

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 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 represent a reference point both in the construction and maintenance of infrastructures as well as in residential and commercial construction.

Cementir is the global white cement leader with **around 27% share of global trade**. With the Aalborg White ® brand, Cementir is the leader in China, the United States, Western Europe, Australia, Malaysia, Egypt.

White and grey cement are two distinctly different products, with different applications and production methods. Applications of white cement are different from the uses of grey cement. White cement is mainly used for dry-mix products, mortars, special products and decorative purposes. Main uses for grey cement are in heavy construction, such as in-situ or precast concrete. Grey cement is a commodity product, used for mass construction, such as civil works, dwellings and industrial estate. In contrast to grey cement, white cement is a specialty product, with niche applications and market.

From the clinker production process, there are two big differences between white and grey cement:

1. The quality control of the color. A reflection of at least 86% is generally required for the white cement to be competitive. The reflection of grey cement is in the range of 30-40%, a fairly dark color being preferred. The demand for consistency of color of white cement is much higher than for grey as no nuances of white or mottling can be accepted.
2. The production process, including the use of consistent raw materials selected within a narrow range of chemical compositions. These peculiarities of white clinker production compared to grey leads to a need for higher energy consumption in the clinker burning process. This is caused by three main reasons: The raw mix, with low iron content and high silicate content, is hard to burn. The reason for this is the relatively small amount of liquid produced during sintering, because of the low iron content of the mix. The final reaction in the kiln, conversion of belite to alite, requires the melt liquid as a solvent, and is slower if the amount of melt is low; The reduced burning conditions increase the energy demand of the process; The quenching process, necessary to maintain the white colour, contributes to the relatively poor energy efficiency of the process, since the sensible heat of the clinker is not recycled as in normal clinker manufacture.

In order to support in the fight against climate change, Cementir Group has developed a strategy which aims at mitigating climate change and which is focused on the following pillars:

- fossil fuels and clinker replacement with alternative fuels and alternative mineral additives. The Group targets have differentiated goals for grey and white cement and these have been deployed in each single plant;
- development of low-carbon cement (FUTURECEM™), which allows CO2 emissions to be reduced by 30%;
- energy recovery. The Aalborg plant recovers excess 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;
- commitment to carbon-related public policy. 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. 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.

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 2019	December 31 2019	Yes	3 years

C0.3

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

- Belgium
- China
- Denmark
- Egypt
- France
- 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

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)	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. 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: in November 2019, the CEO presented to the Board of Directors the 2020-2022 Industrial Plan in which Cementir planned to reduce CO2 emissions per ton of cement produced of 30% by 2030 and planned investment for 100 million EUR in the period 20-22 to mitigate the environmental impact. The Board of Directors approved the 2020-2022 Industrial Plan. 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 also more often. The KPIs have been deployed per single plant and per single year in the period 2020 - 2030.
Board-level committee	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

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 – some 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. For example: in November 2019, the Board approved the target to reduce CO2 emissions per ton of cement produced of 30% by 2030 and planned Euro 100 million investment to mitigate the environmental impact in the 2020-2022 Industrial Plan; in March 2020 the Board approved the 25 Sustainability Targets set by the Group (including among other, targets on emissions, alternative fuels, clinker ratio) and the 2019 Sustainability Report ; in June 2020, the Board will be informed about the evolution on the main Sustainability KPIs and related targets. 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 analyzes 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 and operational), consequently, also risks related 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 analysis are linked with the Group Sustainability Strategy and a separate disclosure is provided to the Audit Committee and BoD.</p>

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 (The Head of Sustainability & External Relations in the N&B Region)	<Not Applicable>	Other, please specify (Contributes to develop a common sustainability approach at Group level)	<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 also more often.

