECOPact by 2025. This is an essential component of our strategy to advance the transition towards low-carbon and circular construction and expected to increase revenues as a result of increased demand for our sustainable products.
Supply chain and/or value chain	Yes	In recent years, extreme weather events such as flooding or water shortages have impacted the continuity of operations in our supply chain. As a result, Holcim's strategy has been influenced to implement mitigation measures to reduce the impact from such weather events and build resiliency programs into our supply chain operations such as developing amended transportation routes to reduce potential delays and extra costs in our supply chain. A short-term time horizon is considered for this risk to materialize. For example, In 2019, our operations in the US were impacted from the flooding of the Mississippi River which caused disruptions in the delivery of our products for up to 3 weeks and resulted in revenue losses equivalent to 5% of the operation' EBIT, higher logistic costs and even reputational damages. To be prepared to deal with these events, our logistics departments developed well prepared response plans which involve a change in product sourcing from our network of plants, additional storage options for inventory and an adaptation of the modes of transport used, reducing the impact.
Investment in R&D	Yes	Risks and opportunities related to the growing demand for low carbon products in the construction sector, which requires solutions and innovations for a more sustainable built environment, have influenced our strategy to invest in research and development. With the strongest innovation organisation in the industry and an extended global network of regional labs, reducing carbon emissions is a key priority of our innovation agenda. As such, this has had an impact on the annual costs associated with research and development activities, having reached CHF 237 million (2020: CHF 171 million) (annual report 2021 page 203). With more than half of the time spent by our researchers at the Innovation Centers in Holderbank, Switzerland and Lyon, France, dedicated to low-carbon products and more than 45% of our patents currently in this area and a further 20% related to other sustainability topics.Since the launch of our new low-carbon products such as ECOPact, ECOPlanet, or Susteno 3R, we have seen revenues of low carbon products increasing on a monthly basis.
Operations	Yes	Our commitment to climate action, our stakeholders' request to reduce the CO2 emissions associated with operations and increased costs associated with carbon pricing mechanisms, have influenced our strategy to work towards increasing energy efficiency measures within our day-to-day operations, and explore alternative low-carbon fuels. Our cement plants continue to be the subject of continuous modernization projects to reduce CO2 emissions. Our Group-wide initiatives focus on lowering the caloric consumption, increasing the use of alternative fuels, the production of low carbon binders and the implementation of CO2 neutral technologies in our operations. These projects require large investments, influencing directly the Group's strategy on capital expenditures. This requires a yearly deployment of our decarbonation efforts. Therefore a short-term time horizon is considered for this risk to materialize. A number of emissions reduction initiatives have been rolled out in 2021 and a large number of new projects are expected to commence or conclude.

C3.4

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

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Capital expenditures Capital allocation Acquisitions and divestments Access to capital Assets	In Europe, we are regulated by the EU-ETS for all of our European operations, which includes 13 countries and impacts 33 integrated cement plants. The EU-ETS introduced the Phase IV of the EU-ETS in 2021, leading to an increase in direct costs to Holcim through: a) Increased price of EUAs on the market associated with the mechanism. b) Imports of clinker and cement from outside the EU and thus not subject to the EU-ETS becoming more cost competitive at the EU borders We have estimated the respective financial impact on our direct costs. Consequently, this has informed our financial planning strategy in the short- and medium-term to increase our capital expenditures to implement further emissions reduction activities to reduce the financial impact from the EU-ETS. As a result, in 2019 we announce a program to invest CHF 160 million in more than 80 projects across 19 European countries with a focus on low-carbon fuels, recycled materials and carbon efficient solutions.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?

Yes

C3.5a

(C3.5a) Quantify the percentage share of your spending/revenue that is aligned with your organization's transition to a 1.5°C world.

Financial Metric

Revenue

Percentage share of selected financial metric aligned with a 1.5°C world in the reporting year (%)

2

Percentage share of selected financial metric planned to align with a 1.5°C world in 2025 (%)

25

Percentage share of selected financial metric planned to align with a 1.5°C world in 2030 (%)

50

Describe the methodology used to identify spending/revenue that is aligned with a 1.5°C world

Today we offer the industry's broadest range of green concrete ECOPact and green cement ECOPlanet, starting with a 30% lower carbon footprint compared to standard and local materials and can go all the way to carbon neutral. We have accounted for the sales of ECOPact as ''aligned with a 1.5°C world' the revenues generated by ECOPact. We estimate that our revenue from ECOPact will increase in the future due to regulatory requirements and shifting consumer preferences. To estimate the percentage share in 2025 we modelled the results from a recent consumer survey and internal forecast. Holcim will remain at the forefront of green building solutions, with 25% of ready-mix net sales coming from ECOPac by 2025.

C4. Targets and performance

C4.1

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

Intensity target

C4.1b

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

Target reference number

Int 1

Year target was set

2018

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2 accounting method

<Not Applicable>

Scope 3 category(ies)
<Not Applicable>

Intensity metric
Other, please specify (Net specific CO2 per tonne cementitious)

Base year
2018

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
0.576

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
0.576

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure
95

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure
<Not Applicable>

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure
<Not Applicable>

% of total base year emissions in all selected Scopes covered by this intensity figure
95

Target year
2030

Targeted reduction from base year (%)
17.5

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]
0.4752

% change anticipated in absolute Scope 1+2 emissions
-11.8

% change anticipated in absolute Scope 3 emissions
0

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)
0.553

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
0.553

% of target achieved relative to base year [auto-calculated]
22.8174603174602

Target status in reporting year
Underway

Is this a science-based target?
Yes, and this target has been approved by the Science Based Targets initiative

Target ambition
Well-below 2°C aligned

Please explain target coverage and identify any exclusions
Leading the way in green construction, Holcim is the first global building materials company to sign the “Business Ambition for 1.5°C” pledge, setting a net zero target with intermediate targets approved by the Science-Based Targets initiative (SBTi). In 2020, the SBTi approved Holcim’s commitment to reduce scope 1 and scope 2 GHG emissions 21% per ton of cementitious materials by 2030 from a 2018 base year. With this target, Holcim commits to reduce scope 1 GHG emissions 17.5% per ton of cementitious material and scope 2 GHG emissions 65% per ton of cementitious materials within the same timeframe. The target boundary includes biogenic emissions and removals from bioenergy feedstocks. The targets are consistent with reductions required to keep warming to Well-below 2°C.

The target covers 95% of Group scope 1 + 2 emissions.

Plan for achieving target, and progress made to the end of the reporting year
Holcim maintained its focus on CO2 emission reduction in 2021. Our efforts in the use of industrial mineral components helped to lower Holcim’s clinker factor, dropping to 70.1%. Our use of alternative fuels and raw materials was particularly strong and
increased over-proportionally to cement volumes with alternative raw materials volumes up almost 50% and Europe leading the way.

As a result, direct CO2 emissions (Scope 1) of 553 kg CO2 net per ton of cementitious materials represented a decrease by 1% like for like versus the prior year.

While this is in line with the yearly efforts planned to reach our 2022 target of 550 kg CO2 net per ton, we acknowledge we must accelerate our CO2 reductions in the

coming years. For that reason, in 2021 Holcim invested over CHF 200 million in CO2-related projects.

We expect to see the full benefit of these investments during 2022, to accelerate CO2 reductions in line with our 2025 and 2030 targets.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Int 2

Year target was set
2018

Target coverage
Company-wide

Scope(s)
Scope 2

Scope 2 accounting method
Market-based

Scope 3 category(ies)
<Not Applicable>

Intensity metric
Other, please specify (CO2 Scope 2 per tonne cementitious)

Base year
2018

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)
0.038

Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
0.038

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure
<Not Applicable>

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure
95

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure
<Not Applicable>

% of total base year emissions in all selected Scopes covered by this intensity figure
95

Target year
2030

Targeted reduction from base year (%)
65

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]
0.0133

% change anticipated in absolute Scope 1+2 emissions
-3.4

% change anticipated in absolute Scope 3 emissions
0

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)
0.034

Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
0.034

% of target achieved relative to base year [auto-calculated]
16.1943319838057

Target status in reporting year
Underway

Is this a science-based target?
Yes, and this target has been approved by the Science Based Targets initiative

Target ambition
Well-below 2°C aligned

Please explain target coverage and identify any exclusions
Leading the way in green construction, Holcim is the first global building materials company to sign the “Business Ambition for 1.5°C” pledge, setting a net zero target with intermediate targets approved by the Science-Based Targets initiative (SBTi). In 2020, the SBTi approved Holcim's commitment to reduce scope 1 and scope 2 GHG emissions 21% per ton of cementitious materials by 2030 from a 2018 base year. With this target, Holcim commits to reduce scope 1 GHG emissions 17.5% per ton of cementitious material and scope 2 GHG emissions 65% per ton of cementitious materials within the same timeframe. The target boundary includes biogenic emissions and removals from bioenergy feedstocks. The targets are consistent with reductions required to keep warming to Well-below 2°C.

The target covers 95% of Group scope 1 + 2 emissions.

Plan for achieving target, and progress made to the end of the reporting year
Holcim maintained its focus on CO2 emission reduction in 2021.

Our efforts in the use of clean electrical energy helped decrease indirect emissions (Scope 2) to 34 kg net CO_2/ton, being on track to reach our 2030 target (decreased of 7% like for like versus the prior year).

