

C0. Introduction

C0.1

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

Cementir Holding is a multinational Group with registered offices in the Netherlands and operating in the building materials sector. With operations in 18 countries, production capacity of over 13 million tons between white and grey cement, Cementir sells around 10 million tons of aggregates every year, 5 million cubic meters of ready-mix concrete and it represents a reference point both in the construction and maintenance of infrastructures as well as in residential and commercial construction.

Cementir is world leaders in white cement, the only producer of cement in Denmark and of concrete in the Scandinavian area, the third largest player in Belgium and among the main international grey cement operators in Turkey. We operate in Belgium one of the largest aggregate quarries in Europe, with 10 million tons extracted each year. In Turkey and the United Kingdom, we are active in the treatment of urban and industrial waste that we use to produce waste-derived fuel for our cement plants.

Cementir is committed to developing a business model in line with the sustainability strategic goals and the CO2 emission reduction targets judged by the Science Based Targets initiative (SBTi) to be consistent with the 'well below 2°C' objective, pursuant to the Paris Climate Agreement of 2015. By 2030, Cementir will reduce its Scope 1 and Scope 2 emission by 25% compared to 2020. This is the first milestone to be accomplished in order to achieve the carbon neutrality along our value chain by 2050.

To drive the transition of the Group to a low carbon economy, the 2022-24 Industrial Plan, approved by the Board of Directors in February 2022, targets a 97 million euro investments in sustainability and digitalisation, which will include, among others: the revamping of the kiln at our Belgian plant in order to increase alternative fuel use from the current 40% to 80%; the switch to natural gas and biogas in some plants; the ramping up of facilities at the Aalborg plant to produce our low-carbon cement, FUTURECEM®; the extension of district heating and other energy efficiency projects. There are also initiatives to reduce transport climate change impact. In transport, our Danish subsidiary Unicon, the largest producer and supplier of ready-mixed concrete in Denmark, set a target to reduce its fleet CO2 emissions by 30% in 2025 compared to 2019. To achieve this, in 2021, Unicon and Volvo Trucks entered into a long-term collaboration to implement and optimise electric solutions for the concrete industry.

Concerning water, the Group has defined a 10-year roadmap that will allow for the reduction of water consumption per ton of cement produced by 20% compared to 2019. For those plants located in high water-stress areas, where the specific water consumption is already lower than the Group average, the reduction target is 25%.

Difference between white and grey cement

White and grey cement are two distinctly different products, with different applications and production methods. White cement is a specialty product mainly used for high performance applications, dry-mix products, mortars, special products and decorative purposes, while grey cement is used in heavy construction, such as in-situ or precast concrete.

Obtaining the right (white) colour is a crucial factor in the manufacturing of white cement and is a conditional clause in trade contracts. A reflection of at least 86% is generally required for the white cement to be competitive compared to the reflection of grey cement which is in the range of 30-40%. For this reason, the production of white cement entails a higher energy consumption than the production of grey clinker. This deals with the fact that high grade raw materials are needed to achieve the necessary chemical purities. In addition, differently from the grey cement production, it is necessary to rapidly cool the white cement clinker from 1200° C to 600° C in a few seconds, which requires quenching with cold water which reduces the possibility of preheating combustion air.

Based on these particularities in the manufacturing of white cement, separate benchmark in the EU ETS has been necessarily deployed. For grey cement, the EU has set a benchmark of 693 Kg CO2/ t clinker, while for white cement the benchmark is 957 kg CO2/ t clinker, 42% higher.

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	No	<Not Applicable>

C0.3

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

- Belgium
- China
- Denmark
- Egypt
- Malaysia
- Norway
- Sweden
- Turkey
- United Kingdom of Great Britain and Northern Ireland
- United States of America

C0.4

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

- EUR

C0.5

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

- Financial control

C-CE0.7

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

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

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	Cementir Holding NV ISIN is NL0013995087

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
Chief Executive Officer (CEO)	<p>The Group operates in several Countries, facing increasing regulations on emissions trading and multiple jurisdictions, management of climate-related items is therefore deal with as a relevant issue with a significant impact both in terms of economic value and in terms of operational criticism. Ultimate powers and responsibilities stay with the board of the Group parent company and of the other companies of the Group, consistent with the uniform approach and strategy set out at Group level. The Group CEO is vested by the Board of the Group Parent company with all relevant authority to implement it. He regularly reports to the Board, where the strategic direction of the Group is ultimately set, about its adherence and the overall performance.</p> <p>The CEO is the individual with direct responsibility for climate-related issues. The CEO is responsible for the implementation of the Sustainability Targets defined by the Group and the implementation of the investments related to the Targets. Example of a climate decision:</p> <ul style="list-style-type: none"> • in March 2020 the CEO presented to the Board of Directors the 26 Sustainability Targets set by the Group (including among other, targets on Co2 emissions, alternative fuels, clinker ratio) and the 2019 Sustainability Report; • in June 2020, the CEO presented to the Board the evolution on the main Sustainability KPIs and related targets in the first half year of 2020. A specific section for the non-financial indicators (with the indication of Co2 emissions, alternative fuels, clinker ratio, alternative fuel produced by the Group) was included in the 2020 CONSOLIDATED HALF-YEAR REPORT; • in July 2020, the CEO signed off the CDP climate change response; • in February 2021, the CEO presented to the Board of Directors the 2021-2023 the update of the Industrial Plan. The BoD approved the 2021-2013 Industrial plan and confirmed the Group CO2 emissions targets by 2030 • in March 2021, following a request coming from the CEO, Cementir submitted the CO2 target to SBTi. In July 2021, SBTi has validated Cementir's CO2 targets, judged to be consistent with "well below 2°C". <p>The CEO is quarterly informed about the evolution of the Sustainability KPIs (among other, emissions, alternative fuels, clinker ratio) and about the evolution of the main risks and opportunities related to climate change. If needed, he is informed also more often.</p>
Board-level committee	<p>Due to increasing relevance of climate-related issues and sensibility of the Group, a specific Sustainability Committee has been established within the Board, dedicated to the Group's initiatives and engagement in this field and with responsibilities detailed in the related Charter. The Committee's purpose is: (i) to assist and advise the Board in its oversight of the Group's policies, programs and related risks however concerning sustainability matters; (ii) act under authority delegated by the Board with respect to setting out, monitoring, evaluating and reporting on policies and practices, management standards, strategy, performance and governance, relating to global and local sustainability matters, involving the Group; (iii) regularly interface with the Sustainability Department and the Group Management Team to respectively collect any required information and provide requested insights and advices and (iv) regular reporting to the Board. The committee meets at least quarterly</p>

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	<p>Reviewing and guiding strategy</p> <p>Reviewing and guiding major plans of action</p> <p>Reviewing and guiding risk management policies</p> <p>Reviewing and guiding annual budgets</p> <p>Reviewing and guiding business plans</p> <p>Setting performance objectives</p> <p>Monitoring implementation and performance of objectives</p> <p>Overseeing major capital expenditures, acquisitions and divestitures</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p>	<Not Applicable>	<p>The Board of Directors (BoD) is informed and deliberates on climate-related issues at least quarterly. The BoD set the overall strategy, approves the performance objectives and goals for the Group.</p> <p>For example:</p> <ul style="list-style-type: none"> • in February 2021, the Board of Directors examines preliminary consolidated results for 2020, approves the 2021-2023 Industrial Plan update and confirmed the Group CO2 emissions targets by 2030; • in July 2021, the Board was informed about the evolution on the main Sustainability KPIs and related targets in the first half year of 2021. A specific section for the non-financial indicators (with the indication of Co2 emissions, alternative fuels, water consumption) was included in the 2021 CONSOLIDATED HALF-YEAR REPORT. In July 2021, SBTi has validated Cementir's CO2 targets, judged to be consistent with "well below 2°C" • in November 2021, the Board Reviewed the Group Enterprise Risk Assessment. Moreover, the BoD defines the guidelines of the risk management system, so that the main risks concerning the whole Group are correctly identified and adequately measured, managed and monitored, determining, the level of compatibility of such risks with the management of the company in a manner consistent with its strategic objectives. The Risk Management system analyses the risks of each Group company (and of the Group) and evaluates the related level of mitigation, through a uniform methodology. All kind of risks are covered by the ERM (strategic, financial, compliance, operational and sustainability), consequently, also risks related to sustainability, as CO2 emissions, alternative fuels availability and others are integrated in the model. A panel of specific risks related to the sustainability aspects is applied to all the Group companies. These analyses are linked with the Group Sustainability Strategy and a separate disclosure is provided to the Audit Committee and BoD. Cementir has therefore committed itself to adopting the recommendations of the TCFD "Task Force on Climate-related Financial Disclosures" committing to be transparent about the risks and opportunities related to climate change. Identification, assessment and effective management of risks and opportunities associated with climate change are fully integrated into the Group's risk management process.

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	<p>One Non-Executive Director qualifies as "independent" pursuant to the Dutch Corporate Governance Code with significant experience in ESG matters as climate change and water-related issues.</p> <p>Criteria used to assess competence: the Non-Executive Director is Founding Members and Board Member of Shareholders for Change. Shareholders for Change is a group of institutional investors involved in active engagement with corporations to enhance a sustainable development as an essential element of their role as bond – and shareholders. Shareholders for Change organises collaborative participation in European companies' Annual General Meetings (AGMs) as well as coordinated voting or submission of questions to their boards and managements related to issues such as: CO2 emissions, climate change, water-related issues, other environmental topics, workers' rights and human rights (https://www.shareholdersforchange.eu/what-we-do/).</p> <p>The Non-Executive Director is also board member of Fundación Finanzas Éticas, the Fundacion, part of Grupo Banca Etica, is actively involved in promoting the energy transition and raising awareness about the role of ethical finance in the fight against climate change (https://finanzaseticas.net/).</p> <p>The Non-Executive Director also published books and articles about green financing.</p>	<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
Chief Executive Officer (CEO)	<Not Applicable >	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Sustainability committee	<Not Applicable >	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Risk committee	<Not Applicable >	Assessing climate-related risks and opportunities	<Not Applicable>	Quarterly
Other C-Suite Officer, please specify (Chief Internal Audit Officer)	<Not Applicable >	Assessing climate-related risks and opportunities	<Not Applicable>	Quarterly
Other, please specify (Group Management Team (GMT), composed of the Group COO, CFO, HR and Head of Regions, is in charge for the implementation of the Group Industrial Plan, and ensures the alignment between sustainability efforts and business objectives.)	<Not Applicable >	Managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Other, please specify (The Sustainability Working Group (SWG), composed by the COO, Group Chief Sales, Group Chief Internal Audit Office and the Head of Nordic & Baltic Region.)	<Not Applicable >	Other, please specify (It monitors the execution of the recommendations provided by the Sustainability Committee to the GMT. it must ensure that all activities undertaken by each Region and BU are consistent with the Group overall climate change strategy.)	<Not Applicable>	More frequently than quarterly

C1.2a

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

1) Group CEO. Climate issues have a strategic relevance because they could affect the long-term business of the Group, for this reason the Group CEO (the ultimate responsible for operational management of the company) is appointed with climate-related strategic responsibilities and must be aware and informed constantly about them. The Group CEO is the executive director of the Board, empowered both for ordinary and extraordinary business. He is one of the members of the Sustainability Committee. The CEO is quarterly informed about the evolution of the Sustainability KPIs (among other, emissions, alternative fuels, clinker ratio), about the evolution of the main risks and opportunities related to climate change. If needed, he is informed more often.

'2) Sustainability Committee, composed of four directors, the CEO plus three non-executive and independent directors. The Sustainability Committee prepares the decision-making process of the Board of Directors in formulating and implementing a strategy in line with a view on long-term value creation by Cementir Holding N.V. and its subsidiaries, regarding the management of climate-related issue and the development and promotion of a healthy, safe and secure environment for the Company's stakeholders as well as the sustainable development and social responsibility and prepares any related decision-making at the Board level.

The main task of the Sustainability Committee is to develop a Group Sustainability Strategy.

Among others, the Sustainability Committee shall:

assist and advise the Board on its supervision of the Group's policies, programs and related risks, concerning sustainability matters, (including, but not limited to) sustainability matters related to public issues of significance to the Group and its stakeholders that may affect the Group's business, strategy, operations, performance or reputation;

receive regular reporting from any subsidiaries' Sustainability Committees and the Sustainability Working Group (SWG) to respectively collect any required information and provide requested insights and advice to the Board;

provide regular reporting to the Board;

act under any authority delegated by the Board relating to global and local sustainability matters, including with respect to setting out, monitoring, evaluating and reporting on policies and practices, management standards, strategy, performance and governance;

review and approve goals and guidelines for environmental, social and governance compliance, aligned with Group's commitments and legal requirements;

review, discuss and propose the Group's sustainability initiatives and engagement;

assist in the Board's supervision of risks relating to sustainability matters overseen by the Sustainability Committee;

review, assess and make recommendations to the Board and to other Group bodies such as the Remuneration Committee on sustainability-related targets for management incentives at Group, regional and BU level;

'3) Risk Committee (Audit Committee) - Examine the Group Non-financial Disclosing prior to its yearly approval by the Board. The committee assists the Board: a) expressing opinions on specific aspects relating to the identification of the main risks for the company; b) reviewing the periodic reports of the internal audit function; c) requesting the internal audit function to carry out reviews of specific operational areas; d) reporting to the Board of Directors on the activity carried out, as well as on the adequacy of the internal control and risk management system

'4) Group Chief Internal Audit Officer - He reports directly to the Group CEO and has been assigned also the responsibility of Operational and Sustainability matters. The Internal Audit is responsible for the periodic monitoring of the activities implemented in reference to the Group's sustainability strategy and its targets. The internal audit is also in charge for the identification, evaluation and monitoring of all Group risks (ERM). All kind of risks are covered by the ERM (strategic, financial, compliance and operational), consequently, also risks related sustainability, as CO2 emissions, alternative fuels availability and others are integrated in the model. The Audit and Risk Committee is updated quarterly a about the evolution of the main risks.

'5) The Sustainability Working Group (SWG), composed by the COO, Group Chief Sales, Group Chief Internal Audit Office and the Group Industrial Officer, is the operational arm of the sustainability committee. On a monthly basis, the SWG monitors the execution of the recommendations provided by the Sustainability Committee to the GMT. Moreover, it must ensure that all activities undertaken by each Region and BU are consistent with the Group overall climate change strategy Each region and BU must report and agree with the SWG any activities undertaken at local level with business association, policy makers or local communities.

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	The monetary incentive plan adopted by Cementir is based on a short-term incentive (STI) system. The system maintains the proper ratio between its components and adequate incentives to achieve continuously improving performance levels within the sustainable value creation structure. The STI is based on the Group's and/or subsidiaries' financial and non-financial targets and includes objectives based on indicators linked to company performance and to managerial roles actually held within the Company. The STI is a tool with which Cementir promotes also the fulfillment of various climate change-related objectives (especially CO2 emissions, alternative fuels and alternative raw materials). Managers from all organisational levels participate and share in this incentive system, so that fulfilling defined goals results in the receipt of annual monetary incentives.

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
Other C-Suite Officer	Monetary reward	Emissions reduction target	The Head of Regions and Managing Directors of BU receive a monetary incentive, if their Regions or BU accomplished targets related to CO2 emissions reductions, clinker/cement substitution, use of alternative fuels. Cementir set 2030 targets. Each target has been deployed per single plant and years. The interim targets have been included in the 2021-2023 Industrial plan approved by the BoD in February 2021.
Other C-Suite Officer	Monetary reward	Emissions reduction target	The Group Chief Technical Officer receive a monetary incentive, if the Group accomplish the targets related to CO2 emissions reductions, clinker/cement substitution, use of alternative fuels. Cementir set 2030 targets. Each target has been deployed per single plant and year. The interim targets have been included in the 2021-2023 Industrial plan approved by the BoD in February 2021.
Other, please specify (Plant Managers)	Monetary reward	Emissions reduction target	The Plant Managers receive a monetary incentive, if their plant accomplishes the targets related to CO2 emissions reductions, clinker/cement substitution, use of alternative fuels. Cementir set 2030 targets. Each target has been deployed per single plant and year. The interim targets have been included in the 2021-2023 Industrial plan approved by the BoD in February 2021.
Chief Procurement Officer (CPO)	Monetary reward	Other (please specify) (Material supplies concerning alternative fuel and alternative raw materials)	The Chief Procurement Officer had specific incentives related to the alternative fuels and alternative raw materials in order to allow the CO2 emissions reductions targets
Other C-Suite Officer	Monetary reward	Company performance against a climate-related sustainability index	The Chief Internal Audit Officers receives a monetary reward based on the Cementir performance against CDP questionnaire. He reports directly to the Group CEO and has been assigned also the responsibility of Operational and Sustainability matters. The Internal Audit is responsible for the periodic monitoring of the activities implemented in reference to the Group's sustainability strategy and its targets. The internal audit is also in charge for the identification, evaluation and monitoring of all Group risks (ERM). All kind of risks are covered by the ERM (strategic, financial, compliance and operational), consequently, also risks related sustainability, as CO2 emissions, alternative fuels availability and others are integrated in the model. The Chief Internal Audit Officer updates the Audit and Risk Committee about the evolution of the main risks, quarterly.
Other, please specify (Group Sustainability Reporting Manager)	Monetary reward	Company performance against a climate-related sustainability index	The Group sustainability Reporting Manager is responsible for the preparation and publication of Cementir Group Non-Financial Report and the other main sustainability disclosures as CDP (Carbon Disclosure Project) and ESG (Environment, Social and Governance) Indexes. He supports the quarterly elaboration and monitoring of the sustainability-related data (KPIs) and he is also responsible for carrying out operational Audit and special projects at Group level and periodically monitoring initiatives with reference to the Group sustainability strategy. He receives a monetary reward based on the Cementir performance against CDP questionnaire
Procurement manager	Monetary reward	Other (please specify) (Material supplies concerning alternative fuel and alternative raw materials)	The Procurement Managers had specific incentives related to the alternative fuels and alternative raw materials in order to allow the CO2 emissions reductions targets

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	<p>We consider as short-term a time horizon between 0 and 3 years, since it is the period covered by our regular industrial planning.</p> <p>Even if Cementir Climate Change Strategy has a medium-term horizon, intermediate short-term goals have been defined. Cementir plans to accomplish 26 Sustainability Targets within 2030, but short-term targets dated 2022, 2023 and 2024 have been defined and included in the 2022-2024 Industrial Plan. Among other, Cementir established short-term target for CO2 emissions, alternative fuels, clinker ratio, green investments. The 2022-24 Industrial Plan, approved by the Board of Directors in February 2022, targets a 97 million Euro investments in Sustainability and Digitalization, which will include, among others: the revamping of the kiln at our Belgian plant in order to increase alternative fuels use from the current 40% to 80%; the switch to natural gas and biogas in some plants; the ramping up of facilities at the Aalborg plant to produce FUTURECEM®, the extension of district heating and other energy efficiency projects.</p>
Medium-term	3	10	<p>The medium term is a time horizon beyond the industrial plan but addressed by Cementir Climate Change Strategy.</p> <p>For example Cementir set up 26 Sustainability Targets to be implemented within 2030. Within 2030, Cementir plans: to reduce scope 1 and 2 GHG emissions 25% per ton of cementitious from a 2020 base year (target validated by SBTi), with emissions below 500 kg per ton of grey cement; to increase the alternative fuels to the 55% of the total fuels used for the production of grey cement; to lower clinker content of grey cement to 63%. For these targets, interim goals dated 2025 have been defined. Specific Roadmaps have been established to accomplish the 2030 targets.</p> <p>Cementir is also supporting Denmark in delivering a 70% reduction in greenhouse gases by 2030. In December 2019, the Danish Prime Minister appointed the Managing Director of Aalborg Portland (Danish legal entity owned by Cementir) as head of the climate partnership for energy-intensive industry, the technical group that will provide to the Danish government the technical forecast of all potential CO2 reductions achievable by energy intensive industry in Denmark and will define the prerequisites (policy, research, innovation, subsidies, etc.) for such reductions.</p>
Long-term	10	30	<p>The long-term is over 10 years.</p> <p>Cutting the CO2 emissions in the medium-term is a priority of Cementir Group, but we also believe that we cannot achieve the carbon neutrality acting alone. For this reason, concerning the long-term horizon, Cementir is involved in strengthening the global partnership for sustainable development.</p> <p>Cementir actively participates in global and national industry policy discussions on issues related to Climate Change, Sustainable Infrastructure, Innovation & Digital Transformation, Operational Efficiency, Health & Safety, Circular Economy, Alternative Fuels, and Waste Management Frameworks, among others.</p> <p>Cementir is a member of the Global Cement and Concrete Association (GCCA).</p> <p>Cementir is also member of the European Cement Research Academy (ECRA). ECRA's most important research projects are related to the carbon capture and storage (CCS) technology. Through the CEMBUREAU (European Cement Association), Cementir is directly involved in dedicated working groups that are coming up with proposals for revising the EU Emissions Trading System and sustainable construction legislation.</p> <p>In 2019, the Group became member of the Carbon Disclosure Project (CDP) in order to improve the Group's accountability for climate change and water management.</p> <p>In April 2021, the Group joined an international consortium led by New Energy Coalition and the University of Groningen for the development of a Carbon Capture and Storage technology</p> <p>The objective of this project is to investigate the potential of the carbon capture and storage technology to reduce CO2 industrial emissions and to allow local communities to share the benefits.</p> <p>From April 1st, 2021, over €13 million of European funds and private investments will enable scaling up technological innovations and conducting socio-economic research.</p> <p>A mobile demo plant will be constructed that will capture up to 100 Kg CO2/h at cement production and will be tested in our Danish plant of Aalborg.</p> <p>The deployment of breakthrough technology will be a corner stone in the path versus the production of 'net zero emissions' cement.</p>

C2.1b

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

A comprehensive assessment of all risks is carried out for all sites and businesses of the Group. Climate-related risks that could have a material adverse effect on our current/future business are integrated in the Risk Management process.

The risks are identified, assessed, managed and monitored taking into account operations, risk profiles and risk management systems of each business unit, to create a wholly integrated risk management process. Every year, Cementir performs and updates these assessments on the whole Group, involving all subsidiaries and the Corporate Level. The top risks results are submitted to the Top Management and Corporate Bodies (Audit Committee and BoD), yearly. Quarterly, a monitoring processes are performed on Group's top risks for monitoring the implementation status of actions plan agreed.

Definition of 'substantive financial or strategic impact'

We define substantive financial or strategic impact as all major adverse events or missed opportunities that have an impact, directly or indirectly, on Cementir's ability to create, preserve or that adversely affect the Group's value.

Risks are assessed in terms of **likelihood** and **impact** and their combination generates the risk scoring. Risk scoring is the results of the multiplication between likelihood and impact.