'2) Sustainability Committee -Includes among its members the Group CEO and the top management. The main task of the Committee is to develop a Group Sustainability Strategy and in the pursuit of said tasks has the following main responsibilities: 1. Review and monitor key public policy trends, issues, regulatory matters and other concerns that may affect the Group's business, strategies, operations, performance or reputation, and its engagement in any pertinent public policy process, insofar as sustainability matters are concerned. 2. Prepare, review and discuss the Group's sustainability initiatives and engagement. 3. Assist in the Board's oversight of risks relating to sustainability matters overseen by the Committee. 4. Prepare, review, assess and make recommendations to the Board and to other Group bodies, such as GMT (Group Management Team), regarding any sustainable development policy, including overall strategy or specific guidelines, management standards, key performance indicators of the Group relating to sustainability-related issues; 5. Prepare, review, assess and make recommendations to the Board and to other Group bodies, such as GMT, as to strategic and review the annual sustainability report of the Group. 6. Prepare, review, assess, define and make recommendations to the Board and to other Group bodies, such as Remuneration Committee, climate-related short term incentives for management at Group, regional and BU level. 7. . Prepare, review, assess and make recommendations to the Board and to other Group bodies, such as GMT, as to strategic and review the annual sustainability report of the Group. 8. Prepare, review, assess and make recommendations to the Board and to other Group bodies, such as GMT and Investment Committee, as to a sustainable investment scheme. 9. Annually assess and regularly provide reports of its actions to the Board and make recommendations to the Board and to other Group bodies, such as GMT, as it considers appropriate. 10. Review and reassess the adequacy of the Charter of the Sustainability Committee on an annual basis and recommend to the Board any improvements to the Charter that the Committee considers necessary or appropriate.

'3) Audit Committee - Examine the Group Non Financial Dislosing 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 - Is one of the members of the Sustainability Committee. 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 Head of Nordic & Baltic Region, 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 fulfilment 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 2020-2022 Industrial plan approved by the BoD in November 2019.
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 2020-2022 Industrial plan approved by the BoD in November 2019.
Other, please specify (Plant Managers)	Monetary reward	Emissions reduction target	The Plant Managers receive a monetary incentives, if their plant 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 2020-2022 Industrial plan approved by the BoD in November 2019.
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. The Chief Internal Audit Officer is member of the Sustainability Committee. 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

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	We consider as short-term a time horizon between 0 and 3 years, since it is the period covered by our regular industrial planning. Even if Cementir Climate Change Strategy has a medium-term horizon, intermediate short-term goals have been defined. Cementir plans to accomplish 25 Sustainability Targets within 2030, but short-term targets date 2020, 2021 and 2022 have been defined and included in the 2020-2022 Industrial Plan. Among other, Cementir established short-term target for CO2 emissions, alternative fuels, clinker ratio, green investments. Cementir plans to invest around Euro 100 million in sustainability over the next three years (2020-2022), which, among other things, will include: the construction of 8 MW wind mills for the needs of Aalborg plant; heat recovery at plants in Denmark and Turkey that will save 30% of fossil fuel consumption; district heating in Denmark, which will allow to supply heat to over 50,000 households from 36,000 of the currently; investments in Belgium which will raise the in the kiln usage of alternative fuels from the current 40% to 80%
Medium-term	3	10	The medium term is a time horizon beyond the industrial plan but addressed by Cementir Climate Change Strategy. For example Cementir set up 25 Sustainability Targets to be implemented within 2030. Within 2030, Cementir plans to reduce the CO2 emissions by 30%, to increase the alternative fuels to the 77% of the total fuels used for the production of grey cement, to lower clinker content of grey cement to 69%. For these targets, interim goals dated 2025 have been defined. Specific Roadmaps have been established to accomplish the 2030 targets. 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.
Long-term	10	30	The long-term is over 10 years. 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. 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. Cementir is a member of the Global Cement and Concrete Association (GCCA). 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. In 2019, the Group became member of the Carbon Disclosure Project (CDP) in order to improve the Group's accountability for climate change and joined the ACT Project. The ACT - Assessing low Carbon Transition initiative, co-founded by the French Energy and Environmental Agency (ADEME) and the CDP, is an accountability framework and provides methodologies to assess how companies' strategies and actions are contributing to the Paris Agreement mitigation goals of remaining considerably below a 2°C temperature increase above pre-industrial levels. The objective of the project is to develop an assessment methodology for the cement sector to drive companies to act and lead them on a relevant low-carbon pathway in terms of their climate strategy, business model, product and services, investments, operations, GHG emissions and GHG management.

C2.1b

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

Annually, Cementir Holding updates the risk assessment model for each subsidiary, according to the Enterprise Risk Management — Integrated Framework, evaluating sustainability, operating, financial, strategic and compliance risks included in the Enterprise Risk Management model.

For each risk, the related likelihood and impact are evaluated, in order to calculate the inherent risk level.