In 2021 Holcim invested over CHF 200 million in CO2-related projects. We expect to see the full benefit of these investments during 2022, to accelerate CO2 reductions in line with our 2025 and 2030 targets.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Int 3

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 3

Scope 2 accounting method
<Not Applicable>

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

Intensity metric
Other, please specify (metric tons CO2 per ton of purchased fuels)

Base year
2020

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)
0.3162

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
0.3162

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure
<Not Applicable>

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure
<Not Applicable>

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure
21

% of total base year emissions in all selected Scopes covered by this intensity figure
21

Target year
2030

Targeted reduction from base year (%)
20

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]
0.25296

% change anticipated in absolute Scope 1+2 emissions
0

% change anticipated in absolute Scope 3 emissions
-4

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)
0.2876

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
0.2876

% of target achieved relative to base year [auto-calculated]
45.2245414294749

Target status in reporting year
Underway

Is this a science-based target?
Yes, and this target has been approved by the Science Based Targets initiative

Target ambition
Well-below 2°C aligned

Please explain target coverage and identify any exclusions
The target covers the fuels emissions disclosed in the GHG Category 3- Fuels and Energy. It does not include emissions from electricity purchased (~0.9 million tons CO2 reported in the baseline).

Plan for achieving target, and progress made to the end of the reporting year
Executing our Thermal Substitution strategy and accelerating sourcing of alternative fuels to replace traditional fuels.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Int 4

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 3

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
Category 1: Purchased goods and services

Intensity metric
Other, please specify (metric tons CO2 per ton of purchased clinker and cement)

Base year
2020

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)
0.7027

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
0.7027

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure
<Not Applicable>

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure
<Not Applicable>

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure
25

% of total base year emissions in all selected Scopes covered by this intensity figure
25

Target year
2030

Targeted reduction from base year (%)
20

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]
0.56216

% change anticipated in absolute Scope 1+2 emissions
0

% change anticipated in absolute Scope 3 emissions
-1

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)
0.7053

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
0.7053

% of target achieved relative to base year [auto-calculated]
-1.85000711541202

Target status in reporting year
Underway

Is this a science-based target?
Yes, and this target has been approved by the Science Based Targets initiative

Target ambition
Well-below 2°C aligned

Please explain target coverage and identify any exclusions
The target covers the emissions related to purchased clinker and cement disclosed in the GHG Category 1: Purchased goods and services (7.2 million CO2 vs 13 million CO2 of the total category)

Plan for achieving target, and progress made to the end of the reporting year
Improved products mix purchased with lower CO2

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Int 5

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 3

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
Category 9: Downstream transportation and distribution

Intensity metric
Other, please specify (metric tons CO2 per ton of material transported)

Base year
2020

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)
0.0104

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
0.0104

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure
<Not Applicable>

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure
<Not Applicable>

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure
27

% of total base year emissions in all selected Scopes covered by this intensity figure
27

Target year
2030

Targeted reduction from base year (%)
24

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]
0.007904

% change anticipated in absolute Scope 1+2 emissions
-3

% change anticipated in absolute Scope 3 emissions
-3

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)
0.0095

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
0.0095

% of target achieved relative to base year [auto-calculated]
36.0576923076923

Target status in reporting year
Underway

Is this a science-based target?
Yes, and this target has been approved by the Science Based Targets initiative

Target ambition
Well-below 2°C aligned

Please explain target coverage and identify any exclusions
The target includes all emissions related to downstream transportation of our products, reported in GHG Category 4 and 9. It excludes inbound logistics (portion of emissions reported in GHG Category 4)

Plan for achieving target, and progress made to the end of the reporting year
Optimize network (move more volumes in rail, waterways vs road), Optimize dispatch (payload improved in avg from 80% to 90%) and KM driven. Optimize fleet mix (phasing out gradually diesel trucks and replacing them with low emission technologies)

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

C4.2

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

C4.2c

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

Target reference number
NZ1

Target coverage
Company-wide

Absolute/intensity emission target(s) linked to this net-zero target
Int1
Int2
Int3
Int4
Int5

Target year for achieving net zero
2050

Is this a science-based target?
Yes, and this target has been approved by the Science Based Targets initiative

Please explain target coverage and identify any exclusions
Leading the way in green construction, Holcim is the first global building materials company to sign the “Business Ambition for 1.5°C” pledge, setting a net zero target with intermediate targets approved by the Science-Based Targets initiative (SBTi).

Going one step further, Holcim was partnering with SBTi to develop a roadmap for aligning climate targets to a 1.5°C future in the cement sector.

Our 2050 targets have been validated by the SBTi aligned with its new netzero standard. The pathway from 2030 to 2050 leverages the same levers used between 2020 and 2030, while integrating new and
advanced technologies. These technologies include novel binders, zero-emission vehicles, low-clinker cements and CCUS technologies.

Holcim’s 2050 net-zero targets validated by SBTi:
• Holcim commits to reduce Scope 1 and 2 GHG emissions by 95% per ton of cementitious materials by 2050 from a 2018 base year.
• Holcim commits to reduce absolute Scope 3 GHG emissions by 90% by 2050 from a 2020 base year.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?
Yes

Planned milestones and/or near-term investments for neutralization at target year
The latest IPCC report recognizes the roles of natural recarbonation.
Natural recarbonation could be relevant for neutralization of residual emissions.
Discussions are ongoing with SBTi to recognize this lever in the near-future.

Planned actions to mitigate emissions beyond your value chain (optional)
N/A

C4.3

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

C4.3a

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

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	85	1290000
Implementation commenced*	97	1530000
Implemented*	95	1240000
Not to be implemented	0	0

C4.3b

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

Initiative category & Initiative type

Energy efficiency in production processes	Other, please specify (Process decarbonization)

Estimated annual CO2e savings (metric tonnes CO2e)
450000

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

Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
5000000

Investment required (unit currency – as specified in C0.4)
35000000

Payback period
4-10 years

Estimated lifetime of the initiative
21-30 years

Comment
This includes 3 process decarbonization projects implemented in 2021 across the Group. Annual CO2 saving estimates are reported per project. This category includes large Modernization Projects improving kilns and overall plant efficiency. The average payback period reflects those projects implemented.

Initiative category & Initiative type

Low-carbon energy generation	Other, please specify (Clean Energy)

Estimated annual CO2e savings (metric tonnes CO2e)
450000

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
1000000

Investment required (unit currency – as specified in C0.4)
6000000

Payback period
4-10 years

Estimated lifetime of the initiative
16-20 years

Comment
In the 2021 reporting year, 1,060,000 MWh of additional renewable electricity were purchased or produced. Considering our average grid emission factor of 421 kg CO2/MWh, a total of around 115'000 t CO2 of Scope 2 emissions were avoided. To allow these CO2 emission reductions investments were required in 6 Projects.

Initiative category & Initiative type

Energy efficiency in production processes	Other, please specify (Carbon efficient Construction)

Estimated annual CO2e savings (metric tonnes CO2e)
120000

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
1000000

Investment required (unit currency – as specified in C0.4)
4000000

Payback period
4-10 years

Estimated lifetime of the initiative
16-20 years

Comment
This includes 5 projects implemented in 2021 in the area of Clinker factor / enhanced grinding capacity, calcined clay and other low carbon materials and technologies. Annual CO2 saving estimates are reported per project and consolidated at group level.

Initiative category & Initiative type

Waste reduction and material circularity	Other, please specify (Circular Economy)

Estimated annual CO2e savings (metric tonnes CO2e)

270000

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
5000000

Investment required (unit currency – as specified in C0.4)
21000000

Payback period
4-10 years

Estimated lifetime of the initiative
6-10 years

Comment
This includes a total of 71 projects on alternative fuels, alternative raw material and waste recycling implemented across the Group in 2021. Annual CO2 savings are estimated from replacement of traditional fossil fuels with biomass fuels, driven by an increase of our thermal energy substitution rate. The average payback period reflects those projects implemented. Annual CO2 saving estimates are reported per project.

C4.3c

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

Method	Comment
Dedicated budget for low-carbon product R&D	Innovation through research and development projects plays a key part in the Group's CO2 emissions reduction activities. Holcim's innovation centers in France, Switzerland, and a worldwide network of laboratories are delivering locally tailored solutions backed by global expertise. Through this research network, research and development projects are carried out with a view to generate added value for customers through end user oriented products and services focusing on i) the development of low carbon products and solutions aiming at environmental protection and lowering the Group's environmental footprint, ii) breakthrough technologies aiming at production systems improvements and iii) innovation through digital technology into all areas of Holcim's business, fundamentally changing how the Group operates and delivers value to customers. Included in the Group's operating profit are the research and development costs of CHF 237 million (2020: CHF 171 million) (annual report 2021 page 203).
Compliance with regulatory requirements/standards	Finance, Public Affairs and Sustainability teams develop in collaboration different scenario analyses to quantify the potential impacts of regulatory requirements / standards. This work is used to inform regional and country existing business plans and short term strategies when significant risks are identified, leading to investments in emissions reduction activities where needed. An example is the transition to phase 4 of the new European Trading System where Holcim implemented a regional-wide decarbonization roadmap. As part of this roadmap, a number of CAPEX projects are being considered or / and under execution, aiming to improve our operations' energy efficiency and reduce carbon intensity.

C4.5

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

C4.5a

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

Level of aggregation
Group of products or services

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

Type of product(s) or service(s)

Buildings construction and renovation	Other, please specify (Low carbon materials)

Description of product(s) or service(s)
Holcim low carbon materials and solutions are those green cement and concrete, and solutions and products, which contribute to reduced life cycle carbon emissions. Examples: Solidia, Susteno, ECOPact, ECOPlanet

Criteria: The criteria for a Holcim low carbon product is to have at least a 30% lower specific CO2 emissions than a local industry average product / baseline such as OPC. The validation can be proved by internal benchmarks against industry data and / or local Life Cycle Assessment / Environmental Product Declarations.

Low carbon solutions account for approximately 25% of our net sales [2021 figures].

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
No

Methodology used to calculate avoided emissions
<Not Applicable>

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
<Not Applicable>

Functional unit used
<Not Applicable>

Reference product/service or baseline scenario used
<Not Applicable>

Life cycle stage(s) covered for the reference product/service or baseline scenario
<Not Applicable>

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
<Not Applicable>

Explain your calculation of avoided emissions, including any assumptions
<Not Applicable>

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
25

C-CE4.9

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

	Total production capacity coverage (%)
4+ cyclone preheating	92
Pre-calciner	76

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?
No

C5.1a

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

Row 1

Has there been a structural change?