A scale from 1 to 25 is obtained and the risks that have a **risk score of 12 or higher** are considered to have a potential **substantive financial or strategic impact** that could undermine the business or part of the business.

In the assessments we consider both direct and indirect operations.

Description of the quantifiable indicators used to define substantive financial or strategic impact

The risk impact value is assessed based on a 5-level rating scale: 1-Negligible, 2-Significant, 3- Relevant, 4-Very Relevant, 5-Extreme.

Impacts are based on the following parameters:

Economical: a specific risk or opportunity is considered as having a substantive impact, if the resulting deviation from the planned EBITDA 2021 (Group EBITDA: € 305,000,000) as follow:

- Impacts below 0.5% of EBITDA are considered as Negligible (< 1,525,000 €)
- Impacts between 0.5%-5% of EBITDA are considered as Significant(€1,525,500- € 15,225,000)
- Impacts between 5-15% of EBITDA are Relevant (€ 15,225,000 - €45,750,000)
- Impacts between 15-30% of EBITDA are Very Relevant (€ 45,75,000- € 91,500,000)
- Impacts above 30% of EBITDA are considered as Extreme(€ > 91,500,000)

Operational: significant delay on the lead time, that cannot be managed through an internal reorganization of business activities, are evaluated as substantive for the Company.

Reputational: Cementir evaluates as substantive the risk of a negative judgment on an international scale by media or high loss of confidence by stakeholders.

In order to assess the overall magnitude of the risk, impact is combined with the likelihood, that is apportioned over a 5-level rating scale: 1- rare, 2- unlikely, 3- moderate, 4- likely, 5- more than likely.

Cementir defines the likelihood as the probability of occurrence of climate related events in the next 2 years:

- Rare: <10%: that the risk event will occur during the first two years from the time of evaluation;
- Unlikely (10 % - 35 %) that the risk event will occur during the first two years from the time of evaluation;
- Moderate: It is likely (35 % - 65 %) that the risk event will occur during the first two years from the time of evaluation;
- Likely: It is highly likely (65 % - 90 %) that the risk event will occur during the first two years from the time of evaluation;
- More than likely: It is almost certain (> 90 %) that the risk event will occur during the first two years from the time of evaluation;

Once defined Impact and likelihood, risk scoring is calculated as the multiplication between likelihood and impact.

The risk scoring has a scale from 1 (impact below 0,5% of operating EBITDA and likelihood rare, < 10%) to 25 (Impacts above 30% of operating EBITDA and likelihood More than likely, >90%)

All risks that have a risk score of 12 or higher are considered to have a potential substantive financial impact that could undermine the business or part of the business.

In addition, a risk could be defined as to have a potential substantive financial/strategic impact by the Top Management, regardless the risk scoring resulting from the Risk Management process.

At the end of the year, Cementir consolidates at Group level the results of all the ERM models performed in each subsidiary.

Example of substantive impact

The CO2 regulation impacts the plant located in Europe in terms of limited free CO2 allowances (see C2.3a Risk1) . Among the assumptions used for the definition of the Industrial Plan 2022-2024, an average yearly CO2 shortage of 500,000 tons is expected. In our ERM, for this Risk the score is 12 because the likelihood is '4' (probability 'likely') and economic impact is '3- Relevant', 40 million € assuming a CO2 price of 80€ (500,000x80), that is 5-15% of EBITDA

(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

Annually

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Cementir identifies, assesses and manages climate risks alongside all other types of risk in a structured manner consistent with the TCFD and as an integral part of its Risk Management Framework.

The process of identifying risks is performed regularly by the Group Risk Officer, involving the Top and Local Management. Macro-economic data and other industry-specific factors and risk information sources serve for the process. In 2021, the Group risk officer, with the support of a consultant, performed a scenario analysis to identify and evaluate the physical risk according to three different climate scenarios proposed by IPCC (RCP 2.6, 4.5 and 8.5) and the transition risk, in particular policy risk, using three scenarios proposed by IEA (High Carbon Price, Moderate Carbon Price and Low-Price Scenario).

A panel of specific risks is then identified and applied to all the Group companies and the Group's risk profile is assessed both from top down and bottom-up perspectives. The bottom-up assessment is performed at the country level. Each legal entity assesses climate-related risks and opportunities that have the potential to impact financial and non-financial targets over a short (<3 years), medium- (3-10 years) time horizon of long term (> 10 years). The top-down assessment is performed by the Group risk officer via interviews with the local and top management.

Risk and opportunities are assessed according to their likelihood of occurring and their potential magnitude of impact and potential financial impact as reported in C2.1b. In case substantive risks and/or opportunities are identified, specific actions to mitigate risks or capture identified opportunities are defined. For example, avoid risk by stopping specific activities, transfer risk to insurance company, reduce risk by mitigation measures or accept risk, if the cost to mitigate it, is higher than to bear the risk. We provide below a few examples of how we ultimately respond to identified risks.

The top risks results are submitted to the Top Management and Corporate Bodies (Audit Committee and BoD), yearly.

Quarterly, a monitoring processes are performed by the Internal Audit on Group's top risks for monitoring the implementation status of actions plan defined.

Our risk universe covers the various stages of the value chains: direct operations, upstream and downstream.

Risk that could affect direct operations in short/medium/long term

Tightening emission regulations could translate into increased compliance costs for the Group. In European countries, there is a risk posed by governmental decisions on emissions and fluctuations in the price of CO₂ emission quotas (set by the EU ETS). These annually permitted emission quotas are also being discussed in other countries where the Group operates, like China, where a system comparable to the EU has introduced in 2021 for the power generation sector.

Concerning the EU ETS, among the assumptions used for the definition of the Industrial Plan 2022-2024, an average yearly CO₂ shortage of 500,000 tons is expected. The potential financial impact for Cementir could be around 40 million € of additional yearly cost, assuming a CO₂ price of 80 EUR.

Task: The Group must constantly monitor its emissions and compliance with regulations and planning the availability of CO₂ emissions quotas. The Group must also define a 10-year roadmap to reduce its emissions to reduce the risk related to emission regulations.

Action: In the Group Risk Register, the tool used by the Group to identify and monitor each risk, the risk "Increase in the price of CO₂ and adoption of the ETS Regulation in non-EU countries" is listed. This risk is evaluated during each session of risk process with each plant of the Group. Likelihood, impact and risk scoring, as described in C.2.1b, are evaluated for this risk in each plant. This risk could have a substantive financial impact for the group.

To manage the risk, each plant defined a 10-year roadmap with the actions and investment to be implemented to reduce emissions. In parallel, Cementir engaged with SBTi to assess the alignment of its CO₂ targets against a well below 2°C scenario.

Results: In July 2021, the Science-Based Targets initiative (SBTi) validated Cementir's targets to reduce its emissions. Cementir will reduce scope 1 and 2 GHG emissions 25% per ton of cementitious products by 2030 from a 2020 base year.

In the short term, specific investments have been included in the 2022-2024 industrial plan. For example, concerning the Belgium plant, we have planned the upgrade of the kiln to increase alternative fuels usage to 80% of total fuel usage. - In the medium term, within 2030, we will reduce CO₂ emissions per ton of cementitious materials by emissions 25% from a 2020 base year. The target will be achieved through greater use of alternative fuels and renewable resources, reduction of thermal consumption and the clinker ratio of cements.

For the long term, Cementir is testing breakthrough technology. In April 2021, the Group joined an international consortium to investigate the potential of the carbon capture and storage technology s. From April 1st, 2021, over €13 million of European funds and private investments will enable scaling up technological innovations and conducting socio-economic research. A mobile demo plant will be constructed and tested in our Danish plant of Aalborg starting from the autumn of 2022.

Example of physical risk that could affect downstream in short term

Cement is the main component of concrete and for our customers that are producing concrete, water is an essential "raw material". In the high water stressed area, a stakeholder conflict could be with our customers.

For our customers located in water stress area, as central Europe (i.e. Belgium), is becoming relevant to have supplier of cement able to guarantee a sustainable use of water to obtain public works contracts. Several governments recognized the importance of label as Concrete Sustainability Council (CSC) certification in the procedures for the award of public works contracts. To obtain the CSC supplier certificate, the cement and aggregates plants must meet several requirements about environmental topics, as "water management", "land use", "energy & climate", "air emissions

In 2019, the plants located in Belgium, a high-stress area, decided to commit the CSC Certification System to meet the new requirements of the Customers and secure the sales related to public works contracts.

In 2020 and 2021 our cement and aggregates plant located in Belgium obtained the CSC Certification. The certification shows the effort of our Belgian operations to manage water issues along the value chain and meet the requirements established by the procedures for the award of public works contracts. Therefore, our Belgian operations can secure sales related to public works contracts. Without CSC certification, our Belgian operations could have lost this type of business.

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

	Relevance & Inclusion	Please explain
Current regulation	Relevant, always included	<p>The regulation related to CO2 emissions currently impacts the Cementir Group plants located in Europe (Belgium and Denmark) in terms of limited free CO2 allowances. European plants are regulated by The European Union Emissions Trading System (EU ETS). Among the assumptions used for the definition of the Industrial Plan 2022-2024, an average yearly CO2 shortage of 500,000 tons is expected. The potential financial impact for Cementir could be around 40 million € of additional yearly cost, assuming a CO2 price of 80 EUR.</p> <p>Climate-related issues and the linked CO2 emissions regulations are affecting also the suppliers landscape, especially in Europe.</p> <p>For example, the fly ash is a by-product from burning pulverized coal in electric power generating plants. In Europe, pressure on reducing coal fired plants progressively reduces fly ash availability and increases the related prices. Fly ash from coal-fired power plants can be used effectively as a component of raw kiln feed for the manufacture of cement clinker.</p> <p>In our Danish plant located in Aalborg, the fly ash is used for the production of the clinker and the related fly ash cement.</p> <p>The utilization of fly ash, as alternative raw materials, can lower the clinker/cement ratio. As clinker production is the most energy-intensive and CO2-emitting step of the cement-making process, reductions in the clinker/cement ratio (through use of clinker substitutes) reduce energy use and CO2 emissions. One possible way to reduce energy and CO2 emissions in cement production is to blend cements with increased proportions of alternative (non-clinker) feedstocks, such as fly ash from coal-fired power generation. So, fly ashes are also a lever used to mitigate CO2 impacts, but, in Europe, CO2 emissions regulations are progressively reducing their availability.</p>
Emerging regulation	Relevant, always included	<p>For example, the risk that emission trading system, like EU ETS, will be implemented in non-European country.</p> <p>This is a risk for non-European Group companies since, in some countries an emission trading system will probably start.</p> <p>Of the areas where the Cementir Group is operating, EU is the only major region with a cap and trade system.</p> <p>The other plant that are producing cement are located in China, Malaysia, Turkey, Egypt and US.</p> <ul style="list-style-type: none"> - China has announced to implement a CO2 trading system. The National ETS in China has been activated in 2021 and the power industry is the first industry to ETS and involved 2225 power companies. The next step is to expand the pilot companies from power to multiple industries including Power, Petrol-chemical, Chemical, Building materials, Iron & Steel, Non-ferrous metals, Paper and Civil aviation industries. - It's predicted that Cement and Non-ferrous metals could be covered in Y2023. - In 2021, the performance of the Anqing plant (the only Cementir plant located in China) was better than ETS Benchmark for white cement. The Anqing plant is producing white cement. The plant emissions were 944 kg CO2/ton clinker versus a benchmark of 957 kg CO2/ton clinker. Considering the performance of our Chinese plant, in the medium-short term, the implementation of a carbon emission trading system will not affect negatively Cementir. - Turkey is discussing the implementation of ETS or CO2 taxation system. Cementir Turkish plants have sent their first greenhouse observation and tracking plans to Turkish Ministry of Environmental starting from 2014. Very likely, in medium term, Turkey will establish a carbon pricing process, but as of July 2022 no additional information are available. - Regional systems in a few US states but not in Texas and Pennsylvania where the Group is operating. - No immediate plans in Egypt and Malaysia.
Technology	Relevant, always included	<p>Cement manufacturing is an energy and CO2 intensive process.</p> <p>The deployment of breakthrough technology will be a corner stone in the path versus the production of 'net zero emissions' cement.</p> <p>Risks and opportunities associated with technological innovations that could reduce CO2 emissions and energy consumption are an integral part of our risk management process, because the players that better succeed on finding new technologies will have a competitive advantage.</p> <p>The Group is investing for reducing the CO2 emissions and for developing the new technologies needed to accomplish the goal of net-zero emissions.</p> <p>For example, Cementir developed a new type of cement FUTURECEM® . FUTURECEM® is a limestone calcined clay cement with up to 30% CO2-reduction compared with existing, conventional cement types.</p> <p>FUTURECEM® is a patented technology based on limestone and calcinated clay, developed by the Group. The combination of limestone and calcinated clay in FUTURECEM® can replace a significant quantity of clinker in cement. Clinker is an interim product that is produced at high temperatures in cement kilns. Hence, replacing clinker with the combination of limestone and calcinated clay means significant reductions in CO2.</p> <p>On 1 January 2021, we began the distribution of FUTURECEM® in Denmark. Following the launch in Denmark, FUTURECEM® roll-out is accelerating in the Cementir Group's European market. CCB, the Cementir subsidiary in Belgium, will commercialise FUTURECEM® in France by 2022, while in Benelux the target is by 2023.</p> <p>By 2030, FUTURECEM® volumes sold are expected to reach around 51% of total volumes sold in Europe.</p> <p>Moreover, in April 2021, the Group joined an international consortium led by New Energy Coalition and the University of Groningen for the development of a Carbon Capture and Storage technology</p> <p>The objective of this project is to investigate the potential of the carbon capture and storage technology to reduce CO2 industrial emissions and to allow local communities to share the benefits.</p> <p>From April 1st, 2021, over €13 million of European funds and private investments will enable scaling up technological innovations and conducting socio-economic research.</p> <p>A mobile demo plant will be constructed that will capture up to 100 Kg CO2/h at cement production and will be tested in our Danish plant of Aalborg.</p>
Legal	Relevant, always included	<p>Although we are currently not subject to any climate change-related litigation, climate change related litigation risk is an emerging phenomenon. An example of a risk would be a lawsuit related to the adverse effects of climate change on certain groups of people due to our role as an emitter of CO2.</p> <p>Moreover, potential breaches of laws and regulations in the areas of CO2 emissions or other air emissions such as NOx and SOx could result in the imposition of sanctions.</p> <p>All air emissions are monitored at site level to check the compliance with the laws. Legal and compliance risks are part of the Group's risk assessment process and are managed both at Group level and local level. Group Legal department tracks all litigation cases and provides support to the local companies in defence and dispute resolution.</p>
Market	Relevant, always included	<p>Since in some of the countries in which the company operates there is an increasing attention to embodied energy and CO2 in building materials, there is the risk of substitution of existing products (concrete) and services with lower emissions options.</p> <p>In North Europe , the main risk is the increase in wood usage for flats, hotels, bridges and other applications.</p> <p>Between 2018 and 2019, we perform a survey to explore and figure out the status of the green transition in North Europe, then how it will change the construction industry in the coming years and finally what a building materials manufacturer such as Cementir should do when it comes to sustainability.</p> <p>The survey, confirmed the importance to develop and distribute low carbon solutions to reduce the risk of substitution with wood or similar alternative building materials.</p> <p>As mentioned in section technology of C2.2a, Cementir developed a new type of cement (FUTURECEM®) responsible for fewer CO2 emissions (30% lower CO2 content). On 1 January 2021, we began the distribution of FUTURECEM®.</p> <p>In addition, in the last years, several governments, especially in North Europe, starting to promote the development of sustainable building materials and recognize the importance of label as Concrete Sustainability Council (CSC) certification in the procedures for the award of public works contracts. The CSC is a certification system for globally responsible sourcing. The CSC strives to generate a market pull for green concrete by promoting sustainable construction through their certified concrete. Concrete that is from a CSC certified cement plant is more sustainable because it meets the standards set for the following categories: reducing CO2 emission; fair business practices & compliance; enhancing biodiversity; excellence in occupational health & safety; moving towards circularity, using water in a responsible manner; and enhanced responsibility in the supply chain.</p> <p>For our customers located in specific European countries as the Netherlands and Belgium is becoming relevant to have supplier of cement certified as CSC in order to obtain public works contracts.</p> <p>Between 2020 and 2021 cement and aggregates business located in Belgium obtained the CSC certification. In 2020, the Belgian cement plant of Cementir Group has received Silver certification from CSC. In 2021, the quarries in Gaurain and Clypot in Belgium obtained the CSC (Concrete Sustainability Council) GOLD certificate</p>
Reputation	Relevant, always included	<p>The cement and concrete businesses are characterized by an high impact in terms of emissions. For this reason, it is important that all the actions that the Group is undertaking in order to limit the impact on the environment and reduce the emission level, are well communicated to the stakeholders and that the stakeholders expectations regarding the Group are well analysed.</p> <p>The risk of being perceived as a large carbon emitter could reduce our attractiveness to stakeholders such as customers, investors, and potential employees.</p> <p>An example can be the investigative reports published by The Guardian about the environmental impacts of concrete. The building materials 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.</p> <p>Link: https://www.theguardian.com/cities/series/guardian-concrete-week</p> <p>Cementir is worldwide leader in the production of white cement. Due to the higher energy consumption needed for production of white clinker, compared to grey, the CO2 emission are certainly higher. A significant gap versus the other cement player must be highlighted.</p> <p>The management at group and local level 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. For example, to improve the accountability for climate change, in 2021, Cementir submitted the CDP Climate Change questionnaire and, for the first time, the Water Security Questionnaire.</p>

	Relevance & inclusion	Please explain
Acute physical	Relevant, always included	The risk of interruption of the operations due to natural events / disasters (such as floods or tropical hurricanes) or climate change is always included in the risk assessment and, consequently, analysed in all the Group companies. For example in Norway (where Cementir produces and sells concrete) climate condition, especially during the winter season, could affect the plant operations and the related sales. If the winter is very cold, construction project could be postponed or delayed. In such cases, the Customers postpone their purchases and as a consequence the sales of Cementir are postponed. The issue is managed through different actions. For example, Cementir arrange training to the customers about how to perform winter concrete casting (especially to the foreign companies that are performing construction project in Norway but that are not familiar with the weather). In addition, the ordinary maintenance of the plants is planned during the winter, when, as mentioned, due to climate condition, the sales are slower.
Chronic physical	Relevant, always included	For example, in cement production, a good quality of freshwater is not material, but sufficient quantities of water are needed for cooling the equipment, conditioning the kiln gases and de-dusting and cleaning. So, water availability at a catchment level is important in our risk assessment as we need water in our cement production process. The risk is that some of our plant located in water stressed area (i.e. Belgium, Turkey or Egypt) could be affected by shortages in water. Long-term shifts in climate patterns that may cause water scarcity must be monitored. For this reason, Cementir must perform a water availability assessment to manage any potential issue in water supply. In the Group Risk Register, the tool used by the Group to identify and monitor each risk, the risk "water stress" is listed. This risk is evaluated during each session of risk process with each plant of the Group. In 2021, a comprehensive water risk assessment was carried out for all cement plant using the WRI Aqueduct. A high water stressed area is defined as having a baseline water stress greater than 40%. The baseline water stress measures the current level of water demanded in a local area against the average available blue water. In 2021, the 44% of our total water consumption was sourced from plants located in water stressed area. The group defined specific target reduction for the water consumption. Within 2030, the Group will reduce the water consumption per ton of cement by 20%, comparing 2019. In the water stressed area the goal is to reduce the consumption per ton of cement by 25%. Moreover, in 2021, for the first time, Cementir submitted CDP water questionnaire. Reporting through CDP will help Cementir to improve the current practices of water management.

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
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Primary potential financial impact

Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

As a Cement Company with two plants located in Europe (Gaurain plant in Belgium and Aalborg plant in Denmark), we are subject under regulatory regime to the EU ETS system, and the financial implications of such a scheme are a risk for us.

Among the areas where Cementir operates, Europe is the only major region with a regulatory framework for CO2 quotes.

The EU ETS works on the 'cap and trade' principle. A cap is set on the total amount of certain greenhouse gases that can be emitted by the installations covered by the system. The cap is reduced over time so that total emissions fall.

Within the system, each cement plant must monitor and report its Co2 emissions, yearly. If the Co2 emitted by the cement plant exceeds what is permitted by its free allowances, a plant must purchase allowances on the markets. Conversely, if a cement plant has performed well at reducing its emissions and its emissions are less than its free allowances, it can sell its leftover credits.

The free allowances are assigned according to the emission recorded by the 10% most efficient cement plants located in EU, so most of the cement plant does not have enough free allowances to cover its emission and must buy allowances on the markets.

For this reason, the EU ETS is increasing the direct cost of most cement plants in EU. The direct cost is increasing because the plant must buy allowances to cover their emissions.

The magnitude of this risk mainly depends on:

- the volume of free allowances received by the plant;
- the co2 emitted by the plant;
- the market price for allowances.

Among the assumptions used for the definition of the Industrial Plan 2022-2024, an average yearly CO2 shortage of 500,000 tons is expected. 500,000 tons is the sum of shortages expected for our two European plants (Gaurain plant in Belgium and Aalborg plant in Denmark)

The potential financial impact for Cementir could be around 40 million € of additional yearly cost, assuming a CO2 price of 80 EUR (500,000 x 80).

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

40000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Among the assumptions used for the definition of the Industrial Plan 2022-2024, an average yearly CO2 shortage of 500,000 tons is expected. The potential financial impact for Cementir could be around 40 million € of additional yearly cost, assuming a CO2 price of 80 EUR (500,000 x 80). 40 million € is the 12.86% of 2021 Group EBITDA. In 2021, the Group EBITDA was 310.952 million €.

The Co2 shortage is calculated as difference between the CO2 that our European plants (Gaurain and Aalborg) will emit in 2022-24 period and the free allowances that our plants will receive according to the ETS rules, in the same period. The CO2 that European plants will emit in 2022-24 period are calculated according to the KPIs planned in the industrial plan 22-24 (cement to be produced, content of clinker in the cement, fuels used for the production).

Since the Co2 emitted by our plants will exceed what will be permitted by our free allowances, we will have to purchase allowances on the markets.

Cost of response to risk

295000000

Description of response and explanation of cost calculation

Cementir is committed to reducing Scope 1 and Scope 2 emissions by 25% per ton of cement by 2030, using 2020 as the base year. The target has been approved by the Science Based Target Initiative. This commitment is defining our strategy for managing this risk.

Reductions in the Co2 emitted by our European plants (Gaurain plant in Belgium and Aalborg plant in Denmark) will mitigate the financial implications of EU ETS.

Intermediate targets for clinker content, alternative fuels and CO2 emissions have been established per each plant to accomplish the 2030 goal.

Such targets were included in the 22-24 Industrial Plan and in short-term incentive system of employees.