Substantive impacts are defined based on the evaluation of the following parameters:

- Economic: a specific risk or opportunity is considered as having a substantive impact, if the resulting deviation from the planned EBITDA for the subsidiary exceeds the 15% (for example, 10.2 million EUR using the 2019 EBITDA of the Belgium subsidiary);
- 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.

The likelihood is evaluated high when it is highly likely (more than 65 %) that the risk event will occur during the first two years from the time of evaluation.

At the end of the year, Cementir consolidates at Group level the results of all the ERM models already evaluated.

Specifically, Cementir evaluated as substantive Group risks:

- risks presenting a significant weighted average at Group level (considering the Group EBITDA);
- risks with a high impact for one or more Company/Region (impact of at least 30% of the Group EBITDA. 70.8 million EUR using the 2019 Group EBITDA);
- risks evaluated as high at Corporate level (as the Corporate coordinates and manages all the Group strategies).

For example, in 2019 the following substantive risks were reported at Group level:

- the scarcity of certain raw materials often supplied by monopolists (mainly slag, fly ash and gypsum) and which are necessary to produce certain qualities of cement and concrete (this risk mainly affects companies based in China, Belgium and northern Europe);
- the evolution of the regulatory environment, which could become more stringent in terms of sustainability, hindering the achievement of the defined sustainability targets such as deficit of CO2 quotas from 2021, due to the introduction of stricter CO2 emission limits;
- the volatility of electricity and fuel prices.

C2.2

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

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

A specific climate-related risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

The Risk Management is carried out by applying the same methodology in all the Group companies and compliant with the reference framework: Enterprise Risk Management - Integrated Framework. 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, quarterly to the Audit Committee. The Sustainability risk are related to four key areas: - Transition risks. The Cementir exposure based on emissions, thermal energy intensify, exposure to downstream regulation. For example, tightening emission regulation could translate into increasing compliance costs. Among the areas where Cementir operates, Europe is the only major region with a regulatory framework for CO2 quotes. In 2021 it is expected a Reform of the Emissions Trading System (ETS) that will cause a reduction of the CO2 emissions of 43% in 2030 compared to 2005. According to the possible scenario, Cementir will have to manage allowances deficit starting 2021. Various actions covering different time horizons have been planned to manage the risk. In the short term, specific investments have been included in the 2020-2022 industrial plan. For example, concerning the Belgium plant, we planned the upgrade of the kiln in order to increase the alternative fuels usage to 80% of the total. This investment will guarantee a CO2 reduction of 88.000 ton, yearly. In the medium term, we will reduce CO2 emissions per ton of cement of about 30% by 2030. The target will be achieved through greater use of alternative fuels (77% of the total to produce grey cement within 2030) and renewable resources, reduction of thermal consumption and the clinker ratio of cements. 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. 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. - Physical risks. The Cementir exposure to physical risks and water supply. Risk to production and asset base from storms, floods and droughts. In the short term, this risk is relevant for the Group companies that have plants located in areas characterized by extreme weather conditions such as snow and very low temperature in winter time (for example Norway and one plant in Turkey). 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 are planned during the winter, when, as mentioned, due to climate condition, the sales are slower. In the last years extreme wheater phenomena are increasing. Hurricanes, cyclones, typhoons, drought, floods, rain and snow, all increase in their degree of violence due to global warming. So in the medium/long term this risk could became relevant also for the other plant of the group. - Transition opportunities. Cementir progresses in shifting towards a low-carbon economy, through alternative materials and fuel and low-carbon products and technologies. For example, opportunities for new revenue streams from low-carbon products. Cementir developed FUTURECEM™ which allows over than 40% clinker replacement in cement with the potential to cut of about 30% the CO2 emitted during the production. In the 2020-2022, the Group planned an investment of 500.000 EUR for the production of 350.000 ton of FUTURECEM™. Starting from 2023, the annual production is expected to grown year by year reaching the 1 million ton in 2027. In March 2020, Bureau Veritas certified the compliance of FUTURECEM™ with the requirements in cement standard (EN 197-1:2011). - Climate governance and strategy. Cementir strategy and governance frameworks including emissions reduction targets and alignment of governance and remuneration structures with low-carbon objectives.