Yes, an acquisition
Yes, a divestment
Yes, other structural change, please specify

Name of organization(s) acquired, divested from, or merged with

Edile Commerciale (S.P.A.)
Eugène Bühler & Fils S.A.
Holcim Madagascar S.A.
Lafarge Cement Malawi Ltd
Holcim Reunion S.A.
Lafarge Zambia Plc
Lafarge UAE and Oman

Details of structural change(s), including completion dates

Acquisitions:
Edile Commerciale (S.P.A.) - February 2021
Eugène Bühler & Fils SA - February 2021

Holcim gained the ownership of all emitting activities of its acquisitions.

Divestments:
Holcim Madagascar and Holcim Reunion - October 2021
Lafarge Zambia - November 2021
Lafarge Malawi - December 2021

Holcim lost the ownership of all emitting activities of its divestments.

Other structural change:
Lafarge UAE and Oman became financially consolidated in May 2021, leading to the inclusion of its emitting activities in this CDP submission.

C5.1b

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

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in boundary	Acquisitions: Edile Commerciale (S.P.A.) - February 2021 Eugène Bühler & Fils SA - February 2021 Holcim gained the ownership of all emitting activities of its acquisitions. Divestments: Holcim Madagascar and Holcim Reunion - October 2021 Lafarge Zambia - November 2021 Lafarge Malawi - December 2021 Holcim lost the ownership of all emitting activities of its divestments. Other structural change: Lafarge UAE and Oman became financially consolidated in May 2021, leading to the inclusion of its emitting activities in this CDP submission.

C5.1c

(C5.1c) Have your organization's base year emissions been recalculated as result of the changes or errors reported in C5.1a and C5.1b?

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	No, because the impact does not meet our significance threshold	Holcim recalculates the base-year emissions policy if the change in boundary has had an impact of more than 5% on the Group's scope 1 + scope 2 absolute emissions. This year, the impact of the acquisitions, divestments and change in boundary was 1.07%, and therefore below Holcim's significance threshold.

C5.2

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

Scope 1

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
121057822

Comment
2018 Net global Scope 1 emissions for Cement operations as reported in the 2019 CDP disclosure. The boundary covers the entities covered in the 2018 Group consolidated financial statements.

Scope 2 (location-based)

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
7841245

Comment
Global Scope 2 (location-based) emissions for Cement operations as reported in the 2019 CDP disclosure.
The boundary covers the entities covered in the 2018 Group consolidated financial statements.

Scope 2 (market-based)

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
7960538

Comment
Global Scope 2 (market-based) emissions for Cement operations as reported in the 2019 CDP disclosure.
The boundary covers the entities covered in the 2018 Group consolidated financial statements.

Scope 3 category 1: Purchased goods and services

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
12988679

Comment
No comment

Scope 3 category 2: Capital goods

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment.

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

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
6864140

Comment
No comment

Scope 3 category 4: Upstream transportation and distribution

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
5364005

Comment
No comment

Scope 3 category 5: Waste generated in operations

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment

Scope 3 category 6: Business travel

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
41690

Comment
No comment

Scope 3 category 7: Employee commuting

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
69850

Comment
No comment

Scope 3 category 8: Upstream leased assets

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment

Scope 3 category 9: Downstream transportation and distribution

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
3834308

Comment
No comment

Scope 3 category 10: Processing of sold products

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment

Scope 3 category 11: Use of sold products

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment

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

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment

Scope 3 category 13: Downstream leased assets

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment

Scope 3 category 14: Franchises

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment

Scope 3 category 15: Investments

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment

Scope 3: Other (upstream)

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment

Scope 3: Other (downstream)

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
N/A

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.
WBCSD: The Cement CO2 and Energy Protocol
Other, please specify (GHG protocol Corporate Value Chain (Scope 3) Accounting and reporting standard + Technical Guidance for calculating Scope 3 emissions (Scope 3))

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)
119427598

Start date
January 1 2021

End date
December 31 2021

Comment
Total Scope 1 emissions as per 2021 consolidation for all segments: Cement, Aggregates, Ready Mix Concrete , Asphalt and Own power generation.

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)
109508107

Start date
January 1 2020

End date
December 31 2020

Comment
Total global Scope 1 emissions for all segments: Cement, Aggregates, Ready Mix Concrete , Asphalt and Own power generation, as reported in the last year CDP disclosure. (Used as reference emissions in C7.9a)

C6.2

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

Row 1

Scope 2, location-based
We are reporting a Scope 2, location-based figure

Scope 2, market-based
We are reporting a Scope 2, market-based figure

Comment
Please note that the number published in the 2021 sustainability performance report follows the market based approach as our operations have the possibilities to update the national grid average with the supplier specific data when available and relevant. Location based Scope figures are publicly disclosed in the CDP submission.

C6.3

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

Reporting year

Scope 2, location-based
7016042

Scope 2, market-based (if applicable)
6924608

Start date
January 1 2021

End date
December 31 2021

Comment
Please note that the number published in the 2021 sustainability performance report follows the marked based approach as our operations have the possibilities to update the national grid average with the supplier specific data when available and relevant. Location based Scope figures are publicly disclosed in the CDP submission.

Past year 1

Scope 2, location-based
6387520

Scope 2, market-based (if applicable)
6910207

Start date
January 1 2020

End date
December 31 2020

Comment
Gross global Scope 2 emissions for all segments: Cement, Aggregates, Ready Mix Concrete , Asphalt and Own power generation, as reported in the last year CDP disclosure. (Used as reference emissions in C7.9a)

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?
No

C6.5

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

Purchased goods and services

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
13561601

Emissions calculation methodology
Hybrid method

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

Please explain
Extraction, production and transportation of goods and services purchased in the reporting year, except Fuels & Electricity (cradle-to-gate emissions). Including Transportation and distribution in vehicles and facilities owned by suppliers.
Hybrid method: for categories with high CO2 impact (Clinker, cement, slag) we use the Average-Data method. For materials with lower CO2 impact we use a Spend-based method.

Capital goods

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
As Capital goods for the cement industry are used for a very long time period (often 40 or 50 years), allocating emissions in a reporting year is insignificant. As we adhere to the Cement Sector- Scope 3 Guidance methodology, this GHG category is categorised as not material for companies to disclose.

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

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
7437527

Emissions calculation methodology
Average data method

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

Please explain
Fuels
Cradle-to-Gate emissions from purchased Fuels and Electricity in the reporting year. Including Transportation and distribution in vehicles and facilities not owned by Holcim.
Electricity
Upstream emissions of purchased electricity (extraction, production and transportation of fuels consumed in the generation of electricity, steam, heating, and cooling consumed by the reporting company) including Transmission and distribution (T&D) losses

Upstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
6174582

Emissions calculation methodology
Distance-based method

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

Please explain
Upstream Transportation and distribution of products purchased by Holcim between the company's tier 1 supplier and its own operation (in vehicles or facilities not owned or controlled by Holcim).
Transportation and distribution in vehicles and facilities NOT owned by Holcim. All volumes are disclosed as transported by third parties (as ~ <10% of the global fleet is owned by Holcim and Vehicle ownership per trip is not yet available in the dispatch system).
Bulk goods: aggregates, slag, fly ash, gypsum, alternative raw material, pozzolane, sand, limestone chalk marl, alumina & ferrous

Waste generated in operations

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
According to GCCA Guidelines for the sector to disclose Scope 3 emissions, this category is considered not relevant for the Cement sector, based on materiality assessment.

Business travel

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
32728

Emissions calculation methodology
Spend-based method

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

Please explain
Transportation of employees for business-related activities during the reporting year (in vehicles not owned or operated by the reporting company)

Employee commuting

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
76589

Emissions calculation methodology
Other, please specify (Own method (see explanation below))

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

Please explain
Transportation of employees between their homes and their worksites during the reporting year (in vehicles not owned or operated by the reporting company).Estimation of commuting KMs travelled by each employee per year. KMs travelled multiplied by emission factor of a mid size car extracted from GaBi environmental database [avg EF from EU-28: Car diesel EURO 4 (EN15804 A4) and EU-28: Car petrol EURO 4 (EN15804 A4)] .

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment.

Downstream transportation and distribution

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
2675260

Emissions calculation methodology
Distance-based method

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

Please explain
Transportation and distribution of products sold by Holcim to distribute sold products (outbound logistics) if not paid for by Holcim, in vehicles and facilities not owned or controlled by Holcim (Customer pickups).

Processing of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment.

Use of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment. The use phase of our products (intermediate products) are not directly associated with energy consumption.

End of life treatment of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment.

Downstream leased assets

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment.

Franchises

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment.

Investments

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment.

Other (upstream)

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
According to GCCA Guidelines for the sector to disclose Scope 3 emission, this category is considered not relevant for the Cement sector, based on materiality assessment.