To accomplish the 2030 target, Cementir has developed a roadmap until 2030 which is focused on the following pillars:

A) Reduction of clinker content to 63% for grey cement and 80% for white cement. In the production of cement, the majority of CO2 emissions occur when the raw materials (limestone) calcinates into clinker in the kiln. Cementir will reduce the clinker content through: - The replacement of clinker with alternative decarbonised mineral additives such as fly ash, slag and limestone - The development of a new low-carbon cement, FUTURECEM®, an innovative, validated and patented technology which allows for more than 35% of the energy-intensive clinker in cement to be replaced by limestone and calcined clay.

B) Replacement of fossil fuels with alternative fuels, such biomass.

C) The establishment of a natural gas line to the plant located in Denmark and the installation of multi-fuel main burners for the kilns. The switching to natural gas, a fossil fuel with emissions much lower than pet coke (estimated reduction of 20% of CO2), is a transitional solution and indispensable for Cementir’s transition to net-zero emissions.

D) Energy recovery. The Aalborg plant recovers heat from cement production to provide district heating to local inhabitants. The recovered thermal energy is used to heat the homes of about 36,000 families in the city of Aalborg.

To guarantee the development of the Group’s Climate Change Strategy and to achieve the Co2 targets, in the roadmap, we identify 295 million € of investment out of which 155 million € for reducing clinker content (see pillar A, mentioned before), 90 million € for increasing alternative fuels utilization and placing the natural gas line in Aalborg (pillar B and C) and 50 for efficiency projects for the kilns, as the energy recovery (D)

Comment

There are not other additional relevant information

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Current regulation	Other, please specify (Scarcity of raw materials (fly ashes) resulting in an increased cost of them)
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Primary potential financial impact

Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

In Europe, pressure on reducing power plant that burns coal for electricity production progressively reduces the availability of fly ashes and therefore increases the related prices.

The fly ash is a by-product from burning coal in electric power generating plants that is used as alternative material by our cement plant in Aalborg (Denmark) to reduce the clinker content in cement and therefore to reduce CO2 emissions. When fly ashes are used to replace clinker in the cement, we speak about 'fly ash cement'.

To produce cement, limestone is heated to approximately 1,450 degrees Celsius in rotary kiln to produce clinker, the semi-finished product. Then gypsum or other high-grade materials such as slag, fly ash or limestone are grinding together with the clinker to produce cement.

So CO2 is emitted as a by-product of clinker production. Hence, reducing the clinker content in cement (the clinker ratio) means reduction in Co2 emissions.

Clinker content in the cement can be reduced by replacing it with alternative materials as fly ash. So, fly ash are also a lever used to mitigate CO2 impacts.

When fly ashes are used to replace clinker in the cement, we speak about 'fly ash cement'.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

650000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

In the short-medium term, in order to manage the issue, the Group is: securing the current supply of materials by long term agreement; scouting for new suppliers and partially replacing fly ash with similar materials available in the market. In the long term, the fly ash cement will be replaced by a new low-carbon cement, FUTURECEM®. Cementir has developed FUTURECEM®, a patented technology, which relies on the synergy of limestone and calcinated clay. This technology enables the clinker reduction in cement and therefore the CO2 emissions.

Comparing to 2020, for the period 2021-2023, the group forecasts an average increase of the price of the fly ash of about 17 €/ton, while we assume the price of similar material available in the market fixed. According to the scenario analyzed, the increasing of the price could be from a minimum of 15 €/ton to a maximum of 19 €/ton. The price assumptions are based on the agreements in place with the suppliers. Applying an average increase of the price of the fly ash of about 17 €/ton to the quantity of fly ash and similar material planned in the 2021-2023 period, we estimate 650.000 € of additional cost, yearly.

Cost of response to risk

155000000

Description of response and explanation of cost calculation

In the short-term, to manage the issue, the Group is: securing the current supply of fly ashes by long term agreement; scouting for new suppliers and partially replacing fly ashes with similar material available in the market.

In the medium/long term, the 'fly ash cement' will be replaced by FUTURECEM®. The group defined a roadmap until 2030 that will reduce the clinker content to 63% for grey cement and 80% for white cement. In the medium/long term Cementir will reduce the clinker content through the development of a new low-carbon cement, FUTURECEM®, an innovative, validated and patented technology which allows for more than 35% of the energy-intensive clinker in cement to be replaced by limestone and calcined clay.

On January 2021, the distribution of FUTURECEM® started in Denmark. By 2030, FUTURECEM® volumes sold are expected to reach around 51% of total volumes sold in Europe.

Therefore, by reaching the target defined per FUTURECEM® (51% of total volumes sold in EUROPE), within 2030 we will replace 'fly ash cement' with FUTURECEM® a we will significantly reduce our dependence to fly ashes,

As already explained in the Risk 1, to guarantee the development of the Group's Climate Change Strategy and to achieve the Co2 targets, in the roadmap, we identify 295 million € of investment out of which 155 million € for reducing clinker content, 90 million € for increasing alternative fuels utilization and placing the natural gas line in Aalborg and 50 for efficiency projects for the kilns, as the energy recovery.

Therefore, as cost of response to risk we report the 155 million € estimated for reducing clinker content to 63% for grey cement and 80% for white cement

Comment

There are not other additional relevant informantion

C2.4

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

Yes

C2.4a

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

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

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

Primary potential financial impact

Reduced direct costs

Company-specific description

As a Cement Company with two plants located in Europe (Guarain plant in Belgium and Aalborg plant in Denmark), we are subject under regulatory regime to the EU ETS system, and the financial implications of such a scheme are a risk for us (as described in C2.3a 'Risk 1').

Reductions in the Co2 emitted by our European plants (Guarain plant in Belgium and Aalborg plant in Denmark) will mitigate the financial implications of EU ETS.

For this reason, the development of our low carbon cement, FUTURECEM® is a great opportunity for reducing the Co2 emitted by our European plants and therefore mitigate the financial implications of EU ETS.

FUTURECEM® is a limestone calcined clay cement with up to 30% CO2-reduction compared with existing, conventional cement types.

On January 2021, Cementir started the production and distribution of FUTURECEM® in Denmark. In 2022, we will start the production in our Belgian plant. In 2022,

through our Belgian plant will commercialize FUTURECEM® in France and in 2023 in Benelux.

In the 2022-2024 period, the Group has planned the sale of more than 1 million ton of FUTURECEM™.

In the 2022-2024 period, the replacement of 1 million ton of the current grey portland cement produced by our plant with the production of 1 million ton of FUTURECEM® could reduce our CO2 emission of about 250,000 ton.

According to current estimates, by 2030 FUTURECEM® volumes sold are expected to reach around 51% of total volumes sold in Europe.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

20000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

As a Cement Company with two plants located in Europe (Guarain plant in Belgium and Aalborg plant in Denmark), we are subject under regulatory regime to the EU ETS system, and the financial implications of such a scheme are a risk for us (as described in C2.3a 'Risk 1').

Reductions in the CO2 emitted by our European plants (Guarain plant in Belgium and Aalborg plant in Denmark) will mitigate the financial implications of EU ETS.

For this reason, the development of our low carbon cement, FUTURECEM® is a great opportunity for reducing the CO2 emitted by our European plants and therefore mitigate the financial implications of EU ETS.

FUTURECEM® is a limestone calcined clay cement with up to 30% CO2-reduction compared with existing, conventional cement types.

On January 2021, Cementir started the production and distribution of FUTURECEM® in Denmark. In 2022, we will start the production in our Belgian plant. In 2022, through our Belgian plant will commercialize FUTURECEM® in France and in 2023 in Benelux.

In the 2022-2024 period, the Group has planned the sale of more than 1 million ton of FUTURECEM™.

In the 2022-2024 period, the replacement of 1 million ton of the current grey portland cement produced by our plant with the production of 1 million ton of FUTURECEM® could reduce our CO2 emission of about 250,000 ton.

Assuming a CO2 price of 80 €/ton, in the period 2022-2024, the potential benefit for Cementir could be 20 million € (250,000 x 80 = 20,000,000) in terms of less CO2 quotas to be purchased in the EUT ETS.

Cost to realize opportunity

13000000

Strategy to realize opportunity and explanation of cost calculation

The Group is investing for developing new technology for reducing the CO2 emissions.

Cementir developed a new type of cement (FUTURECEM®) responsible for fewer CO2 emissions.

FUTURECEM® is a limestone calcined clay cement with up to 30% CO2-reduction compared with existing, conventional cement types.

From 2014-2019, Cementir participated, together with researcher institutions and a range of stakeholders and customers from the construction industry, in the Danish project Green Concrete II with the aim of testing FUTURECEM® in a wide range of actual ready-mix concrete applications. In this project, FUTURECEM® was tested at full-scale in construction parts for infrastructure (two bridges) as well as in an indoor floor and wall in the new concrete laboratory at the Danish Technological Institute.

Those demo projects demonstrate that FUTURECEM® can be implemented in the concrete industry using conventional production and execution technologies.

In March 2020, Bureau Veritas certified the compliance of FUTURECEM® with the requirements in cement standard (EN 197-1:2011).

On January 2021, Cementir started the production and distribution of FUTURECEM® in Denmark. In 2022, we will start the production in our Belgian plant. In 2022, through our Belgian plant will commercialize FUTURECEM® in France and in 2023 in Benelux.

In the 2022-2024 period, the Group has planned the sale of more than 1 million ton of FUTURECEM®.

According to current estimates, by 2030 FUTURECEM® volumes sold are expected to reach around 51% of total volumes sold in Europe.

In the industrial plan 22-24, the Group planned 13 million € for upgrading the facilities to allow production of FUTURECEM® and therefore supporting the roll-out planned for the period 2022-2024.

Comment

There are not other additional relevant information

Identifier

Opp2

Where in the value chain does the opportunity occur?

Upstream

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Reduced water usage and consumption

Primary potential financial impact

Increased access to capital

Company-specific description

The recovery and potabilization of water removed during the exploitation of our quarry of Clypot (Belgium) has been a great opportunity because thank to new infrastructures developed with the local water provider and the local authority, we recover water for supplying 20,000 households allowing the local authority to close production wells and thus spare the aquifer in a high water-stress area. According to the analysis performed by the local authority, the local aquifer where the quarry is

located (the Soignies Ecaussinnes hydrogeological basin) is currently overexploited.

During the operations of extraction of limestone, the water that naturally come out, must be removed to allow dry extraction in the quarry. Until 2020, the water was discharged to surface. In 2021, 1,072 megaliters of water have been recovered and sent to the public water station for drinking water treatment. The goal of the project is to recover more than 2,000 megaliters, yearly (the 70% of withdrawal of Clypot) for supplying 20,000 households. We assume to reach this goal starting from 2022.

The quarry is exploited by Cementir for the limestone and by a third-party for the blue stone. The project is a collaboration with the third-party that is exploiting the quarry, the local water provider and the local authority.

This operation:

- increased our access to capital because, as explained below, the investment for the new infrastructures has been split between Cementir, local authority, local water provider and the third-party that is exploiting part of the quarry;
- improved our resilience to future regulatory changes, reducing the risk of future conflicts with other stakeholders that use the same aquifer (villagers, employees, customers, suppliers) and reducing the risk of future limitation in water utilization by local authorities (regulators) or local water provider.

Following 4 year of study, between 2018 and 2020, we setup the infrastructures for recovering (connecting pipes) and treating the water. Prior sending to public station, the water is treated to guarantee the physical removal of suspended solids and floating material, by sedimentation.

The whole system has been operational since March 2021.

The total investment amounts to 1.6 million €, split in equal part between Cementir (400,000 €), local authority (400,000 €), local water provider (400,000 €) and the third-party (400,000 €).

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1245000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

As potential financial impact we report 1,245,000 €:

- 1,200,000 € for the amount of the investment paid by the other partners of the project. The total investment amounts to 1.6 million €, split in equal part between Cementir (400,000 €), local authority (400,000 €), local water provider (400,000 €) and the third-party (400,000 €);
- 45,000 € related to the water withdrawal tax refunded by the local authority (the 50% of the annual tax pay by Clypot for water withdrawal). As a part of the agreement in place, following the implementation of the investment, the local authority will refund to Cementir the 50% of the annual tax for water withdrawal.

Cost to realize opportunity

400000

Strategy to realize opportunity and explanation of cost calculation

During the operations of extraction of limestone in our quarry of Clypot, the water that naturally come out, must be removed to allow dry extraction in the quarry. During this operation, we withdraw water from the hydrogeological basin of Soignies Ecaussinnes, that according to the local authority is currently overexploited. The area where our quarry is located is evaluated as a high water-stress area by the WRI Aqueduct Global Water Tool. Until 2020, the water withdrew during the operations was discharged to surface.

Due to the concerns expressed by the local authority about the risk of water scarcity, starting from 2014, we investigated the possibility to recover the water removed during the operations without discharging it to surface. The project has been developed in partnership with the local authority, the local water provider and the third-party that is exploiting part of the quarry.

Following 4 year of study, between 2018 and 2020, we setup the infrastructures for recovering (connecting pipes) and treating the water. Prior sending to public station, the water is treated to guarantee the physical removal of suspended solids and floating material, by sedimentation.

The whole system has been operational since March 2021. In 2021, 1,072 megaliters of water have been recovered and sent to the public water station for drinking water treatment. The goal of the project is to recover more than 2,000 megaliters, yearly (the 70% of withdrawal of Clypot) for supplying 20,000 households. We assume to reach this goal starting from 2022.

The total investment (connecting pipes plus treating system) amounts to 1.6 million €, split in equal part between Cementir (400,000 €), local authority (400,000 €), local water provider (400,000 €) and the third-party (400,000 €).

As cost to realize opportunity we reported the part of investment paid by Cementir (400,000 €).

Comment

There are not other additional relevant information

Identifier

Opp3

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Resilience

Primary climate-related opportunity driver

Participation in renewable energy programs and adoption of energy-efficiency measures

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

In our plant of Aalborg (Denmark), we have implemented a system for recovering heat from combustion gases used during the production of cement to provide district heating to local inhabitants. In 2021, the plant delivered about 1.7 million GJ of energy to the Municipality of Aalborg. The recovered thermal energy is used to heat the homes of about 36,000 families.

According to the engineering project developed by the Group, the plant could improve the supply of energy of additional 1 million GJ.

This is a relevant opportunity because:

- utilization of excess heat in the grid can be a key for the green transition of Denmark. In autumn 2019, Denmark's parliament adopted a new climate law with the target of reducing Danish CO2 emissions by 70% by 2030, from a 1990 baseline. The annual CO2 savings from this heat recovery system have been estimated at 150,000 tons. The calculation is based on the amount of CO2 that is not emitted from the local coal-fired power station because the total needs are partially covered by the heat coming from the Aalborg plant;
- the delivery of excess heat can generate additional profit for the plant. The heat delivered to the district heating is sold by Aalborg plant to the local energy provider that manages the district heating.

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)

5000000

Potential financial impact figure – maximum (currency)

10000000

Explanation of financial impact figure

The plant can increase the amount of heat recovered from combustion gases used during the production of cement.

According to the engineering project developed by technical department with the support of external consultants, the plant can recover additional 1 million GJ to be delivered to the district heating.

The heat delivered to the district heating is sold by Aalborg plant to the local energy provider that manages the district heating.

Assuming a price for the energy delivered between 5 € per GJ and 10 € per GJ, we can estimate a positive financial impact between 5 million € and 10 million €.

Cost to realize opportunity

35000000

Strategy to realize opportunity and explanation of cost calculation

The plant can increase the amount of heat recovered from combustion gases used during the production of cement.

According to the engineering project developed by technical department with the support of external consultants, the plant can recover additional 1 million GJ to be delivered to the district heating.

In 2021, the plant delivered about 1.7 million GJ of energy to the Municipality of Aalborg. The recovered thermal energy is used to heat the homes of about 36,000 families.

With the additional 1 million GJ we can provide heating to about 50,000 families in total. The mentioned project must be developed in partnership with the Municipality of Aalborg that is in charge for the management of the district heating and that must manage the additional energy coming from the plant.

In the plant, we are producing grey cement and white cement. The plant has 6 kilns for the production of cement. As of July 2022, only 5 kilns are equipped to recover heat and deliver it to the district heating. The installation of the heat recovery system in the last kiln can increase the supply of heat to the district heating of 1 million GJ.

The cost to realize the opportunity is related to investment needed to equip the kiln for grey cement with heat recovery system.

Costs to realize the opportunity have been already estimated by Cementir in a business case. The investment is about 35 million € (50% of the investment is related to the equipment and 50% related the other activities needed as installation, engineering, construction works, electrical and mechanical activities).

Comment

There are not other additional relevant information

C3. Business Strategy

C3.1

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

Row 1

Transition plan

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

Publicly available transition plan

<Not Applicable>

Mechanism by which feedback is collected from shareholders on your transition plan

<Not Applicable>

Description of feedback mechanism

<Not Applicable>

Frequency of feedback collection

<Not Applicable>

Attach any relevant documents which detail your transition plan (optional)

<Not Applicable>

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

Cementir identifies, assesses and manages climate change risks alongside all other types of risk as an integral part of its Risk Management Framework. Climate risks and opportunities are monitored in a structured manner consistent with the TCFD.

Cementir is currently defining a transition aligned with a 1.5°C world. As first step, Cementir defined a roadmap until 2030 to reduce its scope 1 and 2 emissions according to the reductions required to keep warming to Well-below 2°C.

In particular, Cementir commits to reduce scope 1 and scope 2 GHG emissions 25% per ton of cementitious materials by 2030 from a 2020 base year. In July 2021, the Science-Based Targets initiative (SBTi) validated the targets. Such targets have been deployed in every single plant and per year and were included in the Industrial Plan 2022-2024 and in our employee short-term incentive system.

This is the first step planned by the group for defining the roadmap for the net zero emission.

The goal of the Group is to reduce Scope 1, 2 and 3 emissions to zero or to a residual level that is consistent with reaching net-zero emissions at the global level in eligible 1.5°C scenarios and to neutralize any residual emissions at the net-zero target date.

Cementir is currently developing this target and the related roadmap to achieve the target, according to the guidance for the cement sector defined by SBTi.

As of June 2022, the guidance is still in a draft version, once formalized, Cementir will submit the target to SBTi for the validation.

Cementir wants to develop a transition plan aligned with the best practices defined by SBTi, so, once the guidelines for the cement sector will be issued by SBTi, Cementir will formalized its transition plan aligned with a 1.5°C world. We expected to do this within two years.

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
Physical climate scenarios	RCP 4.5	Company-wide	<Not Applicable>	<p>As part of our TCFD assessment, we have evaluated the exposure of our plants to physical risks, covering: acute physical risks, which refers to those that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, or floods and chronic physical risks which refers to longer-term shifts in climate patterns (e.g., sustained higher temperatures) that may cause sea level rise or chronic heat waves.</p> <p>The assessment has been done for each plant of the Group.</p> <p>Our assessment uses three scenarios proposed by the IPCC.</p> <p>High Climate Change Scenario (RCP 8.5): Continuation of business as usual with emissions at current rates. This scenario is expected to result in warming in excess of 4 degrees Celsius by 2100.</p> <p>Moderate Climate Change Scenario (RCP 4.5): Strong mitigation actions to reduce emissions to half of current levels by 2080. This scenario is more likely than not to result in warming in excess of 2 degrees Celsius by 2100.</p> <p>Low Climate Change Scenario (RCP 2.6): Aggressive mitigation actions to halve emissions by 2050. This scenario is likely to result in warming of less than 2 degree Celsius by 2100.</p> <p>Time horizons</p> <p>For physical risks we look at time horizon out to 2050.</p> <p>An example of risks affecting part of our plants could be policy-based water restrictions due to the exacerbation of water scarcity.</p> <p>Water scarcity already affects every continent and climate change will amplify the already complex relationship between business development and water demand. Water use has been growing globally at more than twice the rate of population increase in the last century, and an increasing number of regions are reaching the limit at which water services can be sustainably delivered.</p> <p>The water-related outcomes of our scenario analysis are affecting the Group business strategy.</p> <p>To address local water issues, the Group defined water targets and planned specific local action plan that fit the individual water contexts.</p> <p>Water Targets. Within 2030, the Group will reduce the water consumption per ton of cement by 20%, comparing 2019. In the water stressed area the goal is to reduce the consumption per ton of cement by 25%. The targets have been deployed per single plant. The targets are monitored at site level, on a monthly basis, and consolidated at Country/Region and Group level on a quarterly basis.</p>
Transition scenarios	IEA 2DS	Company-wide	<Not Applicable>	<p>As part of our TCFD assessment, we have evaluated we conducted an assessment on transition risks, in particular of climate-related carbon pricing (policy) risk based on GHG and operational data of each plant of the Group, along with other climate related transition risks (market, reputation and technology using quantitative and qualitative comparisons.</p> <p>For example, for the policy risk, our assessment uses three scenarios proposed by IEA</p> <p>High Carbon Price Scenario (IEA 66% 2C Scenario): This scenario represents the implementation of policies that are considered sufficient to reduce greenhouse gas emissions in line with the goal of limiting climate change to 2°C by 2100. This scenario is based on research by OECD and IEA (2017).</p> <p>Moderate Carbon Price Scenario: This scenario assumes that policies will be implemented to reduce greenhouse gas emissions and limit climate change to 2°C in the long term, but with action delayed in the short term. This scenario draws on research by OECD and IEA along with assessments of the sufficiency of country Nationally Determined Contributions by Climate Action Tracker by Ecofys, Climate Analytics and New Climate Team. Countries with Nationally Determined Contributions that are not aligned to the 2°C goal in the short term are assumed to increase their climate mitigation efforts in the medium and long term.</p> <p>Low Price Scenario: This scenario represents the full implementation of country Nationally Determined Contributions under the Paris Agreement, based on research by OECD and IEA (2017). Prices in this scenario are considered likely to be insufficient to achieve the goals of the Paris Agreement.</p> <p>Time horizons</p> <ul style="list-style-type: none"> • For transition risk we look at time horizon out to 2050. <p>For the cement sector, the more CO2 emissions are constrained by regulatory framework and the more relevant are transitional risks, in the most constrained scenarios the need for breakthrough technology (i.e. carbon capture usage and storage) becomes fundamental. Because of the scenario analysis, Cementir commits to reduce scope 1 and scope 2 GHG emissions 25% per ton of cementitious products by 2030 from a 2020 base year. The mentioned targets covering greenhouse gas emissions from company operations (scopes 1 and 2) are consistent with reductions required to keep warming to Well-below 2°C and have been validated by the Science Based Targets Initiative (SBTi). This is the first step planned by the group for defining the roadmap for the net zero emission.</p>

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

As defined by the TCFD guidelines, scenario analysis needs crisp, concise, and focused questioning on the strategy decisions and actions to which the scenario analysis is meant to contribute.