C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	The regulation related to CO2 emissions currently impacts the Cementir Group plant located in Europe (Belgium and Denmark) in terms of limited free CO2 allowances. European plant are regulated by The European Union Emissions Trading System (EU ETS). As described in C2.3a, the ETS is impacting direct operations and increasing the direct cost of our European plants. As of July 2020, the EU did not formalize the expected changes in the ETS, yet (revision of phase 4 of the ETS which will come into force in 2021). However, according to the possible scenario, the potential financial impact for Cementir could be around 23 million € of additional yearly cost starting from 2022. The estimation assumes a CO2 price of 30 EUR (the internal carbon price applied by Cementir) and a total allowances deficit of 780.000 quotas (CCB plus Aalborg). No mitigating actions have been included in this calculation (see C2.3a for details).
Emerging regulation	Relevant, always included	This is a risk for non-European Group companies since, in some countries an emission trading system will probably start. Of the areas where the Cementir Group is operating, EU is the only major region with a cap and trade system. The other plant that are producing cement are located in China, Malaysia, Turkey, Egypt and US. - China has announced to implement a CO2 trading system. The Chinese ETS should have started in 2017 but has been postponed. According to the experts, real carbon emissions trading will be implemented formally in the very next future. In 2019, the performance of the AnQing plant (the only Cementir plant located in China) was better than European Benchmark for white cement. The Anqing plant is producing white cement. The plant emissions were 950 kg CO2/ton clinker versus a benchmark of 987 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. In 2019, the emission of the Turkish plants were higher than European benchmark for grey clinker (871 Kg CO2/ ton clinker versus 766 Kg CO2/ ton clinker). In Turkey, Cementir produces only grey cement. A new regulation on CO2 emission could affect Cementir (see C2.3a for details) - 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	The Group is investing in order to reduce the CO2 emissions. For example, plant improvements that allowed to increase the alternative fuels usage (and, consequently, reduce CO2 emissions) have been recently performed or have been planned. Belgium plant planned to increase the usage of alternative fuels from the current 40% to 80%. The related investments have been approved by the BoD and included in the industrial Plan 2020-2022. The Cementir Group developed a new type of cement (FUTURECEM™) responsible for fewer CO2 emissions (from 30% to 50% lower CO2 content). 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. FUTURECEM™ technology will contribute largely to the Group's goal of reducing CO2 emissions by an average 30% per ton of cement by 2030. In March 2020, Bureau Veritas certified the compliance of FUTURECEM™ with the requirements in cement standard (EN 197-1:2011). (see 2.4a for the details concerning FUTURECEM™)
Legal	Relevant, always included	Litigations and the related possible consequences are always analysed during the risk assessment activity. For example, the Cementir Group developed a new type of cement (FUTURECEM™) responsible for fewer CO2 emissions (from 30% to 50% lower CO2 content). 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. Cementir will reduce CO2 emissions per ton of cement of about 30% by 2030 and a pivotal role in CO2 reduction will be played by FUTURECEM™. In order to manage the legal risk, the Group patented this technology. Currently, there are no critical issues regarding this aspect.
Market	Relevant, always included	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. In North Europe, the main risk is the increase in wood usage for flats, hotels, bridges and other applications. Due to the focus on environmental issues, in Norway, the utilization of wood is increasing (the wood has no CO2 content). For example, an hotel has been recently built entirely with wood in Norway (Lillehammer).
Reputation	Relevant, always included	The cement and concrete business is characterized by a 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 analyzed. 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 handicap versus the other cement player must be highlighted.
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 are planned during the winter, when, as mentioned, due to climate condition, the sales are slower.
Chronic physical	Relevant, sometimes included	This risk can be relevant for the Group companies that have plants located in areas characterized by extreme weather conditions such as snow, very low temperature in winter time (Norway and one plant in Turkey). The other areas where the Group plants are located are not subject to permanent critical climatic conditions (such as water scarcity). As of today, natural events / disasters can be exceptional events in the areas where our plants are located. In the last years extreme weather phenomena are increasing. Hurricanes, cyclones, typhoons, drought, floods, rain and snow, all increase in their degree of violence due to global warming. So in the medium/long term this risk could become relevant also for the other plant of the group.