Other (downstream)

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
N/A

C6.5a

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

Past year 1

Start date
January 1 2020

End date
December 31 2020

Scope 3: Purchased goods and services (metric tons CO2e)
12988679

Scope 3: Capital goods (metric tons CO2e)
0

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
6864140

Scope 3: Upstream transportation and distribution (metric tons CO2e)
5364005

Scope 3: Waste generated in operations (metric tons CO2e)
0

Scope 3: Business travel (metric tons CO2e)
41690

Scope 3: Employee commuting (metric tons CO2e)
69850

Scope 3: Upstream leased assets (metric tons CO2e)
0

Scope 3: Downstream transportation and distribution (metric tons CO2e)
3834308

Scope 3: Processing of sold products (metric tons CO2e)
0

Scope 3: Use of sold products (metric tons CO2e)
0

Scope 3: End of life treatment of sold products (metric tons CO2e)
0

Scope 3: Downstream leased assets (metric tons CO2e)
0

Scope 3: Franchises (metric tons CO2e)
0

Scope 3: Investments (metric tons CO2e)
0

Scope 3: Other (upstream) (metric tons CO2e)
0

Scope 3: Other (downstream) (metric tons CO2e)
0

Comment
2020 figures remain unchanged as disclosed in CDP 2020

C6.7

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

C6.7a

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

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	3743946	No comment

C6.10

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

Intensity figure
0.00471

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
126352206

Metric denominator
unit total revenue

Metric denominator: Unit total
26834000000

Scope 2 figure used
Market-based

% change from previous year
0.17

Direction of change
Decreased

Reason for change
0.00471 kg CO2/USD revenue in 2021 vs 0.00472 kg CO2/USD revenue in 2020

Revenue +8.7% vs. 2020 (24,682,000,000 USD)
Scope 1 + 2 emissions +8.5% vs 2020 (116,418,313 t)

Our activities recovered in 2021 after 2020 which was impacted by Covid.
Efforts done in Scope 1+2 CO2 emission reduction in 2021 (see for reference C4.3b):

a) Process Efficiency, e.g. reducing the specific thermal energy consumption by investing in technology. (Scope 1)
b) Clean Energy: e.g. sourcing electricity with a low CO2 footprint (Scope 2)
c) Circular economy, e.g. increasing the share of alternative and biomass fuels - our thermal substitution rate with biomass fuels went up by 1 percentage point (8% vs 7% in 2020). (Scope 1)
d) Carbon efficient construction, e.g. decreasing the clinker content in our cementitious materials - our clinker content in Cements went down by 0.5 percentage points (70.1%, vs 70.6 % in 2020). (Scope 1)

C-CE6.11

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

	Gross Scope 1 emissions intensity, metric tons CO2e per metric ton	Net Scope 1 emissions intensity, metric tons CO2e per metric ton	Scope 2, location-based emissions intensity, metric tons CO2e per metric ton
Clinker	0.821	0.782	0.05
Cement equivalent	0.59	0.562	0.036
Cementitious products	0.581	0.553	0.036
Low-CO2 materials	0.342	0.297	0.144

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
No

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Africa and Middle East	22246804
Asia Pacific (or JAPA)	39992582
Europe	26699192
Latin America (LATAM)	14567636
North America	15921383

C7.3

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

By activity

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Clinker and Cement	114608001
Aggregates	476470
Asphalt	163315
Captive Power Plants	4050636
Concrete Products	30294
Ready Mix Concrete	98882

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

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

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	114608001	109135230	No comment
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Africa and Middle East	1628419	1591741
Asia Pacific (or JAPA)	1888845	2076167
Europe	1702590	1383393
Latin America (LATAM)	719445	611264
North America	1076744	1262043

C7.6

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

By activity

C7.6c

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

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Clinker and Cement	6673012	6630540
Aggregates	263828	231256
Asphalt	17089	7055
Captive Power Plants	64	81
Concrete Products	12875	8551
Ready Mix Concrete	49175	47125

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

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

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	6673012	6630540	No comment
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.9

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

Increased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	446527	Decreased	0.38	Renewable electricity production and purchases increased by 1,060,244 MWh from 2020 to 2021. To estimate the emissions saved, we multiply with the average CO2 intensity of electricity purchase in 2021 (which would have been the alternative) (1,060,244 MWh * 421 kg CO2/MWh = 446,527 t CO2). These savings represent 0.38% of our 2020 gross scope 1 + 2emissions reported in the CDP 2020 ((446,527 t / 115,992,090 t)*100 = 0.38%). As a reference, please see our response in section C4.3b. Please find our changes in emissions visualized consulting the following spreadsheet: https://docs.google.com/spreadsheets/d/16WxGw4EXP-u5bNU3GgeeQILJK2-l3aLIoUbj9k80B-A/edit#gid=1450857378
Other emissions reduction activities	1131684	Decreased	0.98	We decreased our Emissions by 1,131,684 t by reducing both our CO2 intensity of cement production and by reducing the CO2 intensity of non cement production activities (Aggregates, RMX, Asphalt, Products & Solutions, Captive power plants). This translates into an emission decrease of 0.98% ((1,131,684t / 115,992,090 t)*100 = 0.98 %) respective to the 2020 gross scope 1 + 2 emissions declared in the CDP 2021. Please find our changes in emissions visualized consulting the following spreadsheet: https://docs.google.com/spreadsheets/d/16WxGw4EXP-u5bNU3GgeeQILJK2-l3aLIoUbj9k80B-A/edit#gid=1450857378
Divestment	861093	Decreased	0.74	In 2020, the plants that were divested in 2021 were responsible for 861,093 t of CO2. If we assume constant emissions of those plants, this translates into an emission decrease of 0.74% ((861,093t / 115,992,090 t)*100 = 0.98 %) respective to the 2020 gross scope 1 + 2 emissions declared in the CDP 2021. Please find our changes in emissions visualized consulting the following spreadsheet: https://docs.google.com/spreadsheets/d/16WxGw4EXP-u5bNU3GgeeQILJK2-l3aLIoUbj9k80B-A/edit#gid=1450857378
Acquisitions	1363	Increased	0	The plants that were acquired in 2021 emitted 1,363 t of CO2. This translates into an emission increase of 0% ((1,363t / 115,992,090 t)*100 = 0.0 %) respective to the 2020 gross scope 1 + 2 emissions declared in the CDP 2021. Please find our changes in emissions visualized consulting the following spreadsheet: https://docs.google.com/spreadsheets/d/16WxGw4EXP-u5bNU3GgeeQILJK2-l3aLIoUbj9k80B-A/edit#gid=1450857378
Mergers	0	No change	0	N/A
Change in output	10413541	Increased	8.98	Considering a like-for-like consolidation of the 2021 reporting year, the production of cementitious material increased by 17,830,689 t from 2020. Multiplying the 2021 specific emission factor for the production with the production decrease, emissions increased by 10,413,541 t. This translates into an emission decrease of 8.98% compared to the 2020 Gross Scope 1+2 Emissions reported in the CDP 2021 ((10,413,541/ 115,992,090 t)*100 = 8.98%). Please find our changes in emissions visualized consulting the following spreadsheet: https://docs.google.com/spreadsheets/d/16WxGw4EXP-u5bNU3GgeeQILJK2-l3aLIoUbj9k80B-A/edit#gid=1450857378
Change in methodology	0	No change	0	N/A
Change in boundary	2100704	Increased	1.81	The plants that became financially consolidated in 2021 emitted 2,100,704t of CO2. This translates into an emission increase of 1.81% ((2,100,704t / 115,992,090 t)*100 = 1.81 %) respective to the 2020 gross scope 1 + 2 emissions declared in the CDP 2021. Please find our changes in emissions visualized consulting the following spreadsheet: https://docs.google.com/spreadsheets/d/16WxGw4EXP-u5bNU3GgeeQILJK2-l3aLIoUbj9k80B-A/edit#gid=1450857378
Change in physical operating conditions	0	No change	0	N/A
Unidentified	0	No change	0	N/A
Other	283812	Increased	0.24	The amount of 283,812 t was not allocated to a specific reduction type from above and reflects an increase of 0.24% ((283,812 t / 115,992,090 t)*100= 0.24%). Please find our changes in emissions visualized consulting the following spreadsheet: https://docs.google.com/spreadsheets/d/16WxGw4EXP-u5bNU3GgeeQILJK2-l3aLIoUbj9k80B-A/edit#gid=1450857378

C7.9b

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

Market-based

C8. Energy

C8.1

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

More than 15% but less than or equal to 20%

C8.2

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

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

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	10705220	151845120	162550340
Consumption of purchased or acquired electricity	<Not Applicable>	2803304	13638636	16441940
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	534451	<Not Applicable>	534451
Total energy consumption	<Not Applicable>	14042975	165483756	179526732

C-CE8.2a

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

	Heating value	Total MWh
Consumption of fuel (excluding feedstocks)	LHV (lower heating value)	141132009
Consumption of purchased or acquired electricity	<Not Applicable>	15490539
Consumption of other purchased or acquired energy (heat, steam and/or cooling)	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	156622548

C8.2b

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

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

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

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

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

Comment
N/A

Other biomass

Heating value
LHV

Total fuel MWh consumed by the organization
10705220

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
10705220

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

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

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

Comment
No comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

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

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

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

Comment
No comment

Coal

Heating value
LHV

Total fuel MWh consumed by the organization
61666629

MWh fuel consumed for self-generation of electricity
15637789

MWh fuel consumed for self-generation of heat
46028839

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

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

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

Comment
This includes coal, lignite and anthracite

Oil

Heating value
LHV

Total fuel MWh consumed by the organization
4668982

MWh fuel consumed for self-generation of electricity
598197

MWh fuel consumed for self-generation of heat
4070786

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

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

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

Comment
No comment

Gas

Heating value
LHV

Total fuel MWh consumed by the organization
29931810

MWh fuel consumed for self-generation of electricity
2121926

MWh fuel consumed for self-generation of heat
27809884

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

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

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

Comment
No comment

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

Heating value
LHV

Total fuel MWh consumed by the organization
55577699

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
55577699

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

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

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

Comment
These include:
Traditional fuels: petroleum coke, shale, heavy fuel and other traditional fuels
Alternative fuels such as waste oil, impregnated sawdust, and mixed industrial waste