We start with broad questions such as: How might our identified climate-related risks and opportunities plausibly affect cement sector, our plants and therefore the Group at time horizon out to 2050? What should we do? And when?

These broad questions have been further refined to focus on the relevant decisions and uncertainties around the climate-related risks and opportunity of most concern to the company.

The following supplemental questions has driven our analysis:

- Will Co2 regulations can shape our future performance?
- Will cement replaced by alternative material?
- According to the location of our plants, which kind of physical risk will affect our operations?

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

As a Cement Company with two plants located in Europe (Belgium and Denmark), CO2 regulations (ETS and Taxonomy) is a force that is currently affecting our performance and will shape our future performance.

The financial implications of ETS depend on the CO2 emitted by the plant and the market price for allowances. Different scenarios have been simulated assuming different CO2 prices and changes on ETS rules due to the introduction of CBAM. Among the assumptions used for the definition of the Industrial Plan 2022-2024, an average yearly CO2 shortage of 500,000 tons is expected. 500,000 tons is the sum of shortages expected for our two European plants. The potential financial impact for Cementir could be around 40 million € of additional yearly cost, assuming a CO2 price of 80 EUR (500.000 x 80).

Cement is the main component for concrete and the concrete is the second-most-used substance in the world after water and is the most widely used building material. As of July 2022, we did not see a real substitute product for concrete and therefore for cement. However, in the next years, to meet the emission requirements from the authorities (European and non-European) will be more and more challenging. Therefore, the need for breakthrough technology (carbon capture storage) becomes fundamental. In the long term, the installation of carbon capture and storage will be essential to comply with CO2 regulations. For this reason, Cementir is participating in various projects to develop CCS technologies suitable for our plants.

Cementir's plants are in locations with greatest exposure to water stress (Turkey, Belgium and Egypt). An outcome of our scenario analysis is therefore the tightening of policy-based water restrictions due to the exacerbation of water scarcity.

Water scarcity already affects every continent and climate change will amplify the already complex relationship between business development and water demand. Water use has been growing globally at more than twice the rate of population increase in the last century, and an increasing number of regions are reaching the limit at which water services can be sustainably delivered.

Countries where the Group is located will have to tackle the problems presented by water stress asking to the companies to implement solution for minimizing the impact on water management for the local community.

The water-related outcomes of our scenario analysis are affecting the Group business strategy.

To address local water issues, the Group defined water targets and planned specific local action plan that fit the individual water contexts. Within 2030, the Group will reduce the water consumption per ton of cement by 20%, comparing 2019. In the water stressed area the goal is to reduce the consumption per ton of cement by 25%. The targets have been deployed per single plant. The targets are monitored at site level, on a monthly basis, and consolidated at Country/Region and Group level on a quarterly basis.

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	<p>Situation: Most climate experts agree that the escalating climate crisis is the defining issue this lifetime and that the world must take urgent action to cut CO₂ emissions and we cannot deny that cement manufacturing is a process that makes intensive use of thermal energy, releasing both direct and indirect CO₂ emissions into the atmosphere. Climate action is at the heart of the European Green Deal and EU Taxonomy, an ambitious European package of measures for cutting greenhouse gas emissions. Climate change is thus reshaping the cement sector.</p> <p>Task: Cementir must develop product solution (i.e. new low carbon cement) to cut greenhouse emissions.</p> <p>Action: Cementir developed FUTURECEM®, a low carbon cement with a carbon footprint that is up to 30 percent lower compared to traditional Portland cement. FUTURECEM® technology is fully acknowledged as a solution for clinker ratio reduction in the roadmap for "Low Carbon transition in the cement industry" by International Energy Agency - 2018.</p> <p>From 2014-2019, Cementir participated, together with researcher institutions and a range of stakeholders and customers from the construction industry, in the Danish project Green Concrete II with the aim of testing FUTURECEM® in a wide range of actual ready-mix concrete applications.</p> <p>In March 2020, Bureau Veritas certified the compliance of FUTURECEM® with the requirements in cement standard (EN 197-1:2011)</p> <p>Results: On January 2021, Cementir started the distribution of FUTURECEM® . Following the launch in Denmark, FUTURECEM® roll-out is accelerating in the Cementir Group's European market. CCB, the Cementir Group subsidiary in Belgium, will commercialise FUTURECEM® in France by 2022, while in Benelux the target is by 2023.</p> <p>According to current estimates, by 2030 FUTURECEM® volumes sold are expected to reach around 51% of total volumes sold in Europe.</p> <p>As reported in C2.4a, in the 2022-2024 period, the replacement of more than 1 million ton of the current grey portland cement with the production of 1 million ton of FUTURECEM could reduce the CO₂ emission of our European plant of about 250,000 ton.</p>

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Supply chain and/or value chain	Yes	<p>Situation: Following the scenario analysis, as described in C3.2a, Cementir decided to develop a 10-year roadmap for the CO2 reduction aligned with the SBTi guidelines. The calculation of scope 3 is a mandatory step for the definition of a Science Based target. For this reason, starting from 2020, Cementir started to monitor CO2 emission of the main Suppliers in order to calculate for the first time the Scope 3 emissions.</p> <p>Task: Implement a CO2 monitoring system for the Group value chain in order to calculate Scope 3 emissions and for the future, understand where to prioritize reductions in the value chain in line with science based guidelines.</p> <p>Action: To calculate scope 3 emissions and promote awareness among suppliers of their impact on climate change, 55 suppliers (30% of the total purchases by value) were invited to participate in the CDP Supply Chain program. To support this engagement and boost supplier response rates, dedicated supplier training webinars were held. This training aims to communicate the importance and benefits from transparently reporting on emissions and climate impact. Each Supplier has been invited to disclose information about its risks and opportunities associated with climate change, its emissions, details on its emissions management strategy such as targets, and actions it has taken to reduce its emissions.</p> <p>Result: In 2020, 24% of the Suppliers involved provided their environmental information through CDP Supply Chain program. In 2021 the response rate increased to 39% from the 24% of 2020. In 2020 and 2021, a selection of strategic suppliers was invited to participate in the CDP Supply Chain programme (55 Suppliers involved in 2020 with 13 that responded and 74 Suppliers involved in 2021 with 29 that responded). Cementir used this information for the calculation of the Scope 3 emissions related to "Purchased goods and services", as reported in C6.5.</p> <p>As of July 2022, Cementir is developing a scope 3 reduction target. The goal of the Group is to reduce Scope 1, 2 and 3 emissions to zero or to a residual level that is consistent with reaching net-zero emissions at the global level in eligible 1.5°C scenarios and to neutralize any residual emissions at the net-zero target date. To do this, Cementir is currently using information collected through CDP Supply Chain program for the definition of a Scope 3 reduction target.</p>
Investment in R&D	Yes	<p>Situation: Most climate experts agree that the escalating climate crisis is the defining issue this lifetime and that the world must take urgent action to cut CO2 emissions and we cannot deny that cement manufacturing is a process that makes intensive use of thermal energy, releasing both direct and indirect CO2 emissions into the atmosphere. Climate action is at the heart of the European Green Deal and EU Taxonomy, an ambitious European package of measures for cutting greenhouse gas emissions. Climate change is thus reshaping the cement sector.</p> <p>For this reason, in the last years, Cementir focused its R&D on low carbon products (FUTURECEM® , as described in "C.3.3 Products and services") or other project able to reduce CO2 emissions of the production process.</p> <p>Task: develop project in order to replace fossil fuels with alternative fuels for reducing the CO2 emission related to the combustion of fuels for producing clinker. Cement production is a thermal energy intensive process, which requires heating raw materials up to 1450°C and cooling it down. Limestone and clay are heated to approximately 1,450 degrees Celsius in rotary kiln in order to produce clinker, semi-finished product.</p> <p>Action: following the feasibility study for addressing an opportunity for conversion from fossil fuels (i.e. petcoke or coal) to natural gas, Cementir planned the utilization of natural gas in Aalborg, our Danish plant. The switching to natural gas, a fossil fuel with emissions lower than petcoke (estimated reduction of 20% of CO2), is a transitional solution for Cementir's path to net-zero emissions.</p> <p>Results: As part of this project, Aalborg plant has entered into an agreement with the state gas distribution company, Evida, to connect the plant to the gas distribution grid on 2023. Following the implementation of the investment, a reduction of 20% of CO2 is estimated for the Aalborg plant.</p>
Operations	Yes	<p>Situation: Climate action is at the heart of the European Green Deal and EU Taxonomy, an ambitious European package of measures for cutting greenhouse gas emissions. Climate change is thus reshaping the cement sector. Regulatory framework for CO2 is tightening in Europe and in other part of the world. As reported in 2.3a, the potential financial impact related to the regulatory framework for CO2 in Europe could be around 40 million € of additional yearly cost starting from 2022.</p> <p>Task: For each plant, Cementir must develop a 10-year roadmap for the CO2 reduction aligned with the SBTi guidelines.</p> <p>Action: Cementir defined a 10 roadmap to reduce its scope 1 and 2 emissions. In parallel, it engaged with SBTi to complete the formal target submission letter to assess the alignment of its CO2 targets against a well below 2°C scenario. Specific targets for CO2 emissions, alternative fuels and clinker ratio have been established in order to accomplish the 2030 goals. Such targets have been deployed in every single plant and per year and were included in the Industrial Plan 2021-2023 and in the Industrial Plan 2022 - 2024 and in our employee short-term incentive system. Monetary incentives have been defined for the management of climate-related issues.</p> <p>Results: In July 2021, the Science-Based Targets initiative (SBTi) validated Cementir's targets to reduce its emissions. Cementir commits to reduce scope 1 and scope 2 GHG emissions 25% per ton of cementitious products by 2030 from a 2020 base year.</p> <p>The targets validated by SBTi are the targets deployed in every single plant and per year and included in the Industrial Plan 2022-2024 and in our employee short-term incentive system.</p>

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	Capital allocation	<p>Situation: Climate action is at the heart of the European Green Deal and EU Taxonomy, an ambitious European package of measures for cutting greenhouse gas emissions. Climate change is thus reshaping the cement sector. Regulatory framework for CO2 is tightening Europe and in other part of the world. In Europe the CO2 price evolution in the EU ETS is affecting the company cost structure and is affecting financial evaluation and related investment decisions. Due to the CO2 price, Companies are planning investments once not financially convenient.</p> <p>Task: Cementir must prepare a 10 year roadmap for the CO2 reduction in order to reduce the financial impact related to CO2 regulations. As reported in 2.3a, the potential financial impact related to the regulatory framework for CO2 in Europe could be around 40 million € of additional yearly cost starting from 2022.</p> <p>Action: In the 10-year Roadmap, the Group planned the main investment needed until 2030, out of which 107 million declared in the Industrial Plan 2021-2023, approved by the Cementir Board of Director in February 2021.</p> <p>The 10-year roadmap describes the main investments needed to support the 2030 targets. To foster the transition of the Group to a low carbon economy, decisions on investments are driven by an internal carbon price (in 2021, €80 per ton has been applied). Cementir also applies an internal carbon price to navigate GHG regulations such as the EU ETS. For the plants located in the EU, we run various scenarios with different prices to anticipate the CO2 cost the Group will be exposed to until 2030.</p> <p>The regulatory framework for CO2 (i.e. EU ETS) is affecting the financial evaluation of the business case prepared to evaluate any investment. For example, following the feasibility study for addressing an opportunity for conversion from fossil fuels (i.e. petcoke or coal) to natural gas, Cementir planned the utilization of natural gas in Aalborg, our Danish plant. The switching to natural gas, a fossil fuel with emissions lower than petcoke (estimated reduction of 20% of CO2), is a transitional solution for Cementir's path to net-zero emissions. Due to the reduction in CO2 emissions, Cementir will have to buy a minor number of CO2 quotas in EU ETS. This reduction in the CO2 quotas led to a positive financial impact that affect positively the business case evaluation (due to natural gas combustion, Cementir will buy less CO2 quotas).</p> <p>Results: Without the regulatory framework for CO2, the mentioned investment will not have a positive NPV (net present value) and Cementir will not probably implemented it. Therefore, the capital expenditure would be allocated in a different way. As part of this project, Aalborg plant has entered into an agreement with the state gas distribution company, Evida, to connect the plant to the gas distribution grid on 2023. Following the implementation of the investment, a reduction of 20% of CO2 is estimated for the Aalborg plant.</p>

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

2021

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Intensity metric

Metric tons CO2e per metric ton of cement

Base year

2020

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

797.5

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

65.9

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)

863.4

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

99.5

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

97.1

% 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

99.4

Target year

2030

Targeted reduction from base year (%)

25.3

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

644.9598

% change anticipated in absolute Scope 1+2 emissions

-24.1

% change anticipated in absolute Scope 3 emissions

0

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

784.1

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

65.2

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)

849.3

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

6.45485583697507

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

Cementir commits to reduce scope 1 and scope 2 GHG emissions 25% per ton of cementitious products by 2030 from a 2020 base year. The target boundary includes biogenic emissions and removals from bioenergy feedstocks.

The targets covering greenhouse gas emissions from company operations (scopes 1 and 2) are consistent with reductions required to keep warming to Well-below 2°C. In July 2021, the Science-Based Targets initiative (SBTi) validated the target.

The target, expressed in CO2 emissions per ton of cementitious materials, equate to a reduction from 863.4 kg in 2020 to 644.9kg by 2030. In the target have been included, scope 1 emissions, scope 2 emissions (market-based) and biogenic emissions, as requested by SBTi guidelines.

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

Plan for achieving target

To achieve the mentioned targets, Cementir defined a 10-year roadmap to maximise the deployment of existing technologies. Specific targets for alternative fuels, clinker ratio and CO₂ emissions have been established in order to accomplish the 2030 goals. Such targets have been deployed in every single plant and per year and were included in the Industrial Plan 2022-2024 and in our employee short-term incentive system.

The 10-year roadmap to 2030 is focused on the following pillars.

A) Reduction of clinker content to 63% for grey cement and 79% for white cement. Cementir will reduce the clinker content through:

- the replacement of clinker with alternative decarbonised mineral additives such as fly ash and slag;
- the development of a new low-carbon cement, FUTURECEM®, a patented technology which allows for more than 35% of the energy-intensive clinker in cement to be replaced by limestone and calcined clay.

B) Replacement of fossil fuels with alternative fuels. We will replace fossil fuels with waste-derived fuels, and biomass fuels. For grey cement, by 2030, Cementir will use 55% alternative fuel, while for white cement alternative fuels will amount to 8%.

The 10-year roadmap describes the main investments and programs needed to support the Group 2030 carbon reduction targets. The 2022-24 Industrial Plan, approved by the Board of Directors in February 2022, targets a 97 million Euro investments in Sustainability which will include, among others: the revamping of the kiln at our Belgian plant in order to increase alternative fuels use from the current 40% to 80%; the ramping up of facilities at the Aalborg plant to produce FUTURECEM® and other efficiency projects.

Progress made to the end of 2021

In 2021, the intensity figure, for Scope 1 and 2 combined, decreased to 849.3. (784.1 for Scope 1 and 65.2 for Scope2) from 863.4 kg in 2020 (797.5 for Scope1 plus 65.9 for Scope2). The reduction is mainly due to the reduction implemented by the Group for the Scope 1 emissions. In particular, concerning grey cement the clinker ratio decreased to 81%, from the 82% of 2020 and the alternative fuels increased to 30% from the 28% of 2020. Both actions helped to decrease the scope 1 intensity figure to 784.1 from the 797.5 of 2020.

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)

Other climate-related target(s)

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

Oth 1

Year target was set

2019

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

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

Fossil fuel reduction target	Percentage of fossil fuels in the fuel mix
------------------------------	--

Target denominator (intensity targets only)

GJ

Base year

1990

Figure or percentage in base year

100

Target year

2030

Figure or percentage in target year

45

Figure or percentage in reporting year

70

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

54.5454545454545

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes. As mentioned in C4.1b, Cementir commits to reduce scope 1 and scope 2 GHG emissions 25% per ton of cementitious products by 2030 from a 2020 base year.

To achieve the mentioned targets, Cementir defined a 10-year roadmap to maximise the deployment of existing technologies. Specific targets for alternative fuels, clinker ratio and CO₂ emissions have been established in order to accomplish the 2030 goals. Such targets have been deployed in every single plant and per year and were included in the Industrial Plan 2022-2024 and in our employee short-term incentive system.

Concerning fossil fuels, by 2030, the Group will reduce the proportion of fossil fuels in the fuel mix to 45% for producing grey cement and 94% for white cement. The target is company-wide deployed between grey and white cement.

Is this target part of an overarching initiative?

Science Based targets initiative - other

Please explain target coverage and identify any exclusions

As mentioned in C4.1., Cementir commits to reduce scope 1 and scope 2 GHG emissions 25% per ton of cementitious products by 2030 from a 2020 base year (validated by SBTi).

Target coverage

To achieve the mentioned targets, Cementir defined a 10-year roadmap to maximise the deployment of existing technologies. Specific targets for alternative fuels, clinker ratio and CO₂ emissions have been established in order to accomplish the 2030 goals. Such targets have been deployed in every single plant and per year and were included in the Industrial Plan 2021-2023 and in our employee short-term incentive system.

The target cover all Cementir's plants. As already reported in C4.1b, more than 99% of total base year emissions in Scope 1 are covered by our CO₂ reduction target.

Concerning fossil fuels, by 2030, the Group will reduce the proportion of fossil fuels in the fuel mix to 45% for producing grey cement and 92% for white cement.

The target is company-wide deployed between grey and white cement.

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

To achieve the mentioned targets, Cementir defined a 10-year roadmap to maximize the deployment of existing technologies. Specific targets for alternative fuels, clinker ratio and CO₂ emissions have been established to accomplish the 2030 goals. Such targets have been deployed in every single plant and per year and were included in the Industrial Plan 2022-2024 and in our employee short-term incentive system.

The 10-year roadmap to 2030 is focused on the following pillars.

A) Reduction of clinker content to 63% for grey cement and 79% for white cement. Cementir will reduce the clinker content through:

- the replacement of clinker with alternative decarbonized mineral additives such as fly ash and slag;
- the development of a new low-carbon cement, FUTURECEM®, a patented technology which allows for more than 35% of the energy-intensive clinker in cement to be replaced by limestone and calcined clay.

B) Replacement of fossil fuels with alternative fuels. We will replace fossil fuels with waste-derived fuels, and biomass fuels. For grey cement, by 2030, Cementir will use 55% alternative fuel, while for white cement alternative fuels will amount to 8%.

The 10-year roadmap describes the main investments and programs needed to support the Group 2030 carbon reduction targets. The 2022-24 Industrial Plan, approved by the Board of Directors in February 2022, targets a 97 million Euro investments in Sustainability which will include, among others: the revamping of the kiln at our Belgian plant to increase alternative fuels use from the current 40% to 80%; the ramping up of facilities at the Aalborg plant to produce FUTURECEM® and other efficiency projects. Progress made to the end of 2021

In 2021, the fossil fuels account for the 70% of total fuels to produce grey cement and account for the 97% of the total fuels to produce white cement.

List the actions which contributed most to achieving this target

<Not Applicable>

Target reference number

Oth 2

Year target was set

2019

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

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

Fossil fuel reduction target	Percentage of fossil fuels in the fuel mix
------------------------------	--

Target denominator (intensity targets only)

GJ

Base year

1990

Figure or percentage in base year

Target year

2030

Figure or percentage in target year

92

Figure or percentage in reporting year

97

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

37.5

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes. As mentioned in C4.1b, Cementir commits to reduce scope 1 and scope 2 GHG emissions 25% per ton of cementitious products by 2030 from a 2020 base year.

To achieve the mentioned targets, Cementir defined a 10-year roadmap to maximise the deployment of existing technologies. Specific targets for alternative fuels, clinker ratio and CO₂ emissions have been established in order to accomplish the 2030 goals. Such targets have been deployed in every single plant and per year and were included in the Industrial Plan 2022-2024 and in our employee short-term incentive system.

Concerning fossil fuels, by 2030, the Group will reduce the proportion of fossil fuels in the fuel mix to 45% for producing grey cement and 92% for white cement.

The target is company-wide deployed between grey and white cement.

Is this target part of an overarching initiative?

Science Based targets initiative - other

Please explain target coverage and identify any exclusions

As mentioned in C4.1b., Cementir commits to reduce scope 1 and scope 2 GHG emissions 25% per ton of cementitious products by 2030 from a 2020 base year.

To achieve the mentioned targets, Cementir defined a 10-year roadmap to maximise the deployment of existing technologies. Specific targets for alternative fuels, clinker ratio and CO₂ emissions have been established in order to accomplish the 2030 goals. Such targets have been deployed in every single plant and per year and were included in the Industrial Plan 2022-2024 and in our employee short-term incentive system.

Concerning fossil fuels, by 2030, the Group will reduce the proportion of fossil fuels in the fuel mix to 45% for producing grey cement and 92% for white cement. The target is company-wide deployed between grey and white cement.

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

Plan for achieving target

To achieve the mentioned targets, Cementir defined a 10-year roadmap to maximize the deployment of existing technologies. Specific targets for alternative fuels, clinker ratio and CO₂ emissions have been established to accomplish the 2030 goals. Such targets have been deployed in every single plant and per year and were included in the Industrial Plan 2022-2024 and in our employee short-term incentive system.

The 10-year roadmap to 2030 is focused on the following pillars.

A) Reduction of clinker content to 63% for grey cement and 79% for white cement. Cementir will reduce the clinker content through:

- the replacement of clinker with alternative decarbonized mineral additives such as fly ash and slag;
- the development of a new low-carbon cement, FUTURECEM®, a patented technology which allows for more than 35% of the energy-intensive clinker in cement to be replaced by limestone and calcined clay.

B) Replacement of fossil fuels with alternative fuels. We will replace fossil fuels with waste-derived fuels, and biomass fuels. For grey cement, by 2030, Cementir will use 55% alternative fuel, while for white cement alternative fuels will amount to 8%.

The 10-year roadmap describes the main investments and programs needed to support the Group 2030 carbon reduction targets. The 2022-24 Industrial Plan, approved by the Board of Directors in February 2022, targets a 97 million Euro investments in Sustainability which will include, among others: the revamping of the kiln at our Belgian plant to increase alternative fuels use from the current 40% to 80%; the ramping up of facilities at the Aalborg plant to produce FUTURECEM® and other efficiency projects. Progress made to the end of 2021

In 2021, the fossil fuels account for the 70% of total fuels to produce grey cement and account for the 97% of the total fuels to produce white cement.

List the actions which contributed most to achieving this target

<Not Applicable>

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

Target year for achieving net zero

2050

Is this a science-based target?