C2.3

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

Yes

C2.3a

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

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation	Carbon pricing mechanisms
--------------------	---------------------------

Primary potential financial impact

Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Among the areas where Cementir operates, Europe is the only major region with a regulatory framework for CO2 quotes. To achieve the EU's overall greenhouse gas emissions reduction target for 2030, the sectors covered by the EU Emissions Trading System (EU ETS) must reduce their emissions by 43% compared to 2005 levels. As

of July 2020, the EU did not formalized the expected changes in the ETS, yet (revision of phase 4 of the ETS which will come into force in 2021). However, according to the possible scenario, the potential financial impact could be around 23 million € of additional yearly cost starting from 2022. The estimation assumes a CO2 price of 30 EUR (the internal carbon price applied by Cementir) and a total allowances deficit of 780.000 quotas.

Time horizon

Short-term

Likelihood

Very 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)

23000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

According to the possible scenario, the potential financial impact could be around 23 million € of additional yearly cost starting from 2022. The estimation assumes a CO2 price of 30 EUR (the internal carbon price applied by Cementir) and a total allowances deficit of 780.000 quotas. 23 Mln € is the 8% of 2019 Group EBITDA. In 2019 the Group EBITDA was 263,8 MLN €,

Cost of response to risk

100000000

Description of response and explanation of cost calculation

In order to support in the fight against climate change and support the transition to the phase 4 of the new European Trading System which will come into force in 2021 bringing more strict CO2 free credit allocation, Cementir Group has developed a strategy which is focused on the following pillars: Reduction of CO2 emissions per ton of cement of about 30% by 2030 Fossil fuels and clinker replacement with alternative fuels and alternative mineral additives Development of low-carbon cement (FUTURECEM™) Energy recovery (Aalborg Portland recovers surplus heat from production to supply district heating to the citizens of Aalborg. In 2019 the district heating covered the needs of 36.000 households) To guarantee the development of the Group's Climate Change Strategy and to achieve the Group's Sustainability Targets, in the 2020 - 2022 Industrial Plan we have planned an investment of 100 million € which will include, among other things: construction of an 8 MW wind farm to adequately supply the Aalborg plant; • waste heat recovery in our Danish and Turkish plants; expansion of district heating to 50,000 families in Aalborg; increase in the use of alternative fuels from the current 40% to 80% in Belgium. Investment of 100 million € in 2020-2022 Industrial Plan for green investments. For the period 2024-2030, the Group planned additional investments, but these initiatives are still under investigation and we cannot provide the value.

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation	Carbon pricing mechanisms
---------------------	---------------------------

Primary potential financial impact

Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Risk of emerging regulation on CO2 emission. Among the areas where the Cementir plants are operating, Europe is the only major region with a cap and Emissions Trading System (ETS). However, in some non-European countries an emission trading system will be probably implemented in the next years. China has announced to implement a CO2 trading system. According to the experts, real carbon emissions trading will be implemented in the very next future. The rules for assigning CO2 allowances to the cement industry has not been decided yet. However, in 2019 the AnQing plant (the only Cementir plant located in China) performance was better than European Benchmark for white cement. The plant emissions were 950 kg CO2/ ton clinker versus a benchmark of 987 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. In 2019, the emission of the Turkish plants were higher than European benchmark for grey clinker (871 Kg CO2/ ton clinker versus 766 Kg CO2/ ton clinker). In Turkey, Cementir produces only grey cement. Concerning US, Egypt and Malaysia, the other Regions where Cementir is producing cement, we does not expect new regulations in the short term.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium

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)

0

Potential financial impact figure – maximum (currency)

6950400

Explanation of financial impact figure

The financial impact have been calculated considering only the Turkish plants because the Chinese plant is performing better than the ETS benchmark and the implementation of a Chinese carbon emission trading system will not probably affect negatively Cementir in the short-medium term. Concerning US, Egypt and Malaysia, we does not expect new regulations in the short term. We took ETS benchmark for grey clinker as reference value (766 kg CO2 ton/clinker as reference value). In 2019, Cementir Turkish plants issued 871 Kg CO2/ ton clinker. The difference is 105 kg CO2/ton clinker. Multiplying the 2019 clinker production per the mentioned difference, there is an excess emission of 231.680 ton (2.2 Million ton of Clinker X 105 Kg CO2/ Ton clinker). Applying a CO2 price of 30€ (the internal carbon price applied by Cementir), we can estimate a total financial impact of 7 million €. As a mentioned, there is not any carbon pricing process in Turkey, the mentioned calculation is a theoretical appraisal of a potential financial impact for Cementir.