Total fuel

Heating value
LHV

Total fuel MWh consumed by the organization
162550340

MWh fuel consumed for self-generation of electricity
18357912

MWh fuel consumed for self-generation of heat
144192428

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

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

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

Comment
No comment

C-CE8.2c

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

Sustainable biomass

Heating value
Unable to confirm heating value

Total MWh fuel consumed for cement production activities
0

MWh fuel consumed at the kiln
0

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

MWh fuel consumed for the self-generation of electricity
0

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

Other biomass

Heating value
LHV

Total MWh fuel consumed for cement production activities
10705220

MWh fuel consumed at the kiln
10705220

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

MWh fuel consumed for the self-generation of electricity
0

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

Other renewable fuels (e.g. renewable hydrogen)

Heating value
Unable to confirm heating value

Total MWh fuel consumed for cement production activities
0

MWh fuel consumed at the kiln
0

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

MWh fuel consumed for the self-generation of electricity
0

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

Coal

Heating value
LHV

Total MWh fuel consumed for cement production activities
46028839

MWh fuel consumed at the kiln
45485927

MWh fuel consumed for the generation of heat that is not used in the kiln
542912

MWh fuel consumed for the self-generation of electricity
0

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

Oil

Heating value
LHV

Total MWh fuel consumed for cement production activities
1742414

MWh fuel consumed at the kiln
182433

MWh fuel consumed for the generation of heat that is not used in the kiln
1559980

MWh fuel consumed for the self-generation of electricity
0

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

Gas

Heating value
LHV

Total MWh fuel consumed for cement production activities
27077837

MWh fuel consumed at the kiln
25490047

MWh fuel consumed for the generation of heat that is not used in the kiln
1587790

MWh fuel consumed for the self-generation of electricity
0

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

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

Heating value
LHV

Total MWh fuel consumed for cement production activities
55577699

MWh fuel consumed at the kiln
54599416

MWh fuel consumed for the generation of heat that is not used in the kiln
978282

MWh fuel consumed for the self-generation of electricity
0

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

Total fuel

Heating value
LHV

Total MWh fuel consumed for cement production activities
141132009

MWh fuel consumed at the kiln
136463044

MWh fuel consumed for the generation of heat that is not used in the kiln
4668965

MWh fuel consumed for the self-generation of electricity
0

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

C8.2d

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

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	4756004	4751730	523156	518882
Heat	127312	84665	127312	84665
Steam	0	0	0	0
Cooling	0	0	0	0

C-CE8.2d

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

	Total gross generation (MWh) inside the cement sector boundary	Generation that is consumed (MWh) inside the cement sector boundary
Electricity	453610	449337
Heat	35146	0
Steam	0	0

C8.2e

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

Sourcing method
Direct procurement from an off-site grid- connected generator e.g. Power purchase agreement (PPA)

Energy carrier
Electricity

Low-carbon technology type
Solar

Country/area of low-carbon energy consumption
India

Tracking instrument used
Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
92202

Country/area of origin (generation) of the low-carbon energy or energy attribute
India

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2016

Comment
No comment

Sourcing method
Direct procurement from an off-site grid- connected generator e.g. Power purchase agreement (PPA)

Energy carrier
Electricity

Low-carbon technology type
Wind

Country/area of low-carbon energy consumption
Germany

Tracking instrument used
Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
58386

Country/area of origin (generation) of the low-carbon energy or energy attribute
Germany

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2010

Comment
No comment

Sourcing method
Green electricity products from an energy supplier (e.g. green tariffs)

Energy carrier
Electricity

Low-carbon technology type
Hydropower (capacity unknown)

Country/area of low-carbon energy consumption
Romania

Tracking instrument used
Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
350250

Country/area of origin (generation) of the low-carbon energy or energy attribute
Romania

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
1950

Comment
No comment

Sourcing method
Purchase from an on-site installation owned by a third party

Energy carrier
Electricity

Low-carbon technology type
Solar

Country/area of low-carbon energy consumption
United States of America

Tracking instrument used
Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
19416

Country/area of origin (generation) of the low-carbon energy or energy attribute
United States of America

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Comment
No comment

Sourcing method
Purchase from an on-site installation owned by a third party

Energy carrier
Electricity

Low-carbon technology type
Wind

Country/area of low-carbon energy consumption
United States of America

Tracking instrument used
Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
10290

Country/area of origin (generation) of the low-carbon energy or energy attribute
United States of America

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2020

Comment
No comment

Sourcing method
Unbundled energy attribute certificates (EACs) purchase

Energy carrier
Electricity

Low-carbon technology type
Renewable energy mix, please specify (Mixed renewable energy)

Country/area of low-carbon energy consumption
India

Tracking instrument used
Indian REC

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
46592

Country/area of origin (generation) of the low-carbon energy or energy attribute
India

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
1970

Comment
Note: Commissioning year of the energy generation facility is approximate

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Sourcing method
Unbundled energy attribute certificates (EACs) purchase

Energy carrier
Electricity

Low-carbon technology type
Renewable energy mix, please specify (Mixed renewable energy)

Country/area of low-carbon energy consumption
Italy

Tracking instrument used
GO

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
123166

Country/area of origin (generation) of the low-carbon energy or energy attribute
Italy

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
1960

Comment
Note: Commissioning year of the energy generation facility is approximate

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Sourcing method
Unbundled energy attribute certificates (EACs) purchase

Energy carrier
Electricity

Low-carbon technology type
Solar

Country/area of low-carbon energy consumption
Spain

Tracking instrument used
GO

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
378030

Country/area of origin (generation) of the low-carbon energy or energy attribute
Spain

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2010

Comment
No comment

Sourcing method
Green electricity products from an energy supplier (e.g. green tariffs)

Energy carrier
Electricity

Low-carbon technology type
Nuclear

Country/area of low-carbon energy consumption
United Kingdom of Great Britain and Northern Ireland

Tracking instrument used
Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
106898

Country/area of origin (generation) of the low-carbon energy or energy attribute
United Kingdom of Great Britain and Northern Ireland

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
1976

Comment
No comment

Sourcing method
Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

Energy carrier
Electricity

Low-carbon technology type
Renewable energy mix, please specify (89.6% nuclear, 10,4% renewable (including hydroelectric))

Country/area of low-carbon energy consumption
France

Tracking instrument used
Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
690363

Country/area of origin (generation) of the low-carbon energy or energy attribute
France

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
1978

Comment
No comment

Sourcing method
Direct procurement from an off-site grid- connected generator e.g. Power purchase agreement (PPA)

Energy carrier
Electricity

Low-carbon technology type
Solar

Country/area of low-carbon energy consumption
Jordan

Tracking instrument used
Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
13627

Country/area of origin (generation) of the low-carbon energy or energy attribute
Jordan

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2019

Comment
No comment

Sourcing method
Unbundled energy attribute certificates (EACs) purchase

Energy carrier
Electricity

Low-carbon technology type
Renewable energy mix, please specify (Mixed renewable energy)

Country/area of low-carbon energy consumption
Switzerland

Tracking instrument used
GO

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
206022

Country/area of origin (generation) of the low-carbon energy or energy attribute
Switzerland

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
1960

Comment
Note: Commissioning year of the energy generation facility is approximate

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Sourcing method
Unbundled energy attribute certificates (EACs) purchase

Energy carrier
Electricity

Low-carbon technology type
Renewable energy mix, please specify (Mixed renewable energy)

Country/area of low-carbon energy consumption
Poland

Tracking instrument used
GO

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
90421

Country/area of origin (generation) of the low-carbon energy or energy attribute
Poland

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2008

Comment
No comment

Sourcing method
Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

Energy carrier
Electricity

Low-carbon technology type
Low-carbon energy mix, please specify (Mixed low-carbon energy)

Country/area of low-carbon energy consumption
Canada

Tracking instrument used
Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
193470

Country/area of origin (generation) of the low-carbon energy or energy attribute
Canada

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
1920

Comment
No comment

C8.2g

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

Country/area
Other, please specify (Asia)

Consumption of electricity (MWh)
189280779

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
189280779

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Other, please specify (Europe)

Consumption of electricity (MWh)
472494473

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
472494473

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Other, please specify (Latin America)

Consumption of electricity (MWh)
25665584

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
25665584

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Other, please specify (Middle East and Africa)

Consumption of electricity (MWh)
27330302

Consumption of heat, steam, and cooling (MWh)
2861

Total non-fuel energy consumption (MWh) [Auto-calculated]
27333163

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Other, please specify (North America)

Consumption of electricity (MWh)
322205016

Consumption of heat, steam, and cooling (MWh)
81804

Total non-fuel energy consumption (MWh) [Auto-calculated]
322286820

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

C9. Additional metrics

C9.1

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

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

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

	Investment in low-carbon R&D	Comment
Row 1	Yes	N/A

C-CE9.6a

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

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Alternative low-CO2 cements/binders	Small scale commercial deployment	≤20%	237000000	Innovation through research and development projects plays a key part in the Group's activities. Holcim's innovation centers in France, Switzerland and a worldwide network of laboratories are delivering locally tailored solutions backed by global expertise. Through this research network, research and development projects are carried out with a view to generate added value for customers through end user oriented products and services focusing on: • breakthrough technologies aiming at production systems improvements, • development of low carbon products and solutions aiming at environmental protection and lowering the Group's environmental footprint, and • innovation through digital technology into all areas of Holcim's business, fundamentally changing how the Group operates and delivers value to customers. In 2021, costs associated with research and development activities reached CHF 237 million (2020: CHF 171 million) (annual report 2021 page 203).
Carbon capture and storage (CCS)	Pilot demonstration	≤20%	237000000	Innovation through research and development projects plays a key part in the Group's activities. Holcim's innovation centers in France, Switzerland and a worldwide network of laboratories are delivering locally tailored solutions backed by global expertise. Through this research network, research and development projects are carried out with a view to generate added value for customers through end user oriented products and services focusing on: • breakthrough technologies aiming at production systems improvements, • development of low carbon products and solutions aiming at environmental protection and lowering the Group's environmental footprint, and • innovation through digital technology into all areas of Holcim's business, fundamentally changing how the Group operates and delivers value to customers. In 2021, costs associated with research and development activities reached CHF 237 million (2020: CHF 171 million) (annual report 2021 page 203).
Low clinker cement	Large scale commercial deployment	≤20%	237000000	Innovation through research and development projects plays a key part in the Group's activities. Holcim's innovation centers in France, Switzerland and a worldwide network of laboratories are delivering locally tailored solutions backed by global expertise. Through this research network, research and development projects are carried out with a view to generate added value for customers through end user oriented products and services focusing on: • breakthrough technologies aiming at production systems improvements, • development of low carbon products and solutions aiming at environmental protection and lowering the Group's environmental footprint, and • innovation through digital technology into all areas of Holcim's business, fundamentally changing how the Group operates and delivers value to customers. In 2021, costs associated with research and development activities reached CHF 237 million (2020: CHF 171 million) (annual report 2021 page 203).