No, but we are reporting another target that is science-based

Please explain target coverage and identify any exclusions

As mentioned in C4.1b, Cementir commits to reduce scope 1 and scope 2 GHG emissions 25.3% per ton of cement by 2030 from a 2020 base year (validated by SBTi). To achieve the mentioned targets, Cementir defined a 10-year roadmap to maximise the deployment of existing technologies. Specific targets for alternative fuels, clinker ratio and CO₂ emissions have been established in order to accomplish the 2030 goals. Such targets have been deployed in every single plant and per year and were included in the Industrial Plan 2022-2024 and in our employee short-term incentive system.

The achievement of 2030 reduction target is the first step for the net-zero emission.

The Group is committed to reduce Scope 1, 2 and 3 emissions to zero or to a residual level that is consistent with reaching net-zero emissions at the global level in eligible 1.5°C scenarios and to neutralize any residual emissions at the net-zero target date. Cementir is currently developing this target according to the guidance for the cement sector defined by SBTi. As of June 2022, the guidance is still in a draft version, once formalized, Cementir will submit the target to SBTi for the validation.

The target is company-wide without any exclusions.

The main pillar that will support the strategy for the 2050 are:

2050 ambition: Scope 1 emissions

Cementir will maximize existing technology to reduce Scope 1 emissions according to a net-zero pathway endorsed by the SBTi and EU. This will require:

- Replacing fossil fuels with biomass, waste-derived fuels, CO₂-free fuels and increasing the efficiency of the kilns.
- Widespread development of FUTURECEM® to minimize clinker content in cement.
- Deployment of breakthrough carbon capture and storage technologies.

2050 ambition: Scope 2 emissions

After 2030, Cementir will eliminate Scope 2 emissions by expanding renewable energy sources. The Group will use offsite opportunities, by setting up power purchase agreements and onsite opportunities, and by installing wind and solar solutions for electricity on land that it owns.

2050 ambition: Scope 3 emissions

Cementir will reduce Scope 3 emissions according to a net-zero pathway. This will require the embedding of CO₂ emissions in sourcing decisions for all purchase categories and the promotion of zero-emissions transportation solutions within our network.

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 Group is committed to reduce Scope 1, 2 and 3 emissions to zero or to a residual level that is consistent with reaching net-zero emissions at the global level in eligible 1.5°C scenarios and to neutralize any residual emissions at the net-zero target date.

In cement production, most of the Scope 1 emissions result from the chemical reaction that occurs when the limestone calcinates into clinker in the kiln. This decarbonation process is our largest source of CO₂ emissions, accounting for 70% of our total scope 1 emissions.

Due to the peculiarity of cement production, following the implementation of the various action mentioned (i.e. Deployment of breakthrough carbon capture and storage technologies, Widespread development of FUTURECEM® to minimize clinker content in cement, replacing of fossil fuels with CO₂-free fuels), a fractions (from 0 to 5%) of unavoidable emissions could still remain.

For this reason, any unavoidable emissions will be neutralized using removals within or beyond Cementir value chain. For example, Cementir started to investigate REDD+ projects that can support countries in removing ghg from the atmosphere. However, as of July 2022, Cementir did not take any decision concerning REDD+ or other similar carbon offset project.

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

Any unavoidable emissions will be neutralized using removals within or beyond Cementir value chain. For example, Cementir started to investigate REDD+ projects that can support countries in removing ghg from the atmosphere. However, as of July 2022, Cementir did not take any decision concerning REDD+ or other similar carbon offset project.

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 CO ₂ e savings in metric tonnes CO ₂ e (only for rows marked *)
Under investigation	1	400000
To be implemented*	2	257400
Implementation commenced*	2	83000
Implemented*	2	4300
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	Smart control system
---	----------------------

Estimated annual CO2e savings (metric tonnes CO2e)

1800

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)

496000

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

772000

Payback period

1-3 years

Estimated lifetime of the initiative

3-5 years

Comment

One Initiative related to one plant. Implementation of new system on main cement mills plus online PSD (particle size distribution) analyser that bring to reduction in electricity consumption with a saving of 1,800 tons of CO2, yearly

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization
---	----------------------

Estimated annual CO2e savings (metric tonnes CO2e)

2500

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

Scope 1

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

480000

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

250000

Payback period

<1 year

Estimated lifetime of the initiative

1-2 years

Comment

One Initiative related to one plant. System for tracking on regular basis false air ingress for improving thermal and electrical energy efficiency, with a total co2 reduction of 2,500 tons. In cement production, air mix in the kiln is critical and it is important to avoid air leaks (also known as 'False air') in order to avoid inefficiencies in the combustion process. False air in cement plant has got various effects among other, it can increase of power consumption and fuel consumption. A proper monitoring and tracking can reduce those effects.

C4.3c

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

Method	Comment
Internal price on carbon	<p>For example, in 2021, we apply an internal carbon price of 80 EUR to navigate GHG regulations such as the EU ETS.</p> <p>Situation: Cement production is a thermal energy intensive process, which requires heating raw materials up to 1450°C and cooling it down. Limestone and clay are heated to approximately 1,450 degrees Celsius in rotary kiln in order to produce clinker, semi-finished product. For reaching the mentioned temperature (1,450 degrees) is usually used petcoke, a fossil fuel with high energy content and high CO2 emission.</p> <p>Task: develop project in order to replace petcoke with alternative fuels for reducing the CO2 emission related to the combustion of fuels for producing clinker.</p> <p>Action: following the feasibility study for addressing an opportunity for conversion from petcoke to natural gas, Cementir planned the utilization of natural gas in the Aalborg plant. The switching to natural gas, a fossil fuel with emissions lower than petcoke (estimated reduction of 20% of CO₂), is a transitional solution for Cementir's path to net-zero emissions.</p> <p>Results: Due to the reduction in CO2 emissions, Cementir will have to buy a minor number of CO2 quotas in EU ETS. This reduction in the CO2 quotas led to a positive financial impact that affect positively the business case evaluation (due to natural gas combustion, cementir will buy less CO2 quotas). Without the application of the carbon price, the mentioned investment will not have a positive NPV (net present value) and Cementir will not probably implemented it. Therefore, the capital expenditure would be allocated in a different way. As part of this strategy, Aalborg Portland (the Danish legal entity of Cementir) has entered into an agreement with the Danish gas distribution company, Evida, to connect the Aalborg plant to the gas distribution grid on 2023. Following the implementation of the investment, a reduction of 20% of CO2 is estimated for the Aalborg plant.</p>
Partnering with governments on technology development	<p>Cementir actively participates in global and national industry policy discussions on issues related to Climate Change, Sustainable Infrastructure, Circular Economy, Alternative Fuels, and Waste Management Frameworks, among others.</p> <p>For example, since November 2019, the Group has been involved in the most ambitious CO2 reduction project ever sponsored by a national government. In autumn 2019 the Danish government made a broad political agreement with all political parties, including one at parliamentary level about a binding climate law with the target of reducing Danish CO2 emissions by 70% by 2030 compared with the 1990 baseline. The Managing Director of Cementir's subsidiary Aalborg Portland is leading the climate partnership for the Danish energy intensive industry. The working group will provide the Danish government with the technical forecast of all potential CO2 reduction achievable and will define the prerequisites (policy, research, innovation, subsidies, etc.) for such reductions.</p> <p>The key policy recommendations are in progress. The climate partnership is working on:</p> <ul style="list-style-type: none"> - Developing a danish national strategy for carbon capture and subsidy a lighthouse project; - Liberalizing the market for heat recovery/district heating; - Ensuring affordable sustainable fuels (like biogas) - Supporting a market request for sustainable products (public procurement, building regulation etc.). <p>As a part of this partnership with the danish government, in July 2022, Aalborg Portland promises CO2 reductions of 1.6 million tonnes of CO2 within 2030. Aalborg Portland put a cap on the total amount of CO2 emitted by its plant. Aalborg Portland committed to emitt 600,000 tonnes in 2030 which is 1.6 million tonnes less than 2021. This is an absolute target and it is equal to a reduction of 72% comparing to the Co2 emitted by Aalborg Portland in 2018. The 2018 is the baseline agreed with the Danish government for the definition of the target.</p>
Internal incentives/recognition programs	<p>We provide monetary incentive to the Top Management and Middle Management for the achievement of climate-related targets. For example, as already mentioned in section C1.3a, The Head of Regions and Managing Directors of BU receive a monetary incentives, if their Regions or BUs accomplish targets related to CO2 emissions reductions, clinker/cement substitution, use of alternative fuels. Cementir set 2030 targets. Each target has been deployed per single plant and years. The interim targets have been included in the 2022-2024 Industrial plan approved by the BoD in February 2022.</p>
Compliance with regulatory requirements/standards	<p>The Group develops different scenarios analysis to quantify the potential impacts of regulatory requirements / standards, as already reported in the section C2. Risks and opportunities. For example, as decribed in the C2.3a, Among the areas where Cementir operates, Europe is the only major region with a regulatory framework for CO2 quotes.</p> <p>Among the assumptions used for the definition of the Industrial Plan 2022-2024, an average yearly CO2 shortage of 500,000 tons is expected. The potential financial impact for Cementir could be around 40 million € of additional yearly cost, assuming a CO2 price of 80 EUR (500,000 x 80). 40 million € is the 12.86% of 2021 Group EBITDA. In 2021, the Group EBITDA was 310.952 million €.</p>

C4.5

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

Yes

C4.5a

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

Level of aggregation

Product or service

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

The IEA Energy Technology Perspectives Clean Energy Technology Guide

Type of product(s) or service(s)

Cement and concrete	Calcined clay
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Description of product(s) or service(s)

FUTURECEM® is a limestone calcined clay cement with up to 30% CO₂-reduction compared with existing, conventional cement types.

Calcined clay is an alternative cement constituent that can be used instead of clinker in cements. According to IEA, calcined clay is a technology that contribute to achieving the goal of net-zero emissions. FUTURECEM® is fully recognized as a solution for clinker ratio reduction in the roadmap for Low-Carbon Transition in the Cement Industry by the International Energy Agency.

FUTURECEM® is a grey Portland-composite cement, of strength class 52.5 N, with a minimum clinker content of 65%. FUTURECEM® is characterized by a high standard strength (62 to 68 MPa after 28 days), comparable to CEM I cements, despite a significantly lower clinker content. FUTURECEM® can be used in concrete for all purposes and in all environmental classes.

In March 2020, Bureau Veritas certified the compliance of FUTURECEM® with the requirements in cement standard (EN 197-1:2011).

On January 2021, Cemntir started the production and distribution of FUTURECEM® in Denmark. In 2022, we will start the production in our Belgian plant. In 2022, through our Belgian plant will commercialize FUTURECEM® in France and in 2023 in Benelux.

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

Yes

Methodology used to calculate avoided emissions

Methodology for Environmental Life-Cycle Assessment of Information and Communication Technology Goods, Networks and Services (ITU-TL.1410)

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

Cradle-to-gate

Functional unit used

kg CO₂ eq. per ton of FUTURECEM produced. Manufacturing processes, including extraction and transportation of raw materials (cradle-to-gate), of 1 ton of FUTURECEM. It is also included the calcination of clay and its sourcing. It is based on verified results from an LCA performed as basis for an EPD, in accordance with ISO 14025 and EN 15804.

Reference product/service or baseline scenario used

kg CO₂ eq. per ton of CEM I produced. Manufacturing processes, including extraction and transportation of raw materials (cradle-to-gate) of 1 ton of CEM I. It is based on verified results from an LCA performed as basis for an EPD, in accordance with ISO 14025 and EN 15804.

FUTURECEM® is a grey Portland-composite cement comparable to CEM I cements.

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

Cradle-to-gate

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

261

Explain your calculation of avoided emissions, including any assumptions

599 kg CO₂ eq. per ton of FUTURECEM® versus 860 kg CO₂ eq. per ton of CEM I for a difference of 261 kg CO₂ eq. per ton of cement produced.

FUTURECEM® is a grey Portland-composite cement, of strength class 52.5 N, with a minimum clinker content of 65% comparable to CEM I cements, despite a significantly lower clinker content. For this reason, to calculate the avoided emission, we compare the Co₂ emitted to produce 1 ton of FUTURECEM® with the CO₂ emitted to produce 1 ton of CEM I cement.

The production FUTURECEM® avoid 261 kg CO₂ eq. per ton produced comparing CEM I cement (599 versus 860, 30% CO₂-reduction)

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

1

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	24
Pre-calciner	63

C5. Emissions methodology

C5.1

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

No

C5.1a

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

Row 1

Has there been a structural change?

No

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

<Not Applicable>

Details of structural change(s), including completion dates

<Not Applicable>

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	No	<Not Applicable>

C5.2

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

Scope 1

Base year start

January 1 2017

Base year end

December 31 2017

Base year emissions (metric tons CO2e)

7711243

Comment

We decided to report as base year the 2017, because in 2017 Cementir Group acquired the Belgium plant of Guarain (Compagnie des ciments belges). Following this acquisition, the Group structure has changed significantly. The Belgium plant account for about the 25% of the grey cement production capacity of Cementir Group (out of 9,8 million ton of capacity, 2,3 are related to the Belgium plant).

We reported Scope 1 emissions for all segments: Cement, Aggregates, Ready Mix Concrete, Concrete prefabricated products, Waste Management and Recycling.

Scope 2 (location-based)

Base year start

January 1 2017

Base year end

December 31 2017

Base year emissions (metric tons CO2e)

692327

Comment

We decided to report as base year the 2017, because in 2017 Cementir Group acquired the Belgium plant of Guarain (Compagnie des ciments belges). Following this acquisition, the Group structure has changed significantly. The Belgium plant account for about the 25% of the grey cement production capacity of Cementir Group (out of 9,8 million ton of capacity, 2,3 are related to the Belgium plant).

We reported Scope 2 emissions for all segments: Cement, Aggregates, Ready Mix Concrete, Concrete prefabricated products, Waste Management and Recycling.

Scope 2 (market-based)

Base year start

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

470293

Comment

In 2019, Cementir started to calculate the Scope 2 emission according to the market-based method. Previously, only location-based method was applied.

The calculation was made by applying the Suppliers emission rate for the plants located in Europe, the residual mix figures for the plants located in US, while for the other countries, we updated the national grid average with the supplier specific data, if relevant.

Combined, the European and Us operations account for the 80% of the total group revenues, as of December 2019.

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)

685221

Comment

This category includes emissions from purchased raw materials and semi-finished products for cement production, and emissions from purchased services such as research and marketing services, maintenance, cleaning and security services, and subcontracting and external services.

In 2020, we started to investigate the CO₂ emissions of our suppliers in order to understand how they could be reduced and how to develop mutually beneficial projects (for both Cementir and the suppliers). In total, 55 suppliers (30% of total purchases by value) were invited to participate in the CDP Supply Chain programme. Each supplier was invited to disclose information about its risks and opportunities associated with climate change, its emissions, details on its emissions management strategy such as targets, and actions it has taken to reduce its emissions.

For the calculation of the scope 3 emissions related to Purchased goods and services we used the data coming from the CDP Supply chain program.

The emissions obtained by the suppliers of purchased goods and services who responded to the CDP were re-proportioned according to the spending for purchased goods and services recorded in 2020.

Scope 3 category 1: Purchased goods and services was reported also in 2021 CDP climate change questionnaire.

Scope 3 category 2: Capital goods

Base year start

January 1 2020

Base year end

December 31 2020

Base year emissions (metric tons CO2e)

44293

Comment

This category includes emissions from the following capital goods: constructions, machineries, electrical and optical equipment and transport equipment.

The calculation was made on the basis of spending for capex in 2020 and using the GHG Protocol tool

<https://quantis-suite.com/Scope-3-Evaluator/>

Scope 3 category 2: Capital goods was reported also in 2021 CDP climate change questionnaire.

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)

1560067

Comment

This category includes well to tank emissions for fuel and electricity. The calculation was made applying the emission factors of DEFRA on Group consumption for fuels and electricity.

Please see below the Greenhouse gas conversion factors for 2020

<https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020>

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2) was reported also in 2021 CDP climate change questionnaire.

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)

211197

Comment

This category includes emissions from transportation by external trucks and cargo ship of purchased materials and semi-finished products and part of Cementir's sold products.

The calculation was made on the basis of spending for transportation in 2020 and using the GHG Protocol tool <https://quantis-suite.com/Scope-3-Evaluator/>

Scope 3 category 4: Upstream transportation and distribution was reported also in 2021 CDP climate change questionnaire.

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)

227743

Comment

This category includes emissions from industrial waste disposal. The calculation was made applying the emission factors of DEFRA on the waste disposed by the Group during the year. Please see below the Greenhouse gas conversion factors for 2020 <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020>
Scope 3 category 5: Waste generated in operations was reported also in 2021 CDP climate change questionnaire.

Scope 3 category 6: Business travel

Base year start

January 1 2020

Base year end

December 31 2020

Base year emissions (metric tons CO2e)

1481

Comment

The calculation was made on the basis of spending for business travel in 2020 and using the GHG Protocol tool. Emissions related to business travel are not relevant comparing to the total emission of the Group. According to the group practices, usually only employees from HQ travels regularly (about 40 people over 3.000 total employees), moreover, in the period 2020/2021, due to the coronavirus outbreak, the Group suspended any business trips and promoted "work from home", where possible. For this reason, in the next future, we estimate a further decreasing of the relevance of this kind of emissions. Scope 3 category 6: Business travel was reported also in 2021 CDP climate change questionnaire.

Scope 3 category 7: Employee commuting

Base year start**Base year end****Base year emissions (metric tons CO2e)****Comment**

We consider this type of emission not relevant: most of the employees live close to the plants. Moreover, in the period 2020/2021, due to the pandemic outbreak, the Group promoted remote working solutions. Emissions due to employee commuting are estimated to be less than 1% of the total Scope 3 emissions

Scope 3 category 8: Upstream leased assets

Base year start**Base year end****Base year emissions (metric tons CO2e)****Comment**

Category with negligible emissions. According to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance¹², developed by the Cement Sustainability Initiative, this category is considered 'not relevant' to the cement sector. Emissions due to upstream leased assets are estimated to be less than 1% of the total Scope 3 emissions.

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)

211197

Comment

This category includes emissions from transportation by external trucks and cargo ship of Cementir's sold products. Starting from the incointerm rules applied by the Group on the sales, we estimated the spending for the downstream transportation and distribution then we estimated the emissions using the GHG Protocol tool. Scope 3 category 9: Downstream transportation and distribution was reported also in 2021 CDP climate change questionnaire.

Scope 3 category 10: Processing of sold products

Base year start**Base year end****Base year emissions (metric tons CO2e)****Comment**

Category with negligible emissions. According to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance, this category is considered 'not relevant' to the cement sector. Emissions due to the processing of sold cement products are estimated to be less than 1% of the total Scope 3 emissions.

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Category with negligible emissions. According to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance, this category is considered 'not relevant' to the cement sector. Emissions due to the direct use-phase of sold cement products over their expected lifetime are estimated to be less than 1% of the total Scope 3 emissions.

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

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Category with negligible emissions. According to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance, this category is considered 'not relevant' to the cement sector. Emissions due to end-of-life treatment of sold cement products are estimated to be less than 1% of the total Scope 3 emissions

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not applicable: The Cementir Group's business does not include leased assets.

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not applicable: The Cementir Group does not have franchises.

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not applicable: Provision of capital or financing is not included in Cementir Group's business.

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not applicable

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not applicable

C5.3

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

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

The Greenhouse Gas Protocol: Scope 2 Guidance

WBCSD: The Cement CO2 and Energy Protocol

C6. Emissions data

C6.1

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

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

8006881

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

We reported Scope 1 emissions for all segments: Cement, Aggregates, Ready Mix Concrete, Concrete prefabricated products, Waste Management and Recycling.

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

In 2019, Cementir started to calculate the Scope 2 emission according to the market-based method. We performed the calculation for 2019 and also for the 3 years before (2018, 2017 and 2016).

Previously, only location-based method was applied. Until 2019, in the Sustainability Report, we reported scope 2 emission according location-based, only.

In 2021, Scope 2 marked-based figure was calculated by applying: the Supplier emission rates and the European Residual Mixes 2021 (AIB) for the operations located in Europe; the Green-e® Residual Mix (2021 data) for the operations located in US; for the other countries, we updated the national grid average with supplier specific data, if relevant.

We reported Scope 2 emissions for all segments: Cement, Aggregates, Ready Mix Concrete, Concrete prefabricated products, Waste Management and Recycling.

C6.3

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

Reporting year

Scope 2, location-based

707045

Scope 2, market-based (if applicable)

708509

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

In 2021, Scope 2 marked-based figure was calculated by applying: the Supplier emission rates and the European Residual Mixes 2021 (AIB) for the operations located in Europe; the Green-e® Residual Mix (2021 data) for the operations located in US; for the other countries, we updated the national grid average with supplier specific data, if relevant.

We reported Scope 2 emissions for all segments: Cement, Aggregates, Ready Mix Concrete, Concrete prefabricated products, Waste Management and Recycling

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)

685842

Emissions calculation methodology

Hybrid method

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

16

Please explain

This category includes emissions from purchased raw materials and semi-finished products for cement production, and emissions from purchased services such as research and marketing services, maintenance, cleaning and security services, and subcontracting and external services. For the calculation of the Scope 3 emissions related to purchased goods and services, we used the data from the CDP supply chain programme (please see paragraph 'Value chain engagement' for details). The emissions obtained from the suppliers of purchased goods and services who responded to the CDP were re-proportioned according to the spending for purchased goods and services recorded in 2021.

Please be aware that the relevance of each scope 3 category has been determined according to CDP's Technical Note on the relevance of Scope 3 categories by sector (cement sector), to Cement Sector Scope 3 GHG Accounting and Reporting Guidance and to GHG Protocol Scope 3 standard.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

74577

Emissions calculation methodology

Spend-based method

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

0

Please explain

This category includes emissions related to the production and transportation of the following capital goods: constructions, machineries, electrical and optical equipment and transport equipment. The calculation was made on the basis of spending for capex in 2021 and using the GHG Protocol tool <https://quantis-suite.com/Scope-3-Evaluator>.

Please be aware that the relevance of each scope 3 category has been determined according to CDP's Technical Note on the relevance of Scope 3 categories by sector (cement sector), to Cement Sector Scope 3 GHG Accounting and Reporting Guidance and to GHG Protocol Scope 3 standard.