Cost of response to risk

16200000

Description of response and explanation of cost calculation

In order to support in the fight against climate change, Cementir Group has developed a strategy which is focused, among other, on the following pillars: Reduction of CO2 emissions per ton of cement of about 30% by 2030; Fossil fuels and clinker replacement with alternative fuels and alternative mineral additives; Development of low-carbon cement (FUTURECEM™). A decarbonization roadmap have been defined for each Region and plant. This roadmap is being executed by each Region, supported by Group functions and closely monitored by the Group Management Team (GMT). One person at regional level are dedicated to coordinate the initiative supported by 2 person at Group level (1 person from the R&D and 1 from the Group Sustainability Team that are supporting all regions in the execution of the roadmaps). For example, the Turkish plant of Izmir will reduced CO2 emission of 30% and it will increase alternative fuels to 80% within 2030. Moreover, according to the industrial plan 2020-2022, a waste heat recovery system for the production of electricity will be developed in the Izmir plant. We estimated an investment of about 16 Million € for the implementation of the system and an potential reduction of 27.000 ton of CO2, yearly. For the period 2024-2030, the Group planned additional investments in Turkey, but these initiatives are still under investigation and we cannot provide the value. The total cost reported (16.2 Million €) is the summa of the investment for the implementation of the waste heat recovery system (16 million €) and the salary cost of employees that are coordinating the decarbonization roadmap (200.000 €).

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation	Other, please specify (Increased cost of raw materials (fly ash))
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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

Climate-related issues and the linked CO2 emissions regulations are affecting suppliers landscape, especially in Europe. 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. In the Aalborg plant, the fly ash with high alkali is used for the production of the clinker and the related fly ash cement. In addition, 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 process CO2 emissions. One possible way to reduce energy and process 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 ash are also a lever used to mitigate CO2 impacts.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

621000

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 other new product as FUTURECEM™. The Cementir Group 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. For the period 2020-2022, the group forecasts an average increase of the price of the fly ash of about 15 €/ton, while

we assume the price of similar material available in the market fixed. The price assumptions are based on the agreements in place with the suppliers. Applying this price assumption to the quantity of fly ash and similar material planned in the 2020-2022 industrial plan we estimate 621.000 € of additional cost, yearly.

Cost of response to risk

740000

Description of response and explanation of cost calculation

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 material available in the market. In the long term, the fly ash cement will be replaced by other new product as FUTURECEM™. Concerning FUTURECEM™, in 2020-2022 period, the Group has planned the sales of 350.000 ton. Starting from 2023, the annual production is expected to grown year by year reaching 1 Million ton in 2027. How the figure for the cost is calculated. The value is the summa of the cost incurred by Cementir to manage the risk in the short-medium term (240.000€) and in the long term (500.000€). Concerning the project for securing the supply of fly ash, scouting new suppliers and new alternative materials we estimated 240.000 €. The project is managed by the Group Procurement, supported by the Technical office and closely monitored by the Group Management Team (GMT). We assumed 2 person (2 FTE) dedicated to the project. The cost for the production and sales of a of 350.000 ton FUTURECEM™ in 2020-2022, it is 500.000€ . This is the cost according to the existing production setup and external sourcing of calcinated clay. For the period 2024-2030, the Group planned additional actions and investments to progressively reduce the consumption of fly ash and increase the production of FUTURECEM™, but these initiatives are still under investigation and we cannot provide the value.

Comment

C2.4

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

Yes

C2.4a

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

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

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

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

The Cementir Group developed a new type of cement (FUTURECEM™) based on limestone and calcinated clay, that can reduce the quantity of clinker in cement and therefore the CO2 emissions (from 30% to 50% lower CO2 content). FUTURECEM™ technology will contribute largely to the Group's goal of reducing CO2 emissions by an average 30% per ton of cement by 2030. In March 2020, Bureau Veritas certified the compliance of FUTURECEM™ with the requirements in cement standard (EN 197-1:2011). In Aalborg (the Danish cement plant), the first full-scale production trial was performed in 2019. From September 2019 to Spring 2020, the trial productions and internal sampling/testing within Group's company was carried out for concrete applications. In March 2020, Bureau Veritas certified the first cement based on FUTURECEM™ in accordance to European cement standard EN 197-1:2011. From Q3 2020 deliveries are planned to selected group of customers. Full market launch is expected by the end of 2020. In June 2019, Cementir started the assessment on FUTURECEM™ feasibility in terms of production, sourcing and standards also in the Belgium Plant. This project will be finished by mid 2021 and trial productions will be planned following the same path done in Aalborg (the Danish cement plant). From 2021, similar projects are scheduled to start in the other plants, including also white cement production. In 2020-2022 period, the Group has planned the sales of 350.000 ton. Starting from 2023, the annual production is expected to grown year by year reaching 1 Million ton in 2027.