C10. Verification

C10.1

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

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

C10.1a

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

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
25022022-sustainability-performance_fy_2021_report-en.pdf
EY - Holcim - Document on verification statement for CDP reporting.pdf

Page/ section reference
Holcim 2021 sustainability report: Refer to pages 18 to 20, section "ASSURANCE STATEMENT"

Document on verification statement for CDP reporting: all document

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1b

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

Scope 2 approach
Scope 2 market-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
25022022-sustainability-performance_fy_2021_report-en.pdf
EY - Holcim - Document on verification statement for CDP reporting.pdf

Page/ section reference
Holcim 2021 sustainability report: Refer to pages 18 to 20, section "ASSURANCE STATEMENT"

Document on verification statement for CDP reporting: all document

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1c

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

Scope 3 category
Scope 3: Upstream transportation and distribution

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
25022022-sustainability-performance_fy_2021_report-en.pdf
EY - Holcim - Document on verification statement for CDP reporting.pdf

Page/section reference
Holcim 2021 sustainability report: Refer to pages 18 to 20, section "ASSURANCE STATEMENT"

Document on verification statement for CDP reporting: all document

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.2

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

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C8. Energy	Energy consumption	Type of assurance: Limited Assurance Assurance Standard: ISAE3000	Holcim uses the verification standard mentioned above for these indicators to maintain consistency with the verification standard used for scope 1 , 2 and 3 emissions. Specifically the data verified is the following: - Consumption of fuel (excluding feedstocks) for cement production activities (as reported in CDP question C-CE8.2a) - Consumption of fuel (excluding feedstock) (as reported in CDP question C8.2a) The verification is company-wide for our financially consolidated businesses and is done annually. 25022022-sustainability-performance_fy_2021_report-en.pdf

C11. Carbon pricing

C11.1

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

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.
Alberta TIER - ETS
BC carbon tax
Canada federal Output Based Pricing System (OBPS) - ETS
Colombia carbon tax
EU ETS
Mexico carbon tax
Nova Scotia CaT - ETS
Québec CaT - ETS
Switzerland ETS
UK ETS

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

Alberta TIER - ETS

% of Scope 1 emissions covered by the ETS
1

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1 2021

Period end date
December 31 2021

Allowances allocated
1308065

Allowances purchased
0

Verified Scope 1 emissions in metric tons CO2e
1214228

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
BERTA (Exshaw Plant) falls under the Alberta TIER

Canada federal OBPS - ETS

% of Scope 1 emissions covered by the ETS
0.59

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1 2021

Period end date
December 31 2021

Allowances allocated
721272

Allowances purchased
0

Verified Scope 1 emissions in metric tons CO2e
717989

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
Ontario (Bath Cement Plant) falls under the Canada federal OBPS system

EU ETS

% of Scope 1 emissions covered by the ETS
15.3

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1 2021

Period end date
December 31 2021

Allowances allocated
17242801

Allowances purchased
0

Verified Scope 1 emissions in metric tons CO2e
18550366

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
EU27

Nova Scotia CaT - ETS

% of Scope 1 emissions covered by the ETS
0.06

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1 2021

Period end date
December 31 2021

Allowances allocated
62172

Allowances purchased
5000

Verified Scope 1 emissions in metric tons CO2e
75331

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
NOVA SCOTIA (Brookfield plant)

Québec CaT - ETS

% of Scope 1 emissions covered by the ETS
0.63

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1 2021

Period end date
December 31 2021

Allowances allocated
709531

Allowances purchased
0

Verified Scope 1 emissions in metric tons CO2e
758072

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
QUEBEC (St. Constant Plant)

Switzerland ETS

% of Scope 1 emissions covered by the ETS
1.1

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1 2021

Period end date
December 31 2021

Allowances allocated
1239647

Allowances purchased
0

Verified Scope 1 emissions in metric tons CO2e
1329980

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
No comment

UK ETS

% of Scope 1 emissions covered by the ETS
0.49

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1 2021

Period end date
December 31 2020

Allowances allocated
536813

Allowances purchased
52689

Verified Scope 1 emissions in metric tons CO2e
589502

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
No comment

C11.1c

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

BC carbon tax

Period start date
January 1 2021

Period end date
December 31 2021

% of total Scope 1 emissions covered by tax
0

Total cost of tax paid
4553401

Comment
BC CARBON TAX (Richmond)

Colombia carbon tax

Period start date
January 1 2021

Period end date
December 31 2021

% of total Scope 1 emissions covered by tax
0.01

Total cost of tax paid
50840

Comment
No comment

Mexico carbon tax

Period start date
January 1 2021

Period end date
December 31 2021

% of total Scope 1 emissions covered by tax
0.78

Total cost of tax paid
5496636

Comment
No comment

C11.1d

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

i) A description of your strategy for complying with the systems in which you participate

Holcim CO2 ambition, targets and aspirations for 2022, 2023, 2025 and 2030, have been cascaded across all business units by the integration in the business management plan of the respective levers.

At the moment, the levers we are currently employing to reduce carbon intensity associated with regulated systems are focused to reduce our scope 1 emissions related to process, fuel emissions and energy purchased mainly, being fully aligned with the nature of the carbon systems under which we currently operate.

- **Clinker substitution:** Substitution of clinker with mineral components such as limestone, pozzolan, slag or fly ash. Currently, the products we market use on average 29 percent of constituents to replace clinker.
- **Waste-derived fuels and biomass:** To be used as replacement for fossil fuels that provide the energy needed to operate a cement kiln. We are currently able to source 21 percent of our energy needs from low-carbon fuels and biomass.
- **Increased energy efficiency:** We are optimizing our low-carbon power-producing assets across our production plant portfolio. We are also investing in or purchasing renewable power when it is economically advantageous and investigating opportunities to generate renewable energy by using our land for windmills or solar panel farms, or using quarries as water reservoirs for hydropower.
- **Innovation:** We are continually exploring new strategies and technologies, such as carbon capture and usage and developing new low-carbon solutions.
- **Risk and opportunities:** Monitoring and modeling of distinct and plausible carbon scenarios are used to increase the robustness of our strategy.
- **Transparency:** The Group supports transparency and improved disclosure in carbon-related performance and risks.

ii) A description of your strategy for complying with the system in which you anticipate to participate in, and identification of when you anticipate being regulated in the next 3 years

In Europe we have been closely managing the transition to the phase 4 of the new European Trading System which came into force in 2021, bringing more strict CO2 free credit allocation systems and the increase of fossil fuels' costs and scarcity of alternative mineral components. Holcim has already implemented a dedicated regional-wide decarbonization roadmap. The initiative has been distributed in four key areas, aligned with our global strategy:

- Energy efficiency improvements and acceleration of Alternative Fuel usage

- Enhanced product portfolio optimization to accelerate the production of low carbon binders

- Network optimization to evaluate production thresholds and network optimization synergies

- Innovation of CO2 neutral technologies such as carbon capture and storage

A range of plausible scenarios of regulation developments (including the enactment of a CBAM and a reduction of free allowances) have been factored in the strategic and financial planning and considered in our decarbonization roadmap.

iii) An example of how you have applied your strategy

We are regulated by the EU-ETS for all of our European Operations. We anticipated three years in advance the impact of this transition with regards to potential increase of our direct costs. We realised the need to increase investment in emissions reduction activities, to reduce the financial impact from this scheme. As a result, the company decided to invest CHF 160 million and work on more than 80 projects across 19 European countries such as France and Germany, with a focus on low-carbon fuels, recycled materials and carbon efficient solutions. With this investment we are aiming to reduce our CO2 emissions in Europe by 3million tons by 2022 on a like for like basis, compared to our 2018 baseline.

C11.2

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

Yes

C11.2a

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

Credit origination or credit purchase
Credit origination

Project type
Agriculture

Project identification
The Cerro Blanco Forest is a private reserve of 6,078 hectares and it is one of the last remnants of dry forest on the Ecuadorian coast. The Foundation 'Pro-bosque' protects and rehabilitates this Tropical Dry Forest Region in collaboration with Holcim Ecuador. Holcim Ecuador has an agreement with the Foundation 'Pro-Bosque' to offset the carbon footprint of their products by taking into account the carbon captured by the preserved forest. External Annual audits are carried out to monitor the forest's CO2 capture rate (currently by 'Sambito' Auditing corporation). The Ecuadorian Government recognizes the process and the external audits., 3,300 hectares are currently available to compensate for emissions.

Verified to which standard
Not yet verified

Number of credits (metric tonnes CO2e)
9405

Number of credits (metric tonnes CO2e): Risk adjusted volume
9405

Credits cancelled
Yes

Purpose, e.g. compliance
Voluntary Offsetting

C11.3

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

C11.3a

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

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

GHG Scope
Scope 1
Scope 2
Scope 3

Application
Our climate policy vision supports effective carbon pricing mechanisms. In Europe, our financial teams use carbon pricing aligned with EU-ETS forecast to assess our capital expenditures.