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

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1560189

Emissions calculation methodology

Fuel-based method

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

0

Please explain

This category includes the emissions related to the extraction, production and transportation of fuels and energy purchased by Cementir in 2021 not already accounted for in Scope 1 or 2. The calculation was made applying the well-to-tank emission factors of DEFRA to Group consumption for fuels and electricity. Please see below the greenhouse gas conversion factors for 2020

<https://www.gov.uk/government/publications/greenhousegas-reporting-conversion-factors-2020>

Please be aware that the relevance of each scope 3 category has been determined according to CDP's Technical Note on the relevance of Scope 3 categories by sector (cement sector), to Cement Sector Scope 3 GHG Accounting and Reporting Guidance and to GHG Protocol Scope 3 standard.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

252877

Emissions calculation methodology

Spend-based method

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

0

Please explain

This category includes emissions from transportation by external trucks and cargo ships of purchased materials and semi-finished products and part of Cementir's sold products. The calculation was made on the basis of spending for transportation in 2021 and using the GHG Protocol tool <https://quantis-suite.com/Scope-3-Evaluator/>

Please be aware that the relevance of each scope 3 category has been determined according to CDP's Technical Note on the relevance of Scope 3 categories by sector (cement sector), to Cement Sector Scope 3 GHG Accounting and Reporting Guidance and to GHG Protocol Scope 3 standard.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

162936

Emissions calculation methodology

Waste-type-specific method

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

0

Please explain

This category includes emissions related to the disposal and treatment of waste generated by Cementir in 2021. The calculation was made applying the emission factors of DEFRA to the waste disposed of by the Group during the year.

Please be aware that the relevance of each scope 3 category has been determined according to CDP's Technical Note on the relevance of Scope 3 categories by sector (cement sector), to Cement Sector Scope 3 GHG Accounting and Reporting Guidance and to GHG Protocol Scope 3 standard.

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

1425

Emissions calculation methodology

Spend-based method

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

0

Please explain

This category includes emission from employee business travels. The calculation was made on the basis of spending for business travel in 2021 and using the GHG Protocol tool <https://quantis-suite.com/Scope-3-Evaluator/>

Please be aware that the relevance of each scope 3 category has been determined according to CDP's Technical Note on the relevance of Scope 3 categories by sector (cement sector), to Cement Sector Scope 3 GHG Accounting and Reporting Guidance and to GHG Protocol Scope 3 standard.

Employee commuting

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

Category with negligible emissions. Most of the employees live close to the plants. Moreover, in the period 2020/2021, due to the outbreak of the pandemic, the Group promoted remote working solutions. Emissions due to employee commuting are estimated to be less than 1% of the total Scope 3 emissions.

Please be aware that the relevance of each scope 3 category has been determined according to CDP's Technical Note on the relevance of Scope 3 categories by sector (cement sector), to Cement Sector Scope 3 GHG Accounting and Reporting Guidance and to GHG Protocol Scope 3 standard.

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

Category with negligible emissions. According to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance, developed by the Cement Sustainability Initiative, this category is considered 'not relevant' to the cement sector. Emissions due to upstream leased assets are estimated to be less than 1% of the total Scope 3 emissions.

Please be aware that the relevance of each scope 3 category has been determined according to CDP's Technical Note on the relevance of Scope 3 categories by sector (cement sector), to Cement Sector Scope 3 GHG Accounting and Reporting Guidance and to GHG Protocol Scope 3 standard.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

252877

Emissions calculation methodology

Spend-based method

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

0

Please explain

This category includes emissions from transportation by external trucks and cargo ships associated with Cementir's sold products. Starting from the incoterm rules applied by the Group on the sales, we estimate the spending for the downstream transportation and distribution then we estimated the emissions using the GHG Protocol tool.

Please be aware that the relevance of each scope 3 category has been determined according to CDP's Technical Note on the relevance of Scope 3 categories by sector (cement sector), to Cement Sector Scope 3 GHG Accounting and Reporting Guidance and to GHG Protocol Scope 3 standard.

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

Category with negligible emissions. According to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance, this category is considered 'not relevant' to the cement sector. Emissions due to the processing of sold cement products are estimated to be less than 1% of the total Scope 3 emissions.

Please be aware that the relevance of each scope 3 category has been determined according to CDP's Technical Note on the relevance of Scope 3 categories by sector (cement sector), to Cement Sector Scope 3 GHG Accounting and Reporting Guidance and to GHG Protocol Scope 3 standard.

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

Negligible. According to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance, this category is considered "not relevant" to the cement sector.

Please be aware that the relevance of each scope 3 category has been determined according to CDP's Technical Note on the relevance of Scope 3 categories by sector (cement sector), to Cement Sector Scope 3 GHG Accounting and Reporting Guidance and to GHG Protocol Scope 3 standard.

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

Negligible. According to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance, this category is considered "not relevant" to the cement sector.

Please be aware that the relevance of each scope 3 category has been determined according to CDP's Technical Note on the relevance of Scope 3 categories by sector (cement sector), to Cement Sector Scope 3 GHG Accounting and Reporting Guidance and to GHG Protocol Scope 3 standard.

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

Not applicable: The Cementir Group's business does not include leased assets.

Please be aware that the relevance of each scope 3 category has been determined according to CDP's Technical Note on the relevance of Scope 3 categories by sector (cement sector), to Cement Sector Scope 3 GHG Accounting and Reporting Guidance and to GHG Protocol Scope 3 standard.

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

Not applicable: The Cementir Group does not have franchises.

Please be aware that the relevance of each scope 3 category has been determined according to CDP's Technical Note on the relevance of Scope 3 categories by sector (cement sector), to Cement Sector Scope 3 GHG Accounting and Reporting Guidance and to GHG Protocol Scope 3 standard.

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

Not applicable: Provision of capital or financing is not included in Cementir Group's business.

Please be aware that the relevance of each scope 3 category has been determined according to CDP's Technical Note on the relevance of Scope 3 categories by sector (cement sector), to Cement Sector Scope 3 GHG Accounting and Reporting Guidance and to GHG Protocol Scope 3 standard.

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

Category with negligible emissions. According to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance, this category is considered 'not relevant' to the cement sector.

Please be aware that the relevance of each scope 3 category has been determined according to CDP's Technical Note on the relevance of Scope 3 categories by sector (cement sector), to Cement Sector Scope 3 GHG Accounting and Reporting Guidance and to GHG Protocol Scope 3 standard.

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

Category with negligible emissions. According to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance, this category is considered 'not relevant' to the cement sector.

Please be aware that the relevance of each scope 3 category has been determined according to CDP's Technical Note on the relevance of Scope 3 categories by sector (cement sector), to Cement Sector Scope 3 GHG Accounting and Reporting Guidance and to GHG Protocol Scope 3 standard.

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	334661	<p>Co2 equivalent emission deriving from biomass combustion for the cement production.</p> <p>Cementir Holding uses, in addition to traditionally fossil fuels to operate cement kilns, fuels derived from waste materials and biomass. These alternative fuels (AF) include fossil fuel-derived fractions such as, e.g. waste oil and plastics, as well as biomass-derived fractions such as waste wood and dewatered sludge from wastewater treatment. Therefore, these alternative fuels contain both fossil and biogenic carbon.</p> <p>Cementir Holding estimates CO2 emissions from biofuels/biomass combustion according to the CO2 and Energy Accounting and Reporting Standard for the Cement Industry, developed by the Cement Sustainability Initiative. According to the Cement Sustainability Initiative Standard, CO2 emissions from biofuels/biomass combustion are estimated by determining the share of the biogenic carbon in the fuel's overall carbon content, according to international standards (e.g. EN 15440).</p> <p>Moreover, the GCCA Standard advises companies to use a conservative approach in determining the biogenic carbon content, meaning that the biogenic carbon content should not be overestimated. A fossil carbon content of 100% shall be assumed for fuel types in case of a lack of reliable information on their biogenic carbon content until more precise data becomes available.</p> <p>On the basis of the share of the biogenic carbon in the fuel's overall carbon content, Cementir Holding estimated the share of CO2 emissions from biofuels/biomass combustion in the fuel's overall CO2 emissions.</p>

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

0.006407411

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

8713926

Metric denominator

unit total revenue

Metric denominator: Unit total

1359976000

Scope 2 figure used

Location-based

% change from previous year

8.21

Direction of change

Decreased

Reason for change

In 2021, the intensity figure decreased to 6.41 Kg CO2/EUR from 6.98 Kg CO2/EUR (value related to 2020). (In 2020, the numerator (scop1+scope2) was 8,549,459 tons and the denominator was 1,224,793,000 € for a ratio of 6.98 Kg CO2/EUR).

The reduction is mainly due to the reduction implemented by the Group for the Scope 1 emissions. In particular, concerning grey cement the clinker ratio decreased to 81%, from the 82% of 2020 and the alternative fuels increased to 30% from the 28% of 2020. Both actions helped to decrease the co2 emitted per ton of cement produced and therefore to decrease the intensity figure.

Please be aware that we reported the CO2 (scope 1 + scope 2) related to the full Group. All segments: Cement, Aggregates, Ready Mix Concrete, Concrete prefabricated products, Waste Management and Recycling have been included in the calculation.

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	0.909	0.87	0.079
Cement equivalent	0.741	0.709	0.064
Cementitious products	0.752	0.72	0.065
Low-CO2 materials	0.548	0.523	0.046

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)
Denmark	2265968
Belgium	1137221
Turkey	3200957
Egypt	399545
Malaysia	282657
China	485819
United States of America	234002
Norway	711

C7.3

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

- By business division
- By facility
- By activity

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
Nordic & Baltic Region	2266679
Belgium Region	1137221
Turkey CEM BU	3200955
Asia Pacific	768477
Egypt CEM BU	399545
North American Region	234002
Waste Management BU	2

C7.3b

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

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Den_1	2257761	57.05276	9.978676
Belgium_1	1122141	50.595716	3.481121
Turkey_1	1337965	38.42608	27.216053
Turkey_2	736543	41.799189	26.691284
Turkey_3	814364	38.664642	39.237156
Turkey_4	312083	40.575994	43.010445
Malesia	282657	4.591978	101.09
China	485819	30.535	117.104
US_1	111417	39.96	-76.72
US_2	121955	31.54	-97.14
Egypt	399545	31.12	33.8

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Cement Production	7982250
Concrete Production	8919
Aggregates, waste management and recycling and other products (concrete prefabricated products)	15712

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	7982250	7637911	We reported gross and net scope 1 emissions related to cement production
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)
Denmark	112823	186623
Belgium	70843	42896
Sweden	100	0
Turkey	338742	338897
Egypt	45430	45430
Malaysia	35193	27425
China	78393	41711
Norway	152	2572
United Kingdom of Great Britain and Northern Ireland	804	1005
United States of America	24565	21950

C7.6

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

- By business division
- By facility
- By activity

C7.6a

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

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Nordic & Baltic Region	113075	189195
Belgium Region	70843	42896
Turkey CEM BU	337930	337930
Asia Pacific Region	113585	69136
Egypt CEM BU	45430	45430
North American Region	24565	21950
Waste BU	1616	1972

C7.6b

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

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Den_1	111131	183825
Belgium_1	63071	37638
Turkey_1	134715	134715
Turkey_2	77651	77651
Turkey_3	90722	90722
Turkey_4	31461	31462
Malesia	35193	27425
China	78393	41711
US_1	14546	10926
US_2	9420	10141
Egypt_1	45430	45430

C7.6c

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

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Cement Production	691732	691645
Concrete Production	5766	9015
Aggregates, waste management and recycling and other products (concrete prefabricated products)	9547	7850

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	691732	691645	We reported Scope 2, location-based and market-based related to cement production
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 emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	544	Decreased	0.01	<p>The consumption of renewable electricity increased of 1,059 Mwh in 2021 comparing 2020. To estimate the emissions saved, we multiply this amount of renewable electricity for the average CO2 intensity of electricity purchased in 2021 (513.5kg CO2/MWh). In this way, we estimate a CO2 saving of 544 metric tons CO2e</p> <p>The emission value (percentage) is 0.01 because we divided the change in emission per the total Scope 1 and Scope 2 (market based) of the previous year $0.01\% = 544 / (7,977,232 + 700,278)$.</p> <p>In 2021 the scope 1 + scope 2 (market based) emissions increased of 37,880 tons.</p> <p>Scope 1 + Scope 2 in 2021: 8,715,390 = 8,006,881+ 708,509. See C6.1 and C6.3.</p> <p>Scope 1 + Scope 2 in 2020: 8,677,510 = 7,977,232 + 700,278. As reported last year</p> <p>Out of a difference of 37,880: A) 544 is a reduction related to Change in renewable energy consumption B) 4,300 is a reduction related to Other emissions reduction activities C) 240,131 is an increasing related to Change in output D) 197,407 is a reduction related to other. Difference that is not allocated to any specific reason because related to inherent interdependencies between various different levers. C – A -B - D = 37,880. So, C less A, B, D explains the difference between 2021 and 2020.</p>
Other emissions reduction activities	4300	Decreased	0.05	<p>Initiatives implemented in 2021, as described in C4.3b.</p> <p>A total of 4,300 tons has been reduced due to: - Implementation of new system on main cement mills + online PSD analyser with a saving of 1,800 tons - new system for tracking on regular basis false air ingress for improving thermal and electrical energy efficiency with a saving of 2.500 tons</p> <p>The emission value (percentage) is 0.05 because we divided the change in emission per the total Scope 1 and Scope 2 (market based) of the previous year $0.05\% = 4,300 / (7,977,232 + 700,278)$.</p> <p>In 2021 the scope 1 + scope 2 (market based) emissions increased of 37,880 tons.</p> <p>Scope 1 + Scope 2 in 2021: 8,715,390 = 8,006,881+ 708,509. See C6.1 and C6.3.</p> <p>Scope 1 + Scope 2 in 2020: 8,677,510 = 7,977,232 + 700,278. As reported last year</p> <p>Out of a difference of 37,880: A) 544 is a reduction related to Change in renewable energy consumption B) 4,300 is a reduction related to Other emissions reduction activities C) 240,131 is an increasing related to Change in output D) 197,407 is a reduction related to other. Difference that is not allocated to any specific reason because related to inherent interdependencies between various different levers. C – A -B - D = 37,880. So, C less A, B, D explains the difference between 2021 and 2020.</p>
Divestment	0	No change	0	In 2021, there was not any divestment
Acquisitions	0	No change	0	In 2021, there was not any acquisition
Mergers	0	No change	0	In 2021, there was not any merger
Change in output	240131	Increased	2.77	<p>In 2021, comparing 2020, the clinker production increased of 264,170 ton. Multiplying this amount with average emission factor of Cementir in 2021 (0.909 as reported in the question CE6.11), this increase in the production of clinker generated an increase in CO2 of 240,131.</p> <p>The emission value (percentage) is 2.77 because we divided the change in emission per the total Scope 1 and Scope 2 (market based) of the previous year $2.77\% = 240,131 / (7,977,232 + 700,278)$.</p> <p>In 2021 the scope 1 + scope 2 (market based) emissions increased of 37,880 tons.</p> <p>Scope 1 + Scope 2 in 2021: 8,715,390 = 8,006,881+ 708,509. See C6.1 and C6.3.</p> <p>Scope 1 + Scope 2 in 2020: 8,677,510 = 7,977,232 + 700,278. As reported last year</p> <p>Out of a difference of 37,880: A) 544 is a reduction related to Change in renewable energy consumption B) 4,300 is a reduction related to Other emissions reduction activities C) 240,131 is an increasing related to Change in output D) 197,407 is a reduction related to other. Difference that is not allocated to any specific reason because related to inherent interdependencies between various different levers. C – A -B - D = 37,880. So, C less A, B, D explains the difference between 2021 and 2020.</p>
Change in methodology	0	No change	0	In 2021, there was not any change in methodology
Change in boundary	0	No change	0	In 2021, there was not any change in boundary
Change in physical operating conditions	0	No change	0	In 2021, there was not any change in physical operating conditions
Unidentified	0	No change	0	there was not any unidentified changes

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Other	197407	Decreased	2.27	<p>Difference that is not allocated to any specific reason because related to inherent interdependencies between various different levers.</p> <p>The emission value (percentage) is 2.27 because we divided the change in emission per the total Scope 1 and Scope 2 (market based) of the previous year $2.27\% = 197,407 / (7,977,232 + 700,278)$.</p> <p>In 2021 the scope 1 + scope 2 (market based) emissions increased of 37,880 tons.</p> <p>Scope 1 + Scope 2 in 2021: $8,715,390 = 8,006,881 + 708,509$. See C6.1 and C6.3.</p> <p>Scope 1 + Scope 2 in 2020: $8,677,510 = 7,977,232 + 700,278$. As reported last year</p> <p>Out of a difference of 37,880: A) 544 is a reduction related to Change in renewable energy consumption B) 4,300 is a reduction related to Other emissions reduction activities C) 240,131 is an increasing related to Change in output D) 197,407 is a reduction related to other. Difference that is not allocated to any specific reason because related to inherent interdependencies between various different levers. C - A - B - D = 37,880. So, C less A, B, D explains the difference between 2021 and 2020.</p>

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 20% but less than or equal to 25%

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)	1055480	9486233	10541713
Consumption of purchased or acquired electricity	<Not Applicable>	311074	1068537	1379611
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>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	1366554	10554770	11921324

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)	10413705
Consumption of purchased or acquired electricity	<Not Applicable>	1319892
Consumption of other purchased or acquired energy (heat, steam and/or cooling)	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	11733597

C8.2b

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

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

C8.2c

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

Sustainable biomass

Heating value

LHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

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

1055480

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

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

We reported the total biomass used by the Group (Meat and bone meal, Sunflower oil and biomass content of fuels derived from waste (RDF). RDF, Refuse-derived fuel, is the fuel produced from various types of waste.).

Other renewable fuels (e.g. renewable hydrogen)

Heating value

LHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

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

Coal

Heating value

LHV

Total fuel MWh consumed by the organization

3614849

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

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

Coal used by the Group

Oil

Heating value

LHV

Total fuel MWh consumed by the organization

139084

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

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

Oil used by the Group

Gas

Heating value

LHV

Total fuel MWh consumed by the organization

510074

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

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

Natural gas used by the Group

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

Heating value

LHV

Total fuel MWh consumed by the organization

5222225

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

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

Other non-renewable fuels, mainly petcoke, used by the Group.

Total fuel

Heating value

LHV

Total fuel MWh consumed by the organization

10541712

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

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

Total Fuels = 1,055,480 of biomass + 3,614,849 of Coal + 139,084 of oil + 510,074 of Gas + 5,222,225 of Other non-renewable fuels

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

LHV

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

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Other biomass

Heating value

LHV

Total MWh fuel consumed for cement production activities

1054787

MWh fuel consumed at the kiln

1054787

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

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Other renewable fuels (e.g. renewable hydrogen)

Heating value

LHV

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

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Coal

Heating value

LHV

Total MWh fuel consumed for cement production activities

3614849

MWh fuel consumed at the kiln

3614849

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

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Oil

Heating value

LHV

Total MWh fuel consumed for cement production activities

123395

MWh fuel consumed at the kiln

123395

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

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Gas

Heating value

LHV

Total MWh fuel consumed for cement production activities

505564

MWh fuel consumed at the kiln

505564

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

<Not Applicable>

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

5115110

MWh fuel consumed at the kiln

5105388

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

9722

MWh fuel consumed for the self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Total fuel

Heating value

LHV

Total MWh fuel consumed for cement production activities

10413705

MWh fuel consumed at the kiln

10403983

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

9722

MWh fuel consumed for the self-generation of electricity

<Not Applicable>

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	0	0	0	0
Heat	448553	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C-CE8.2d

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

	Total gross generation (MWh) inside the cement sector boundary	Generation that is consumed (MWh) inside the cement sector boundary
Electricity	0	0
Heat	448553	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 line to an off-site generator owned by a third party with no grid transfers

Energy carrier

Electricity

Low-carbon technology type

Solar

Country/area of low-carbon energy consumption

Belgium

Tracking instrument used

Contract

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

127

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

Belgium

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

2020

Comment

Our concrete plant in Belgium purchases electricity coming from photovoltaic panels installed on the building of our neighbour.