In addition, Holcim promotes the use of an Integrated Profit and Loss statement as a tool to assess the initiatives proposed for future investments to achieve our sustainability ambition. This tool quantifies the equivalent economic value on the social and environmental externalities related to the company's new projects, to raise awareness of how they may or may not affect Holcim's business, and to assess their relative importance in the decision making process. A Social and Environmental P&L assessment can be conducted for each of the initiatives considering a price for carbon and other externalities. The methodology is publicly available and covers scope 1,2 and 3 emissions.

Actual price(s) used (Currency /metric ton)
51.5

Variance of price(s) used
We based our figure on the latest report of the Environmental Protection Agency (which provides a base price of USD 52/t in 2020). Taking the 3% discount rate and inflating this number to 2021 gives us: USD 56/t (i.e. CHF 51.5/t). The application of the discount rate is based on the recommended discount rate in the VBA methodology paper: 3.5%. The EPA report does not provide 3.5% outcomes, so a more conversative approach was used: the 3% figures were used.

Type of internal carbon price
Shadow price

Impact & implication
Specific description of how organization uses internal price on carbon:

According to the existing carbon pricing schemes, Holcim uses an internal price of carbon to estimate the economic impact on the production cost of the sites that are under the defined mechanisms in each country or region.

Regarding the efficiency of each production site and the existing and projected market demand, Holcim makes decisions based on the overall financial impact that the asset has and may have in the future.

Based on the obtained results, roadmaps are defined to achieve the goals of our sustainability ambition, giving priority to those initiatives (new products, investments or R&D activities) that are matched in high integrated P&L value, high feasibility and high estimated net present value.

For example, in Europe, we are regulated by the EU-ETS for all of our European operations, which includes 13 countries and impacts 33 integrated cement plants. As part of the EU Decarbonization roadmap, respective capital expenditures are assessed taking into account a carbon price. In our assessment, we assume a CO2 price between 50 CHF / EUA (low) and 100 CHF/ EUA (high) to determine respective paybacks and assess each project.

In addition, Holcim promotes the use of the Integrated (Economic, Social and Environmental) Profit and Loss Statement (IPL) methodology as a fundamental piece of information in its mainstream reports.

The Holcim IPL assumptions are made publicly available:
https://www.holcim.com/sites/holcim/files/2022-04/25022022-holcim_ipl_2021_statement.pdf

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?
Yes, our suppliers
Yes, our customers/clients
Yes, other partners in the value chain

C12.1a

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

Type of engagement
Innovation & collaboration (changing markets)

Details of engagement
Run a campaign to encourage innovation to reduce climate impacts on products and services
Collaborate with suppliers on innovative business models to source renewable energy
Other, please specify ((1) Partner with suppliers in specific projects to drive innovation, CO2 reduction, 2) Founding member of the "WEF First Movers Coalition" for heavy duty vehicles. 3) Signed the “Sea Cargo Charter” committed to reduce CO2 from Sea Transportation)

% of suppliers by number
39

% total procurement spend (direct and indirect)
60

% of supplier-related Scope 3 emissions as reported in C6.5
72

Rationale for the coverage of your engagement
Supplier sustainability compliance and performance is an integral part of sourcing decisions. We engage with suppliers to encourage innovation and reduce climate impacts from products and services purchased. To do it, we prioritize our supplier base to identify those with high ESG impact and focus our engagement efforts with them. Our main focus is on 39% of our supplier base (37'000 suppliers from 97'000 total active suppliers) representing 60% of the annual spend (CHF 9.2 billion from total spend CHF 15.3 billion). Suppliers identified as having high environmental impact, such as suppliers of energy, fuels and transportation, account for approximately 72% of our Scope 3 CO2 emissions (equivalent to 21.6 mio tons CO2). Through our supplier qualification process, we verify that they have an environmental management system in place to manage their impact and we identify partnership opportunities to drive CO2 reduction in our supply chain. For example, we partnered with our transportation suppliers worldwide as approximately 95% of road vehicles moving our materials are owned and operated by third parties. Through this type of engagements, we implemented in-vehicle management systems, to improve road safety and eco-driving (we provide training and monitor drivers performance in our Transport Analytics Center) as it is one of the levers to reduce the kilometers driven and consequently CO2 scope 3 emissions. We are also partnering with OEM suppliers of Heavy Duty vehicles and Heavy Mobile Equipment to pilot new eco-friendly technologies to phase out Diesel trucks.

Impact of engagement, including measures of success
We measure success in terms of the percentage (%) of the total annual spend from high ESG impact suppliers covered by our ESG qualification process. For this reporting year, our target is to have 70% of our total spend on high ESG impact suppliers to be in compliance with Holcim’s ESG criteria. This target will enable the company to be in a viable position to attain 100% of its total spend with high impact suppliers assessed to be in compliance with the criteria by 2022. By the end of 2021, a total of 20,676 high ESG impact suppliers were in compliance with Holcim’s ESGl criteria, accounting for 73% of Holcim’s total spend with high ESG impact suppliers to be covered. We consider this to be a successful attainment of our threshold.

The impacts of this successful engagement were that we are mobilising our key suppliers to foster innovation (including climate-related aspects) that will help us reduce Scope 3 emissions from our top categories (covering +70% of our total absolute emissions). For example, we are leading the largest roll-out of Industry 4.0 technologies in the building solutions industry. We piloted Volvo Autonomous vehicles in one of our queries in Switzerland fully powered by renewable energy and we are working with Volvo to agree on a roadmap plan to scale the technology in selected quarries over the next years. We are also piloting several eco friendly technologies for Heavy Duty Trucks, some examples: Mexico, Switzerland, Canada, USA, RMX Canada.

Comment
No comment

C12.1b

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

Type of engagement & Details of engagement

Collaboration & innovation	Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number

100

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

0

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

We consider customer-related Scope 3 emissions (Use of sold products) as not relevant for the scope of our customer engagement (0%) according to the GCCA Guidelines for the cement sector. The use of our products is not directly associated with energy consumption. On another hand, Holcim has an important range of products and brands which can be considered as low carbon products and we are continuously encouraging our customers to improve their climate change initiatives. As a result, we believe that our products can support our customer's ESG goals, and therefore we engage with all our customers to encourage them to use our products for low-carbon, innovative buildings. Holcim Group Sustainability is engaging with the entire construction value chain including real estate developers and construction companies through its standing stakeholders panel. Furthermore, dedicated workshop meetings with contractors and construction companies on low carbon construction materials are taking place. Incentivisation: The Holcim Foundation for Sustainable Construction promotes and encourages the development and design of a sustainable built environment. The Holcim Foundation for Sustainable Construction runs a 3-year competition with USD 2 million prize money to promote sustainable approaches to creating the built environment with an active focus on reducing CO2 emissions at every stage of a structure's use cycle.

Impact of engagement, including measures of success

We measure the success of this engagement by our ability to hold at least 10 meetings per year with our local customers with regards to the launch of new low carbon products. In 2021, we held a total of 15 meetings in several countries, including Canada, France, Germany, Italy, Japan, United Kingdom and United States to present ECOPact products. We consider this as a company success. Since 2003, the Holcim Foundation for Sustainable Construction has stimulated professional and targeted dialogue with over 500 practitioners, prescriptors, academics and public authorities from around the globe, which are increasingly interested in our low carbon and sustainable products. In addition, we regularly engage locally with our customers to communicate updates on our respective low-carbon product portfolio. As a result of our continuous engagements, new customers adopted ECOPact. The extension of the UK's high-speed rail network, for example, will use 800,000m³ of ready-mix concrete from our ECOPact range, supplied by Holcim, to meet the project's performance and low-carbon requirements. Marking its first anniversary, ECOPact green concrete is now available globally in 24 markets across all five regions just one year after its global launch.

C12.1d

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

Holcim joined the First Movers Coalition (FMC) as a founding member to drive more green demand and low carbon technologies to advance our world's climate goals.

On the green procurement side, Holcim commits to FMC's trucking ambition, to reach 30% of zero-emission heavy-duty truck purchases or contracts by 2030.

On the supply side, Holcim will continue to scale up its green building solutions and next-generation technologies for net-zero construction.
These commitments build on Holcim's industry-first 2050 net-zero goals, validated by the Science Based Targets initiative.

The FMC was launched at COP26 by Secretary John Kerry, US Special Presidential Envoy for Climate, and the World Economic Forum (WEF).

C12.2

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

Yes, climate-related requirements are included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement
Complying with regulatory requirements

Description of this climate related requirement
Through our Sustainable Procurement program, we require all suppliers identified as having high impact on environment (including climate-related impact), to demonstrate compliance to regulatory requirements. We verify compliance through our "supplier qualification" program and we include this requirement in the contractual terms and conditions.
In addition, for some specific categories (eg mobile equipment), we require suppliers to share their EPD which we use to inform sourcing decisions by including CO2 efficiency in our "Total Cost of Ownership" models.

% suppliers by procurement spend that have to comply with this climate-related requirement
77

% suppliers by procurement spend in compliance with this climate-related requirement
78

Mechanisms for monitoring compliance with this climate-related requirement
Supplier self-assessment
First-party verification

Response to supplier non-compliance with this climate-related requirement
Other, please specify (Consequence management is linked to market complexity (Krlajic Matrix) and actions are related to each quadrant: "Leverage": Suspend and engage; "Strategic and Critical": retain and engage; "Non-critical": exclude.)
lh_sustainable_procurement_principles_and_processes.pdf
2021_coc_a5_english-final.pdf
holcim_sustainable_procurement_directive.pdf

C12.3

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

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate
Yes, we engage directly with policy makers
Yes, we engage indirectly through trade associations
Yes, we engage indirectly by funding other organizations whose activities may influence policy, law, or regulation that may significantly impact the climate

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

Attach commitment or position statement(s)
210702._holcim_public_policy_3.0.pdf
lafargeholcim_responsible_lobbying_and_advocacy_directive_.pdf
lafargeholcim_2021_industry_associations_climate_review_final.pdf

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy
In September 2020, Holcim was the first global building materials company to sign the UN Global Compact's "Business Ambition for 1.5°C" initiative, with a 2030 SBTi-verified targets. As part of this net zero climate pledge, Holcim has identified key policy enablers that form the core of its policy positions and advocacy, including:

– Effective carbon pricing mechanisms
– Market demand for low-carbon products and solutions
– Large-scale deployment of advanced technologies, such as carbon capture usage and storage (CCUS)

In support of this commitment and associated policy enablers, Holcim decided to assess its memberships in its main trade organizations around the world. The aim was to ensure that those organizations have no major misalignment with the Group's policy positions on climate change.