Sourcing method

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

Energy carrier

Electricity

Low-carbon technology type

Wind

Country/area of low-carbon energy consumption

Denmark

Tracking instrument used

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

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

1692

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

Denmark

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

Comment

information provided by the Suppliers plus Results of the calculation of Residual Mixes for the calendar year 2021 (AIB)

Sourcing method

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Country/area of low-carbon energy consumption

Denmark

Tracking instrument used

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

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

5853

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

Denmark

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

Comment

Information provided by the Suppliers plus Results of the calculation of Residual Mixes for the calendar year 2021 (AIB)

Sourcing method

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

Energy carrier

Electricity

Low-carbon technology type

Nuclear

Country/area of low-carbon energy consumption

Denmark

Tracking instrument used

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

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

73617

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

Denmark

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

Comment

information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB)

Sourcing method

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

Energy carrier

Electricity

Low-carbon technology type

Other biomass

Country/area of low-carbon energy consumption

Belgium

Tracking instrument used

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

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

10437

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

Belgium

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

Comment

information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB)

Sourcing method

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Country/area of low-carbon energy consumption

Belgium

Tracking instrument used

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

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

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

Belgium

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

information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB)

Sourcing method

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

Energy carrier

Electricity

Low-carbon technology type

Nuclear

Country/area of low-carbon energy consumption

Belgium

Tracking instrument used

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

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

166188

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

Belgium

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

information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB)

Sourcing method

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

Energy carrier

Electricity

Low-carbon technology type

Solar

Country/area of low-carbon energy consumption

Denmark

Tracking instrument used

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

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

8709

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

Denmark

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

information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB)

Sourcing method

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

Energy carrier

Electricity

Low-carbon technology type

Other biomass

Country/area of low-carbon energy consumption

Denmark

Tracking instrument used

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

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

7122

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

Denmark

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

information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB)

Sourcing method

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

Energy carrier

Electricity

Low-carbon technology type

Solar

Country/area of low-carbon energy consumption

Belgium

Tracking instrument used

Other, please specify (information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB))

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

20373

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

Belgium

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

information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (AIB)

Sourcing method

Other, please specify (Information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (Green-e®))

Energy carrier

Electricity

Low-carbon technology type

Solar

Country/area of low-carbon energy consumption

United States of America

Tracking instrument used

Other, please specify (Information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (Green-e®))

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

73

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)**Comment**

Information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (Green-e®)

Sourcing method

Other, please specify (Information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (Green-e®))

Energy carrier

Electricity

Low-carbon technology type

Wind

Country/area of low-carbon energy consumption

United States of America

Tracking instrument used

Other, please specify (Information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (Green-e®))

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

6304

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)**Comment**

Information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (Green-e®)

Sourcing method

Other, please specify (Information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (Green-e®))

Energy carrier

Electricity

Low-carbon technology type

Nuclear

Country/area of low-carbon energy consumption

United States of America

Tracking instrument used

Other, please specify (Information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (Green-e®))

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

9024

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)

Comment

Information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (Green-e®)

Sourcing method

Other, please specify (Information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (Green-e®))

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Country/area of low-carbon energy consumption

United States of America

Tracking instrument used

Other, please specify (Information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (Green-e®))

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

282

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)

Comment

Information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (Green-e®)

Sourcing method

Other, please specify (Information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (Green-e®))

Energy carrier

Electricity

Low-carbon technology type

Other biomass

Country/area of low-carbon energy consumption

United States of America

Tracking instrument used

Other, please specify (Information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (Green-e®))

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

178

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)

Comment

Information provided by the Suppliers and Results of the calculation of Residual Mixes for the calendar year 2021 (Green-e®)

Sourcing method

Other, please specify (Information provided by the Suppliers and Grid mix of renewable electricity)

Energy carrier

Electricity

Low-carbon technology type

Other biomass

Country/area of low-carbon energy consumption

Turkey

Tracking instrument used

Other, please specify (Information provided by the Suppliers and Grid mix of renewable electricity)

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

5331

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

Turkey

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

Comment

Information provided by the Suppliers and Grid mix of renewable electricity

Sourcing method

Other, please specify (Information provided by the Suppliers and Grid mix of renewable electricity)

Energy carrier

Electricity

Low-carbon technology type

Solar

Country/area of low-carbon energy consumption

Turkey

Tracking instrument used

Other, please specify (Information provided by the Suppliers and Grid mix of renewable electricity)

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

16944

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

Turkey

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

Comment

Information provided by the Suppliers and Grid mix of renewable electricity

Sourcing method

Other, please specify (Information provided by the Suppliers and Grid mix of renewable electricity)

Energy carrier

Electricity

Low-carbon technology type

Wind

Country/area of low-carbon energy consumption

Turkey

Tracking instrument used

Other, please specify (Information provided by the Suppliers and Grid mix of renewable electricity)

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

34846

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

Turkey

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

Comment

Information provided by the Suppliers and Grid mix of renewable electricity

Sourcing method

Other, please specify (Information provided by the Suppliers and Grid mix of renewable electricity)

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Country/area of low-carbon energy consumption

Turkey

Tracking instrument used

Other, please specify (Information provided by the Suppliers and Grid mix of renewable electricity)

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

142103

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

Turkey

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

Comment

Information provided by the Suppliers and Grid mix of renewable electricity

Sourcing method

Other, please specify (Information provided by the Suppliers and Grid mix of renewable electricity)

Energy carrier

Electricity

Low-carbon technology type

Geothermal

Country/area of low-carbon energy consumption

Turkey

Tracking instrument used

Other, please specify (Information provided by the Suppliers and Grid mix of renewable electricity)

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

14054

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

Turkey

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

Comment

Information provided by the Suppliers and Grid mix of renewable electricity

Sourcing method

Other, please specify (Information provided by the Suppliers and Grid mix of renewable electricity)

Energy carrier

Electricity

Low-carbon technology type

Other biomass

Country/area of low-carbon energy consumption

Malaysia

Tracking instrument used

Other, please specify (Information provided by the Suppliers and Grid mix of renewable electricity)

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

344

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

Malaysia

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

Comment

Information provided by the Suppliers and Grid mix of renewable electricity

Sourcing method

Other, please specify (Information provided by the Suppliers and Grid mix of renewable electricity)

Energy carrier

Electricity

Low-carbon technology type

Solar

Country/area of low-carbon energy consumption

Malaysia

Tracking instrument used

Other, please specify (Information provided by the Suppliers and Grid mix of renewable electricity)

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

230

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

Malaysia

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

Comment

Information provided by the Suppliers and Grid mix of renewable electricity

Sourcing method

Other, please specify (Information provided by the Suppliers and Grid mix of renewable electricity)

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Country/area of low-carbon energy consumption

Malaysia

Tracking instrument used

Other, please specify (Information provided by the Suppliers and Grid mix of renewable electricity)

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

6511

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

Malaysia

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

Comment

Information provided by the Suppliers and Grid mix of renewable electricity

Sourcing method

Other, please specify (Grid mix of renewable electricity)

Energy carrier

Electricity

Low-carbon technology type

Solar

Country/area of low-carbon energy consumption

Egypt

Tracking instrument used

Other, please specify (Grid mix of renewable electricity)

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

564

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

Egypt

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

Grid mix of renewable electricity

Sourcing method

Other, please specify (Grid mix of renewable electricity)

Energy carrier

Electricity

Low-carbon technology type

Wind

Country/area of low-carbon energy consumption

Egypt

Tracking instrument used

Other, please specify (Grid mix of renewable electricity)

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

1414

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

Egypt

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

Grid mix of renewable electricity

Sourcing method

Other, please specify (Grid mix of renewable electricity)

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Country/area of low-carbon energy consumption

Egypt

Tracking instrument used

Other, please specify (Grid mix of renewable electricity)

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

5030

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

Egypt

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

Grid mix of renewable electricity

Sourcing method

Other, please specify (Grid mix of renewable electricity)

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Country/area of low-carbon energy consumption

China

Tracking instrument used

Other, please specify (Grid mix of renewable electricity)

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

13795

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

China

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

Comment

Grid mix of renewable electricity

C8.2g

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

Country/area

Denmark

Consumption of electricity (MWh)

352571

Consumption of heat, steam, and cooling (MWh)

0

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

352571

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Belgium

Consumption of electricity (MWh)

287523

Consumption of heat, steam, and cooling (MWh)

0

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

287523

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Turkey

Consumption of electricity (MWh)

484623

Consumption of heat, steam, and cooling (MWh)

0

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

484623

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Egypt

Consumption of electricity (MWh)

74475

Consumption of heat, steam, and cooling (MWh)

0

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

74475

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Malaysia

Consumption of electricity (MWh)

42918

Consumption of heat, steam, and cooling (MWh)

0

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

42918

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

China

Consumption of electricity (MWh)

77616

Consumption of heat, steam, and cooling (MWh)

0

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

77616

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Norway

Consumption of electricity (MWh)

6353

Consumption of heat, steam, and cooling (MWh)

0

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

6353

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

United States of America

Consumption of electricity (MWh)

48731

Consumption of heat, steam, and cooling (MWh)

0

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

48731

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

United Kingdom of Great Britain and Northern Ireland

Consumption of electricity (MWh)

2863

Consumption of heat, steam, and cooling (MWh)

0

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

2863

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Sweden

Consumption of electricity (MWh)

1937

Consumption of heat, steam, and cooling (MWh)

0

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

1937

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

C9.1

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

Description

Energy usage

Metric value

20

Metric numerator

Alternative fuel consumption for cement production

Metric denominator (intensity metric only)

total fuel consumption for cement production

% change from previous year

5.26

Direction of change

Increased

Please explain

Utilization of alternative fuels for thermal energy production in place of non-renewable fossil fuels.

In 2021, 20% of the thermal energy needed in the cement production process of grey and white cement combined was generated from alternative fuels. In 2020, the percentage was 19.0%.

The reduced consumption of non-renewable fossil fuels and the resulting increased use of alternative fuels is a primary aim for reducing environmental impact, particularly associated with emissions.

By 2030, the Group will increase the proportion of alternative fuels in the fuel mix to 55% for producing grey cement and 8% for white cement. For white cement, the demand for consistency of colour is much higher than with grey as varying shades of white or coloured surfaces are not acceptable. For this reason, the use of alternative fuels is drastically limited in the production of white cement.

The targets have been set for each plant and mid-term targets has been defined for 2022, 2025 and 2030.

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	<p>Cementir developed a new type of cement (FUTURECEM®) with up to 30% CO₂-reduction compared with existing, conventional cement types</p> <p>FUTURECEM® is a patented technology based on limestone and calcinated clay, developed by the Group. The combination of limestone and calcinated clay in FUTURECEM® can allows over than 35% clinker replacement in cement. Clinker is an interim product that is produced at high temperatures in cement kilns. Hence, replacing clinker with the combination of limestone and calcinated clay means significant reductions in CO₂.</p> <p>From 2014-2019, Cementir participated, together with researcher institutions and a range of stakeholders and customers from the construction industry, in the Danish project Green Concrete II with the aim of testing FUTURECEM® in a wide range of actual ready-mix concrete applications</p> <p>In March 2020, Bureau Veritas certified the compliance of FUTURECEM® with the requirements in cement standard (EN 197-1:2011). On January 2021, Cementir started the distribution of FUTURECEM® in Denmark.</p> <p>In 2021, Cementir started to develop SUPERFUTURECEM, a new low-carbon cement with up to 50% clinker substitution (FUTURECEM® allows the 35% clinker replacement in cement). In the development project, Cementir involved 12 partners representing the entire value chain from academia to industry and final users (i.e. construction companies). In 2021, 16 tons of a test version of cement with 50% clinker replacement has been produced for industrial trials. Additional test of concrete with the new cement are planned in 2022/2023.</p>

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
Waste heat recovery	Small scale commercial deployment	≤20%		In our plant of Aalborg (Denmark), we have implemented a system for recovering heat from combustion gases used during the production of cement to provide district heating to local inhabitants. In 2021, the plant delivered about 1.7 million GJ of energy to the Municipality of Aalborg. The recovered thermal energy is used to heat the homes of about 36,000 families In the last 3 years, the technical department with the support of external consultants, developed an engineering project to recover additional 1 million GJ to be delivered to the district heating. With the additional 1 million GJ we can provide heating to about 50,000 families in total. The mentioned project must be developed in partnership with the Municipality of Aalborg that is in charge for the management of the district heating and that must manage the additional energy coming from the plant. The plant is currently talking with the Municipality to evaluate the feasibility of the implementation.
Low clinker cement	Large scale commercial deployment	≤20%		Cementir developed a new type of cement (FUTURECEM®) with up to 30% CO2-reduction compared with existing, conventional cement types FUTURECEM® is a patented technology based on limestone and calcinated clay, developed by the Group. The combination of limestone and calcinated clay in FUTURECEM® can allow over than 35% clinker replacement in cement. Clinker is an interim product that is produced at high temperatures in cement kilns. Hence, replacing clinker with the combination of limestone and calcinated clay means significant reductions in CO2. From 2014-2019, Cementir participated, together with researcher institutions and a range of stakeholders and customers from the construction industry, in the Danish project Green Concrete II with the aim of testing FUTURECEM® in a wide range of actual ready-mix concrete applications In March 2020, Bureau Veritas certified the compliance of FUTURECEM® with the requirements in cement standard (EN 197-1:2011). On January 2021, Cementir started the distribution of FUTURECEM® in Denmark. In 2021, Cementir started to develop SUPERFUTURECEM, a new low-carbon cement with up to 50% clinker substitution (FUTURECEM® allows the 35% clinker replacement in cement). In the development project, Cementir involved 12 partners representing the entire value chain from academia to industry and final users (i.e. construction companies). In 2021, 16 tons of a test version of cement with 50% clinker replacement has been produced for industrial trials. Additional test of concrete with the new cement are planned in 2022/2023.
Carbon capture, utilization and storage (CCUS)	Pilot demonstration	≤20%		Cementir through its Danish subsidiary Aalborg Portland is participating in an international consortium led by New Energy Coalition and the University of Groningen that will develop a European innovation project named "ConsenCUS – CarbOn Neutral cluSters through Electricity-based iNnovations in Capture, Utilisation and Storage". The objective of this project is to investigate the potential of the carbon capture and storage technology to reduce CO2 industrial emissions and to allow local communities to share the benefits. Industrial and academic partners from The Netherlands, Denmark, United Kingdom, Romania, Greece, China and Canada have joined forces to make electrochemical CO2 emission reduction possible worldwide. From April 1st, 2021, over €13 million of European funds and private investments will enable scaling up technological innovations and conducting socio-economic research. A mobile demo plant will be constructed that will capture up to 100 Kg CO2/h at cement production and convert it to useful chemicals (potassium formate and formic acid). In the same locations, the opportunities or challenges that the CO2 clusters bring to the local economy, geology and community will be studied. Cementir's role Within ConsenCUS, Cementir will operate a CO2-capturing test-facility to provide reference data for the new capturing technology. Cementir is responsible for preparing, supporting and testing of the capturing facility for 5 months. International cooperation for an international challenge Several crucial European industrial sectors emit CO2 as an inherent part of their production process (e.g. cement, magnesita or refinery). To meet European climate targets, this CO2 will have to be captured and used or stored (known as CCUS). So far, CCUS only takes place in a few locations world-wide, and often uses additional fossil fuels for the boilers that regenerate the CO2-absorbing material. The ConsenCUS consortium wants to make capture and conversion possible with (green) electricity, so that it can be done more sustainably and even climate-neutral. The innovation action includes designing so-called CO2 clusters, such that regional companies can work together with governments and citizens to make smart investments in shared infrastructure (such as pipelines or temporary storage locations) to reach net-zero carbon emissions safely.

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

Sustainability Report 2021.pdf

PwC for Cementir Holding NV-Independent auditor's report on the Sustainability Report for the year ended 31.12.2021.pdf

Page/ section reference

Limited assurance from external Auditor (PricewaterhouseCoopers) on the 2021 Sustainability Report.

See page 95 of Sustainability Report for the Scope 1 emissions of the Group.

See page 98 of Sustainability Report for the Scope 1 emissions related to cement production

See page 172 of Sustainability Report (Independent Auditor's Report on the Consolidated Non-Financial Statement).

The Sustainability Report and related assurance is also available on Corporate Website.

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 location-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

Sustainability Report 2021.pdf

PwC for Cementir Holding NV-Independent auditor's report on the Sustainability Report for the year ended 31.12.2021.pdf

Page/ section reference

Limited assurance from external Auditor (PricewaterhouseCoopers) on the 2021 Sustainability Report.

See page 95 of Sustainability Report for the Scope 2 emissions of the Group.

See page 98 of Sustainability Report for the Scope 2 emissions related to cement production

See page 172 of Sustainability Report (Independent Auditor's Report on the Consolidated Non-Financial Statement).

The Sustainability Report and related assurance is also available on Corporate Website.

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: Purchased goods and services
- Scope 3: Capital goods
- Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
- Scope 3: Upstream transportation and distribution
- Scope 3: Waste generated in operations
- Scope 3: Business travel
- Scope 3: Downstream 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

Sustainability Report 2021.pdf
PwC for Cementir Holding NV-Independent auditor's report on the Sustainability Report for the year ended 31.12.2021.pdf

Page/section reference

Limited assurance from external Auditor (PricewaterhouseCoopers) on the 2020 Sustainability Report.
See pages 96 and 97 of Sustainability Report for the Scope 3 emissions of the Group.
See page 172 of Sustainability Report (Independent Auditor's Report on the Consolidated Non-Financial Statement).
The Sustainability Report and related assurance is also available on Corporate Website.
<https://www.cementirholding.com/sites/default/files/documenti/2022-04/Sustainability%20Report%202021.pdf>

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	ISAE3000	All the energy consumptions (fossil fuels, alternative fuels, electricity) have been certified by the external auditor PWC. See pages 85/86/87 and 99/100 for the energy consumption See page 172 of Sustainability Report (Independent Auditor's Report on the Consolidated Non-Financial Statement) The Sustainability Report and related assurance is also available on Corporate Website https://www.cementirholding.com/sites/default/files/documenti/2022-04/Sustainability%20Report%202021.pdf
C9. Additional metrics	Other, please specify (Fossil fuel replacement index: Utilization of alternative fuels for thermal energy production in place of non-renewable fossil fuels.)	ISAE3000	The fossil fuel replacement index reported in section C9. Additional metrics has been certified by the external auditor PWC. See page 86 (Fossil fuel replacement index) and 172 of Sustainability Report (Independent Auditor's Report on the Consolidated Non-Financial Statement). The Sustainability Report and related assurance is also available on Corporate Website https://www.cementirholding.com/sites/default/files/documenti/2022-04/Sustainability%20Report%202021.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.
EU ETS

C11.1b

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

EU ETS

% of Scope 1 emissions covered by the ETS

42

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1 2021

Period end date

December 31 2021

Allowances allocated

2627519

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO₂e

3369771

Verified Scope 2 emissions in metric tons CO₂e

0

Details of ownership

Facilities we own and operate

Comment

The only carbon pricing regulation which impacts on Cementir operations is the EU ETS.

C11.1d

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

As a Cement Company with two plants located in Europe (Guarain plant in Belgium and Aalborg plant in Denmark), we are subject under regulatory regime to the EU ETS system, and the financial implications of such a scheme are a risk for us. Among the areas where Cementir operates, Europe is the only region with a regulatory framework for CO2 quotes.

Description of the strategy for complying with the systems in which Cementir participates

Cementir is committed to reducing Scope 1 and Scope 2 GHG emissions by 25% per ton of cement by 2030, using 2020 as the base year. The target has been approved by the Science Based Target Initiative. This commitment is defining our strategy for managing this risk. Reductions in the Co2 emitted by our European plants (Guarain plant in Belgium and Aalborg plant in Denmark) will mitigate the financial implications of EU ETS.

To accomplish the 2030 target, Cementir has developed a roadmap until 2030 which is focused on the following pillars.

Reduction of clinker content to 63% for grey cement and 80% for white cement. In the production of cement, the majority of CO2 emissions occur when the raw materials (mainly limestone) calcinates into clinker in the kiln. Cementir will reduce the clinker content through: - The replacement of clinker with alternative decarbonised mineral additives such as fly ash, slag and limestone - The development of a new low-carbon cement, FUTURECEM®, an innovative, validated and patented technology which allows for more than 35% of the energy-intensive clinker in cement to be replaced by limestone and calcined clay.

Replacement of fossil fuels with alternative fuels, such biomass.

The establishment of a natural gas line to the plant located in Denmark and the installation of multi-fuel main burners for the kilns. The switching to natural gas, a fossil fuel with emissions much lower than pet coke (estimated reduction of 20% of CO2), is a transitional solution and indispensable for Cementir's transition to net-zero emissions.

Energy recovery. The Aalborg plant recovers heat from cement production to provide district heating to local inhabitants. The recovered thermal energy is used to heat the homes of about 36,000 families in the city of Aalborg.

To guarantee the development of the Group's Climate Change Strategy and to achieve the Group's Co2 reduction targets, in the roadmap, we identify about 310 million € of investment out of which 190 million € for reducing clinker content, 80 million € for increasing alternative fuels utilization and 40 for efficiency projects for the kilns, as energy recovery.

Specific targets for alternative fuels, clinker ratio and CO2 emissions have been established in order to accomplish the 2030 goals. Such targets have been deployed in every single plant and were included in the 2022-2024 Industrial Plan and in our employee short-term incentive system.

A description of the 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.

The commitment to reducing Scope 1 and Scope 2 GHG emissions is company-wide, so each plant developed a decarbonization roadmap until 2030, aligned with our global strategy.

This will help our plants to manage any emerging regulations concerning carbon pricing system.

Among the non-European countries, where our plants are located, China has announced to implement a CO2 trading system. It's predicted that Cement sector could be covered in Y2023.

In 2021, the performance of our Chinese plant was better than European Benchmark for white cement (our Chinese plant is producing white cement). The plant emissions were 944 kg CO2/ton clinker versus a benchmark of 957 kg CO2/ton clinker. Considering the performance of our Chinese plant and the related decarbonization roadmap in progress, in the medium-short term, the implementation of a carbon emission trading system will not affect negatively Cementir.

C11.2

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

Yes

C11.2a

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

Credit origination or credit purchase

Credit purchase

Project type

Other, please specify (The Group supports a water project in Rwanda that provide safe and clean water using borehole technology to hundreds of households in the province of Nyagatare.)

Project identification

Our Belgian subsidiary (CCB) obtained a CO2-Neutral certification for its concrete plant located in Brussels. To obtain this, 171.70 tCO2 are offset through certified climate projects. This corresponds to the offsetting of scope 1, scope 2 and partial scope 3 (mobility) of the concrete plant located in Brussels.

The Group supports a water project in Rwanda that provide safe and clean water using borehole technology to hundreds of households in the province of Nyagatare. Through the implementation of safe water solutions such as the rehabilitation of new boreholes, there is no need to purify water for drinking, cleaning and washing. This leads to a reduction in wood combustion and as a result to a reduction of greenhouse gas emissions. It also improves livelihoods of the local population, by ensuring better health conditions, air quality and saving a lot of valuable time for women, that usually are responsible for purifying water for drinking, cleaning and washing. The project is certified by the Gold Standard.

Verified to which standard

Gold Standard

Number of credits (metric tonnes CO2e)

172.7

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

172.7

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

C11.3

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

Yes

C11.3a

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

Objective for implementing an internal carbon price

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

GHG Scope

Scope 1

Application

We apply an internal carbon price to navigate GHG regulations such as the EU ETS. In countries subject to an emissions trading system such as the EU member states, we run various scenarios with different prices to anticipate the CO2 cost we will be exposed to in the 4th trading period until 2030.

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

80

Variance of price(s) used

We apply an uniform pricing. The same price (80 EUR) is applied throughout the Group independent of geography, business unit, or type of decision

Type of internal carbon price

Shadow price
Internal fee

Impact & implication

Situation: Climate action is at the heart of the European Green Deal and EU Taxonomy, an ambitious European package of measures for cutting greenhouse gas emissions. Climate change is thus reshaping the cement sector

For this reason, in the last years, Cementir focused its R&D on low carbon products (FUTURECEM®, as described in "C.3.3 Products and services") or other project able to reduce CO2 emissions of the production process.

Task: develop project in order to replace fossil fuels with alternative fuels for reducing the CO2 emission related to the combustion of fuels for producing clinker. Cement production is a thermal energy intensive process, which requires heating raw materials up to 1450°C and cooling it down. Limestone and clay are heated to approximately 1,450 degrees Celsius in rotary kiln in order to produce clinker, semi-finished product.

Action: following the feasibility study for addressing an opportunity for conversion from fossil fuels (i.e. petcoke or coal) to natural gas, Cementir planned the utilization of natural gas in Aalborg, our Danish plant. The switching to natural gas, a fossil fuel with emissions lower than petcoke (estimated reduction of 20% of CO₂), is a transitional solution for Cementir's path to net-zero emissions.

Results: Due to the reduction in CO2 emissions, Cementir will have to buy a minor number of CO2 quotas in EU ETS. This reduction in the CO2 quotas led to a positive financial impact that affect positively the business case evaluation (due to natural gas combustion, Cementir will buy less CO2 quotas). Without the application of the carbon price, the mentioned investment will not have a positive NPV (net present value) and Cementir will not probably implemented it. Therefore, the capital expenditure would be allocated in a different way. As part of this project, Aalborg plant has entered into an agreement with the state gas distribution company, Evida, to connect the plant to the gas distribution grid on 2023. Following the implementation of the investment, a reduction of 20% of CO2 is estimated for the Aalborg plant.

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

Engagement & incentivization (changing supplier behavior)

Details of engagement

Run an engagement campaign to educate suppliers about climate change

Other, please specify (Monitor CO2 emissions of 50% of top Group suppliers (representing approx. 25% of the total purchases by value) through the CDP supply chain program)

% of suppliers by number

50

% total procurement spend (direct and indirect)

25

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

52

Rationale for the coverage of your engagement

Cutting our CO2 emissions is a priority of Cementir Group, but clearly, we cannot achieve a carbon neutral future alone. For this reason, we decided to engage with the various partner of our value chain (supplier, customers, competitors, policy maker) to promote the development of a sustainable cement business.

We decided to investigate the CO2 emissions of our suppliers to understand how to reduce them and how to develop mutually beneficial projects (for Cementir and the Suppliers). Rationale for the coverage: we decided to focus the engagement on the Top Group Suppliers, the suppliers evaluated as strategic by the Group because of proportion of spend, geographic location, type of raw material and services provided. In 2020 and 2021, a selection of strategic suppliers was invited to participate in the CDP Supply Chain program, a program aimed at the collection and evaluation of our Scope 3 data.

In 2021, the 50% of Top Group suppliers (74 Suppliers, equal to the 25% of the purchases of the Group by value) were invited to participate in the CDP Supply Chain program. By covering the 50% of Top group suppliers, we included the fuels suppliers of the Group that, as reported in C6.5, account are the main source of Scope 3 emissions and account for about the 52% of our total Scope 3 emissions. So, by covering the 50% of Top group supplier, we are ensuring the monitoring of more than half of our scope 3 emissions.

To support this engagement and boost supplier response rates, dedicated supplier training webinars were held. This training aims to communicate the importance and benefits from transparently reporting on emissions and climate impact. Each Supplier has been invited to disclose information about its risks and opportunities associated with climate change, its emissions, details on its emissions management strategy such as targets, and actions it has taken to reduce its emissions.

Impact of engagement, including measures of success

Cementir started the mentioned project in 2020 and the impact of engagement is in line with the targets setup for the project. (the project is still on-going)

In particular, the targets of the project were:

- 1) run an engagement campaign to educate suppliers about climate change.
- 2) to collect information useful information for the estimation of scope3 emission. Until 2020, Cementir did not calculate scope 3 emission.
- 3) to reach a response rate of 50% within 3 years. At least half of the suppliers involved must provide the requested information through CDP Supply Chain program.
- 4) to collect information for the definition of a co2 reduction target for scope 3 emission.

Status of the targets

- 1) Target achieved. In 2020, 2021 and 2022, dedicated supplier training webinars were held. The trainings, performed by our Sustainability Department with the support of CDP personnel, were focus on climate change issues and in the importance and benefits from transparently reporting on emissions and climate impact.
- 2) Target achieved. In 2020, the 24% of the Suppliers involved provided their environmental information through CDP Supply Chain program. In 2020, the information collected throughout this program helped Cementir to estimate for the first time its Scope 3 emission. In particular, the Scope 3 category 'Purchased goods and services'.
- 3) Target in line with the planned roadmap. In 2021 the response rate increased to 39% from the 24% of 2020. In 2020 and 2021, a selection of strategic suppliers was invited to participate in the CDP Supply Chain program (55 Suppliers involved in 2020 with 13 that responded, and 74 Suppliers involved in 2021 with 29 that responded).
- 4) Target in line with the planned roadmap. As of July 2022, Cementir is currently developing a scope 3 reduction target. The goal of the Group is to reduce Scope 1, 2 and 3 emissions to zero or to a residual level that is consistent with reaching net-zero emissions at the global level in eligible 1.5°C scenarios and to neutralize any residual emissions at the net-zero target date. To do this, Cementir is currently using information collected through CDP Supply Chain program for the definition of a Scope 3 reduction target.

For the target 1) and 2) we consider our impact to be successful with regard to the measure of success. For the target 3 and 4, the project is in line with the planned roadmap.

Comment

There are not other additional relevant information.

C12.1b

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

Type of engagement & Details of engagement

Education/information sharing	Share information about your products and relevant certification schemes (i.e. Energy STAR)
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% of customers by number

55

% 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

The 55% of the total turnover is related to North Europe (Scandinavia, France, Benelux, UK, Germany, Poland), so, due to the relevance of this market for the Group, between 2018 and 2019, we engaged our customers located in North Europe performing a survey to explore and figure out the status of the green transition in North Europe, then how it will change the construction industry in the coming years and finally what a building materials manufacturer such as Cemntir should do to help its customers (i.e. construction companies). The survey has been performed via telephon in-depth interviews and in-person interviews. One outcome of the survey is that, in the last years, several governments, especially in North Europe, starting to request to the constructions companies to perform a transparent communication about environmental impact of the cement and concrete used in their activity by the adoption of certification schemes, as Concrete Sustainability Council (CSC) or the Environmental Product Declaration (EPD). In North Europe, for public works contracts, construction companies must use cement/concrete supported by CSC certification or EPD. For this reason, following the survey, our plants located in North Europe (Gaurain in Belgium and Aalborg in Denmark), started to develop EDP for their cements and committed to CSC Certification to meet the new requirements coming from our customers (construction companies) and secure the sales related to public works contracts.

The CSC is a certification system for globally responsible sourcing. The CSC strives to generate a market pull for green concrete by promoting sustainable construction through their certified concrete. Concrete that is from a CSC certified cement plant is more sustainable because it meets the standards set for the following categories: reducing CO2 emission and using water in a responsible manner.

An Environmental Product Declaration (EPD) is a standardized document informing about a product's potential environmental and human health impact. In particular, the EPD is the report that communicates what the product is made of and how it impacts the environment across its entire life cycle. The EPD provides information about the potential environmental impact of the cement (i.e., the global warming potential).

Impact of engagement, including measures of success

Success is measured by % of sale of cements supported by EDP and CSC certifications. In 2021, the 41% of cement sales of the Group were supported by EDP or CSC. In particular, the 100% of cements sold by our Danish plant (Aalborg) are supported by the EPDs while for our Belgian plant (Gaurain) the activity is still in progress and only few cements (CEM I and CEM II) are supported by EPD. Concerning CSC, starting from the last quarter of 2021, the 100% of sale of cement performed by our Belgian plant are supported by CSC certificates. For our Danish plant the activity is in progress.

Type of engagement & Details of engagement

Collaboration & innovation	Other, please specify (Development and testing of new low-carbon cement)
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% of customers by number

1

% 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

Cemntir involved 12 partners representing the entire value chain from academia to industry and final users (i.e., construction companies) to cover the various activities that we should perform to develop and deliver a new low-carbon cement to the end customers.

Cemntir developed a new type of cement (FUTURECEM®) with up to 30% CO2-reduction compared with existing, conventional cement types. FUTURECEM® is a patented technology based on limestone and calcinated clay, developed by the Group. The combination of limestone and calcinated clay in FUTURECEM® can allows over than 35% clinker replacement in cement. Clinker is an interim product that is produced at high temperatures in cement kilns. Hence, replacing clinker with the combination of limestone and calcinated clay means significant reductions in CO2.

From 2014-2019, Cemntir participated, together with partners representing the entire value chain from academia to industry and final users, in the Danish project Green Concrete II with the aim of testing FUTURECEM® in a wide range of actual ready-mix concrete applications. Those demo projects demonstrate that FUTURECEM™ can be implemented in the concrete industry using conventional production and execution technologies. Furthermore, similar performance as conventional concrete in terms of workability, strengths and other key parameters were achieved.

In March 2020, Bureau Veritas certified the compliance of FUTURECEM® with the requirements in cement standard (EN 197-1:2011). On January 2021, Cemntir started the distribution of FUTURECEM® in Denmark.

In 2021, Cemntir started to develop SUPERFUTURECEM, a new low-carbon cement with up to 50% clinker substitution (FUTURECEM® allows the 35% clinker replacement in cement). Also in the development of this project, Cemntir involved partners representing the entire value chain from academia to industry and final users (i.e., construction companies). In 2021, 16 tons of a test version of cement with 50% clinker replacement has been produced for industrial trials. Additional test of concrete with the new cement are planned in 2022/2023.

Impact of engagement, including measures of success

Success is measured by % of sale of new low-carbon cements sold by the Group.

On January 2021, Cemntir started the production and distribution of FUTURECEM® in Denmark. In 2021, the ton of FUTURECEM® sold have been limited (about the 1% of total cement sold), but the amount is expected to growth year by year. In 2022, we will start the production in our Belgian plant. In 2022, through our Belgian plant will commercialize FUTURECEM® in France and in 2023 in Benelux.

In the 2022-2024 period, the Group has planned the sale of more than 1 million ton of FUTURECEM™.

By 2030, FUTURECEM® volumes sold are expected to reach around 51% of total volumes sold in Europe.

C12.1d

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

Cementir actively participates in global and national industry policy discussions on issues related to Climate Change, Sustainable Infrastructure, Innovation & Digital Transformation. The other partners in the value chain involved are: Competitors, Research Academy and other international organization actively involved in the building of a sustainable economy (i.e. CDP), local communities.

First Example

How we have chosen the parts of the value chain as well as the individual partners to focus your engagement on

As explained in C3.2a, for the cement sector, the more CO2 emissions are constrained by regulatory framework and the more relevant are transitional risks, in the most constrained scenarios the need for breakthrough technology becomes fundamental. So for Cementir is a priority engage with partners (Research academy of company from other sectors) with the know-how for developing such technology.

Methods of engagement

Cementir through its Danish subsidiary Aalborg Portland is participating in an international consortium that will develop a European innovation project named "ConsenCUS – CarbOn Neutral cluSters through Electricity-based iNnovations in Capture, Utilisation and Storage". The objective of this project is to investigate the potential of the carbon capture and storage technology to reduce CO2 industrial emissions and to allow local communities to share the benefits.

Industrial and academic partners from The Netherlands, Denmark, United Kingdom, Romania, Greece, China and Canada are participating to the consortium

Measure success and any positive outcomes achieved in the reporting year

From April 1st, 2021, over €13 million of European funds and private investments will enable scaling up technological innovations and conducting socio-economic research. A mobile demo plant will be constructed that will capture up to 100 Kg CO2/h at cement production and convert it to useful chemicals (potassium formate and formic acid). In the same locations, the opportunities or challenges that the CO2 cluster bring to the local economy, geology and community will be studied.

Within ConsenCUS, Cementir will operate a CO2-capturing test-facility to provide reference data for the new capturing technology. Cementir is responsible for preparing, supporting and testing of the capturing facility for 5 months.

The Co2-capturing test facility is expected to operate in 2023.

Second Example

As explained in C3.2a, the water-related outcomes of our scenario analysis are affecting the Group business strategy, especially at local level.

How we have chosen the parts of the value chain as well as the individual partners to focus your engagement on

Clypot is a limestone and blue stone quarry exploited for aggregates and located in Belgium. During the operations of extraction of limestone, the water that naturally come out, must be removed to allow dry extraction in the quarry. The local authority considers the local aquifer where the quarry is located (the Soignies Ecaussinnes hydrogeological basin) currently overexploited. This poses a risk for the future exploitation of our quarry.

Methods of engagement

So, to anticipate future regulatory tightening concerning water management we started a collaboration with the local authority, the local water provider and the third-party that exploits part of the quarry for implementing a project for recovering quarry water in the public distribution network allowing the authority to close production wells and thus spare the local aquifer

Measure success and any positive outcomes achieved in the reporting year

Following 4 year of study, between 2018 and 2020, we setup the infrastructures for recovering (connecting pipes) and treating the water. Prior sending to public station, the water is treated to guarantee the physical removal of suspended solids and floating material, by sedimentation.

The whole system has been operational since March 2021.

The total investment amounts to 1.6 million €, split in equal part between Cementir (400,000 €), local authority (400,000 €), local water provider (400,000 €) and the third-party (400,000 €).

In 2021, 1,072 megaliters of water were recovered, subjected to primary treatment and then sent to the public water station for drinking water treatment.

The goal of the project is to recover more than 2,000 megaliters, yearly (the 70% of withdrawal of Clypot) for supplying 20,000 households. We assume to reach this goal starting from 2022. This operation allows the authority to close production wells and thus spare the local aquifer

C12.2

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

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

C12.3

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

Row 1

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

Yes, we engage directly with policy makers

Yes, we engage indirectly through trade associations

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

Yes

Attach commitment or position statement(s)

We want to offer consistent and effective disclosures that allow governments, investors, and other stakeholders to assess the climate risks and the pertinence of the actions planned by Cementir to manage those risks.

Cementir is committed to developing a business model in line with the sustainability strategic goals and the CO2 emission reduction targets judged by the Science Based Targets initiative (SBTi) to be consistent with the 'well below 2°C' objective, pursuant to the Paris Climate Agreement of 2015. By 2030, Cementir will reduce its Scope 1 and Scope 2 emission by 25% compared to 2020. This is the first milestone to be accomplished in order to achieve the carbon neutrality along our value chain by 2050. (see 2021 Sustainability Report, paragraph 'Letter to stakeholders', page 4)

CH_Press release_SBTi_22 07 2021.pdf

Sustainability Report 2021.pdf

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

The Sustainability Committee is responsible for the coordination of all activities that influence policy. For this reason, the Sustainability Committee is responsible for the coordination of the participation of Cementir representatives in the various regional / global associations or public working groups.

For example, Cementir takes part in CEMBUREAU, the European Cement Association (trade association), the GCCA, the Global Cement and Concrete Association (trade association) and the Climate Partnership promoted by the Danish Government to cut the CO2 emissions of Denmark of 70% by 2030 (policy makers). Cementir representatives that actively participate to the mentioned associations or public working groups must engage in a way that reflects Cementir position, according to the instructions received by the Sustainability Committee.

All the activities engaged by Cementir representatives must be previously agreed with the Sustainability Committee. In addition, the Committee is quarterly updated concerning the commitment of the mentioned associations or public working groups on public policy and concerning any relevant trend or upcoming legislation concerning climate change.

In this way, the Committee can evaluate the consistency of the activities performed by the associations and working group with Cementir Sustainability Strategy.

In case, any major divergences with the mentioned associations or working groups should occur, Cementir will dissociate itself from the association and related activities. In extreme situation, Cementir will resign from the association or working group.

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

Climate-related targets

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Danish climate law. The purpose of this law is for Denmark to reduce greenhouse gas emissions in 2030 by 70% compared to the level of emissions in 1990, and to achieve a climate-neutral society by 2050 at the latest, taking into account the Paris Agreement target of limiting the global temperature rise to 1.5 degrees Celsius.

Policy, law, or regulation geographic coverage

National

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

Denmark

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

Starting from 2019, through Aalborg Portland, the Group was involved in the most ambitious CO2 reduction project sponsored by a national government. In autumn 2019, Denmark's parliament adopted a new climate law with the target of reducing Danish CO2 emissions by 70% by 2030, from a 1990 baseline.

In December 2019, the Danish Prime Minister appointed the Managing Director of Aalborg Portland as head of the climate partnership for energy-intensive industry in Denmark. In 2020 and 2021, this climate partnership, led by Aalborg Portland and composed by the main refining, chemicals and food Danish companies, provided the Danish government with the technical forecast of all potential CO2 reduction achievable and defined the prerequisites (policy, research, innovation, subsidies, etc.) for such reductions.

In July 2022, in compliance with the climate law defined by Danish government, Aalborg Portland committed to reduce its Co2 emissions by 1.6 million ton within 2030. This is an absolute target and it is equal to a reduction of 72% comparing to the Co2 emitted by Aalborg Portland in 2018. The 2018 is the baseline agreed with the Danish government for the definition of the target.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

<Not Applicable>

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

Other, please specify (GCCA - Global Cement and Concrete Association is an international industry association that was established in 2018. the GCCA members account for 80% of the global cement industry volume outside of China.)

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 2021, the GCCA committed to achieve net zero emissions according to a pathway that helps limiting global warming to 1.5 degrees Celsius.

In 2021, the GCCA published the '2050 Cement and Concrete Industry Roadmap for Net Zero Concrete'.

The GCCA published the '2050 Cement and Concrete Industry Roadmap for Net Zero Concrete' is the collective commitment of the GCCA members to fully contribute to building the sustainable world of tomorrow. The roadmap sets out a net zero pathway to help limit global warming to 1.5.

Cementir is aligned with the position stated by the GCCA and actively participated in the working group promoted by the GCCA for the definition of the roadmap.

Through the GCCA, our Global Sustainability and R&D Director is member of Innovandi a network promoted by the GCCA that connects the cement industry with scientific institutions to promote innovation and collaborate on innovative research projects to support the decarbonisation of the industry. In 2022, through the Innovandi network, the GCCA decided to back six start-ups that are developing the technology and implementation for carbon capture, utilisation and storage (CCUS). This is part of the commitment of the GCCA members to have 10 industrial scale carbon capture plants by 2030 as part of the landmark Net Zero Roadmap, mentioned at the beginning. our Global Sustainability and R&D Director is in the working group that selected the start-ups to be backed.

In 2021/2022 period, the GCCA has been focus on calling for policymakers, governments and industry to work together to achieve net zero future defined in the roadmap. In particular, in November 2021 the GCCA was an official observer at COP26. COP26 provided a springboard for accelerating the discussions with policymakers and government leaders from around the world. In June 2022, the GCCA discussed the implementation of its roadmap with global policymakers including the United Nations, USA Dept of Energy, global economists and cement and concrete industry CEOs, in Atlanta, USA, during the event 'Call for Deeper Collaboration with Governments on Net Zero Targets'

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

C12.4

(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

Cementir Holding Annual Report 2021_0.pdf

Page/Section reference

CORPORATE GOVERNANCE, pages 53/76 (please see page 65 for Sustainability Committee)

RISKS AND UNCERTAINTIES, pages 45/51 (with a specific part for climate risks);

NON-FINANCIAL INDICATORS, pages 27/29 (with information about emission figures, emissions targets, strategy and other metrics as alternative fuels or water)

INNOVATION, QUALITY, RESEARCH AND DEVELOPMENT, pages 36/38 (with information about strategy)

NON-FINANCIAL STATEMENT, pages 81/82 (with information about strategy)

Content elements

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

Other, please specify (Water consumption, see NON-FINANCIAL INDICATORS, pages 27/29)

Comment

Cementir published the 2021 Annual Report. In addition to financial performance of the Group, the Annual Report provides information about the Sustainability Governance, Climate risks, emission reduction targets and the related strategy to accomplish the targets, actual emission figures, metrics about alternative fuels and water consumption. Starting from 2021 the Cementir Group has launched a project to implement the recommendations of the TCFD (Task Force on Climate-Related Financial Disclosure) committing to be transparent on risks and opportunities related to climate change. The identification, assessment and effective management of risks and opportunities related to climate change are fully integrated into the Group's risk management process (see pages 49/51)

Publication

In voluntary sustainability report

Status

Complete

Attach the document

Page/Section reference

Incorporation of TCFD recommendations: pages 50/52
Governance: pages 62/64
Strategy: see '10-year roadmap to 2030' (pages 53/58) and '2050 ambition' (pages 59/61)
Risks & opportunities: see 'Risk Management Framework' (72/75) and 'Climate risks' (76/80)
Emissions figures: 'Cementir's CO2 footprint' (95/98),
Emission targets: 'Our 2030 commitment in numbers' (53/54) and 2050 ambition (59/61)
Other metrics: 'alternative fuels' (85/86)
Other: Other air emissions (101), water consumption (102/105)

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics
Other, please specify (Managing quarrying activities (page 91), Other air emissions (101), water consumption (102/105))

Comment

Cementir publishes an annual Sustainability Report, incorporating the TCFD recommendations. The Report is compliant with GRI Sustainability Reporting Standards, (In Accordance - Core" reporting option). A detailed overview of the indicators disclosed can be found in the GRI Content Index (included in the Report) which provides a detailed description of all the topics covered in the document.
The Report was subjected to assurance by PricewaterhouseCoopers S.p.A.. In the Report, Cementir describes the 26 Sustainability Targets set by the Group. The targets are related to the effort of Cementir for adopting all necessary measures and the most innovative technological solutions to minimise the impact of our business on the environment; creating a healthy, safe and inclusive work environment; respecting human rights and creating a constructive and transparent relationship with the local communities and business partners. The 26 Sustainability Targets are aligned with the Sustainable Development Goals (SDGs) set by the United Nations General Assembly. For each target, we report 2030, 2025 and 2022 goals and 2021 actual status. Cementir defined a 10-year roadmap to maximise the deployment of existing technologies and laying the groundwork for the breakthrough innovations that will lead to the production of 'net zero emissions'. A pivotal role in CO2 reduction will be played by FUTURECEM® - our proprietary technology internally developed and worldwide patented – which allows over than 40% clinker replacement in cement. The targets have been defined by the Sustainability Team in collaboration with regional and corporate functions and according to the guidelines established by the Sustainability Committee and the UN Sustainable Development Goals (SDGs). The Group Management Team (GMT) is accountable for managing the projects and achieving the targets. The internal audit is responsible the periodic monitoring of the activities implemented in reference to the Group's sustainability strategy and its targets.

Publication

In voluntary communications

Status

Complete

Attach the document

InvestorPresentation_IIC_17052022.pdf

Page/Section reference

Investor presentation
ESG commitment and Industrial Plan, page 14

Content elements

Strategy
Emissions figures
Emission targets

Comment

Periodically, the Group CEO engages investors and analysts to show the group performance in terms of CO2 emissions and providing updates about the implementation of the CO2 reductions declared by the Group. The presentations are also available in our corporate website.
<https://www.cementirholding.com/en/investors/results-center-and-presentations>

https://www.cementirholding.com/sites/default/files/documenti/2022-05/InvestorPresentation_IIC_17052022.pdf

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	Due to increasing relevance of environmental and climate-related issues and sensibility of the Group, a specific Sustainability Committee has been established within the Board, dedicated to the Group's initiatives and engagement in this field and with responsibilities detailed in the related Charter. The Committee's purpose is: (i) to assist and advise the Board in its oversight of the Group's policies, programs and related risks however concerning sustainability matters; (ii) act under authority delegated by the Board with respect to setting out, monitoring, evaluating and reporting on policies and practices, management standards, strategy, performance and governance, relating to global and local sustainability matters, involving the Group; (iii) regularly interface with the Sustainability Department and the Group Management Team to respectively collect any required information and provide requested insights and advices and (iv) regular reporting to the Board. The committee meets at least quarterly	<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	No, but we plan to do so within the next 2 years	<Not Applicable>	<Not Applicable>

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	No, but we plan to assess biodiversity-related impacts within the next two years	<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	Law & policy

C15.5

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

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

C15.6

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

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Governance	'SUSTAINABILITY TARGETS' page 15 'MANAGING QUARRYING ACTIVITIES' pages 91/93 'GOVERNANCE' pages 62/66 Sustainability Report 2021.pdf

C16. Signoff

C-FI

(C-F) 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.

N/A

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	Group CEO	Chief Executive Officer (CEO)

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

The European Climate Pact Submission

Please indicate your consent for CDP to showcase your disclosed environmental actions on the European Climate Pact website as pledges to the Pact.

Yes, we wish to pledge to the European Climate Pact through our CDP disclosure

Please confirm below

I have read and accept the applicable Terms