To proceed with this assessment, Holcim has analyzed its memberships around the world and made a selection of 20 organizations. Those were selected to reflect both the size of the Group's financial contribution to the organizations (above CHF 250,000) and the Group's geographical footprint. All in all, these organizations represent c. 80% of the total amount that the Group paid to trade organizations in 2020.

The core review was led by the corporate public affairs team based on the organizations' public positions, on their website, media releases, publications and social media. A questionnaire was also sent to the organizations based on the five criteria (see below) to complement the analysis and give the opportunity to bring additional positions into the review. When needed, a discussion was organized with the local public affairs team to ensure a good understanding of the policy landscape and alignment in the analysis. The analysis was then reviewed with the Group's sustainability and stakeholder engagement team.

Should major divergences in positions appear, Holcim will work proactively with the organization in question to find alignment.

If no alignment can be found, Holcim will dissociate itself from the organization in question and related activities, or in extreme cases, renounce its mandates within the organization and/or its membership.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate
<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate
<Not Applicable>

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Focus of policy, law, or regulation that may impact the climate
Carbon tax

Specify the policy, law, or regulation on which your organization is engaging with policy makers
We have engaged with EU commision in recent regulation developments including the enactment of a carbon border adjustment mechanisms (CBAM) and a reduction or phase out of free allowances

Policy, law, or regulation geographic coverage
Regional

Country/region the policy, law, or regulation applies to
EU28

Your organization's position on the policy, law, or regulation
Support with minor exceptions

Description of engagement with policy makers
Holcim engages with public authorities in a transparent and constructive way, on policy issues relevant to its activities. It remains politically neutral, supports freedom of expression and respects other stakeholders' rights to express their opinions and positions.
The Group shares publicly its policy positions and topics of engagement. It is transparent on its membership in coalitions, think-tanks and professional organizations. The Group is committed to giving reliable and up-to-date information to public authorities.
Holcim requires that any third-party that engages with public authorities on its behalf undergo due diligence.
The Group does not make political donations, unless it is expressly permitted under written local laws and applicable Holcim policies and guidelines, and transparently and accurately
recorded. Those principles form part of the Group's Responsible Lobbying and Advocacy Directive. The Directive is applicable to all Holcim employees engaging with Public Authorities.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
Holcim requires a level playing field between domestic producers and importers: where carbon prices are in place, a level playing field on carbon costs between domestic producers and importers is necessary to ensure that low-carbon solutions remain competitive (e.g. through carbon border adjustment mechanisms).

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

C12.3b

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

Trade association
CEMBUREAU: The European Cement Association

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

Has your organization influenced, or is your organization attempting to influence their position?
We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
In 2020 we contributed to the development of the Cembureau's agenda on climate change through active participation in management meetings. Holcim representatives lead the work on standardization for GHG reporting, and are active in 4 working bodies whose main focus is Climate Change. In 2021, the country CEO of Holcim in Spain, was appointed Cembureau's new President.

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

Describe the aim of your organization's funding
<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Trade association
Other, please specify (Global Cement and Concrete Association)

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

Has your organization influenced, or is your organization attempting to influence their position?
We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
Holcim was a founder member of the GCCA and has an active role in the development of the GCCA'a agenda. Holcim champions various focus areas on Climate and Energy and Monitoring and reporting. Holcim CEO Jan Jenisch is on the board of the GCCA and in 2022 has been appointed as GCCA president. EXCO member Miljan Gutovic is on the steering committee. In addition, Holcim subsidiaries are participating in the Low Carbon Technologies Partnership. The use of the roadmap is the first step to developing climate regulations, setting targets for emissions reduction, financed with national resources and reduction financed with international funds.

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

Describe the aim of your organization's funding
<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Trade association
European Roundtable of Industrialists (ERT)

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

Has your organization influenced, or is your organization attempting to influence their position?
We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
Holcim is an active participant to the climate and energy working group and plays a leading role in the development of forward-looking engagement on the low-carbon transition.

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

Describe the aim of your organization's funding
<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Trade association
Other, please specify (Zürich Carbon Markets Association (ZCMA))

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

Has your organization influenced, or is your organization attempting to influence their position?
We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
The ZCMA provides a network for knowledge sharing for all organisations that are interested in the evolution of sustainability focused and high quality carbon markets with the aim to mitigate greenhouse gas emissions. Holcim has representation actively driving the ZCMA's program of activities.

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

Describe the aim of your organization's funding
<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

C12.3c

(C12.3c) Provide details of the funding you provided to other organizations in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.

Type of organization
International Governmental Organization (IGO)

State the organization to which you provided funding
CPLC - Carbon Pricing Leadership Coalition

Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)
0

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate
CPLC is a voluntary partnership of national and sub-national governments, businesses, and civil society organizations that agree to advance the carbon pricing agenda by working with each other towards the long-term objective of a carbon price applied throughout the global economy by:
• Strengthening carbon pricing policies to redirect investment commensurate with the scale of the climate challenge
• Bringing forward and strengthen the implementation of existing carbon pricing policies to better manage investment risks and opportunities
• Enhancing cooperation to share information, expertise, and lessons learnt on developing and implementing carbon pricing programs through various "readiness" platforms

Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

C12.4

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

Publication
In mainstream reports, incorporating the TCFD recommendations

Status
Complete

Attach the document
25022022-finance-holcim_fy_2021_report-full-en (1).pdf
08042022-holcim-climate-report-2022.pdf
25022022-sustainability-performance_fy_2021_report-en.pdf

Page/Section reference
i) Integrated Annual Report 2021: Page 108
ii) Climate Report:
Governance: Page 48
Strategy and targets: Page 10
Risk and Opportunities: Page 50
Scenario Analysis: Page 62
iii) Sustainability Performance Report
Metrics: Page 7

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

Comment
No comment

C15. Biodiversity

C15.1

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

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, both board-level oversight and executive management-level responsibility	The Board of Directors has a dedicated Committee with a specific remit on Sustainability and Health and Safety (HSSC). The committee consists of five Board members, is Chaired by a senior Board member, and meets at least quarterly. This committee's mission is to provide advice on strategic direction and on the development and promotion of sustainability related topics - with Nature including biodiversity being one of our 4 sustainability pillars. The HSSC's key water related responsibilities: - informs, reviews and approves the Holcim's sustainability strategy framework - is briefed on a quarterly basis on key environmental (including water) related aspects as well as on performance against key indicators. In 2021, the biodiversity related topics discussed and agreed by the HSSC included the approval of the Nature strategy, with the following biodiversity targets: - all quarries with rehabilitation plans by 2022 - all quarries located in high biodiversity values to have biodiversity management plans in place by 2022 - global Biodiversity Indicator and Reporting System baseline completed in all managed land by 2024 - A measurable positive impact on biodiversity based on the Biodiversity Indicator Reporting System developed in partnership with IUCN by 2030	<Not Applicable>

C15.2

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

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Adoption of the mitigation hierarchy approach Commitment to not explore or develop in legally designated protected areas Other, please specify (Measurable positive impact on biodiversity based on the Biodiversity Indicator Reporting System developed in partnership with IUCN All quarries with rehabilitation plans and all located in high biodiversity areas with biodiversity management plans)	CBD – Global Biodiversity Framework SDG Other, please specify (Holcim is an official member of the Task Force for Nature Related Financial Disclosures Members of the SBTN corporate engagement program which is setting the Science Based Targets for Nature)

C15.3

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

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	Yes, we assess impacts on biodiversity in our upstream value chain only	<Not Applicable>

C15.4

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

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Land/water management Species management Education & awareness Law & policy Other, please specify (Advocacy efforts with Business for Nature, TNFD and SBTN)

C15.5

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

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	State and benefit indicators Other, please specify (Biodiversity actions: number of endemic plant species planted, number of native individual plants planted, to increase number of pollinators, to increase or enhance wetland areas, to remove and control invasive species, to create green corridors.)

C15.6

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

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In mainstream financial reports	Content of biodiversity-related policies or commitments Governance Impacts on biodiversity Details on biodiversity indicators Influence on public policy and lobbying Risks and opportunities Biodiversity strategy	Risks & opportunities - page 112 Impacts on biodiversity - page 42-43 Content of biodiversity-related policies or commitments - page 42-43 Influence on public policy and lobbying - page 42-43 Biodiversity strategy - page 42-43 25022022-finance-holcim_fy_2021_report-full-en (1).pdf
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Governance Impacts on biodiversity Details on biodiversity indicators Influence on public policy and lobbying Risks and opportunities Biodiversity strategy	Holcim 2021 Sustainability performance report: Impacts on biodiversity - pg. 8 Details on biodiversity indicators - pg. 8 Biodiversity strategy - pg. 2 Content of biodiversity-related policies or commitments - page 16 and 34 Ip&L: impact - pg. 3 25022022-holcim_ipl_2021_statement.pdf 25022022-sustainability-performance_fy_2021_report-en.pdf

C16. Signoff

C-FI

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

C16.1

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

	Job title	Corresponding job category
Row 1	CFO	Chief Financial Officer (CFO)

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

Please confirm below

I have read and accept the applicable Terms