Time horizon

Short-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)

5000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

In the Industrial plan 2020-2022, the Group planned the production of 350.000 ton in Aalborg plant. Starting from 2023, the annual production is expected to grown year by year reaching the 1 Million ton in 2027 (In 2019, Cementir Group sold 6,8 million tons of grey cement). 5 Million € are the revenues related to the sales of the 350.000 ton planned in 2020-2022 period.

Cost to realize opportunity

500000

Strategy to realize opportunity and explanation of cost calculation

We reported the cost for the production of 350.000 ton FUTURECEM™ in 2020-2022. The cost is estimated according to the existing production setup and external sourcing of calcinated clay. (the cost is the summa of the CAPEX needed for equipments, Construction works , Engineering activities)

Comment

In 2021, according to the preliminary results the business case will be updated in order to increasae the production of FUTURECEM™

Identifier

Opp2

Where in the value chain does the opportunity occur?

Upstream

Opportunity type

Energy source

Primary climate-related opportunity driver

Other, please specify (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

System for recovering heat from combustion gases used. Aalborg Portland (AP), the danish legal entity, has since 1990 delivered District Heating to the Municipality of Aalborg. In order to produce cement, raw materials such as limestone and sand must be burned at temperatures of up to 1500°C. Due to this high temperature process, the Aalborg Portland cement factory has enormous supplies of excess heat. One of the main sources of waste heat is the flue gas streams from the white kilns. The solution to this energy loss was to implement a heat recovery system, in which the flue gasses from the five white kilns of Aalborg plant are utilized in heat exchanger installations to transfer the thermal energy from the flue gas to Aalborg's district heating network. The Aalborg plant recovers excess 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 2019, Aalborg Portland delivered about 1.6 million GJ of energy to the Municipality of Aalborg. According to the engineering project developed by the Aalborg plant and the Municipality, Aalborg plant could improve the supply of energy of additional 0.6 TJ. In AP, we are producing grey cement and white cement. The plant has 6 kilns, 5 reserved for the production of white cement and one for the production of grey cement. As of July 2020, only the kilns reserved for the production of white cement are equipped to recover heat and deliver it to the district heating. The grey cement kiln of Aalborg Portland is currently not equipped with waste heat recovery. In the industrial Plan 2020-2022, we included the heat recovery project for the kiln producing grey cement.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium

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)

2900000

Potential financial impact figure – maximum (currency)

4300000

Explanation of financial impact figure

In the industrial Plan 2020-2022, we included the heat recovery project for the kiln producing grey cement in the Aalborg plant. According to The business case prepared, a capex between 15 to 20 Million EUR is needed in order to recover between 0.5 to 0.65 TJ. This heat can be delivered to the district heating system. According to the agreement in place the Municipality, the supply of additional energy could produce extra yearly profit between 2.9 and 4.3 million €.

Cost to realize opportunity

15000000

Strategy to realize opportunity and explanation of cost calculation

Aalborg Portland (AP), the danish plant of Cementir, has delivered District Heating to the Municipality of Aalborg, since 1990. In AP, we are producing grey cement and white cement. The plant has 6 kilns, 5 reserved for the production of white cement and one for the production of grey cement. As of July 2020, only the kilns reserved for the production of white cement are equipped to recover heat and deliver it to the district heating. The kiln reserved for the production of grey cement is not equipped with waste heat recovery, but the installation of the equipment is possible. Costs to realize the opportunity have been already estimated by Cementir in a business case and they have been included in the Group Industrial Plan 2020-2022. The cost to realize the opportunity is related to investment needed to equipped the kiln for grey cement with heat recovery system. The cost of investments is between 15 to 20 Million EUR. We expect that the installation could be implemented within 2 years. With this investment we could recover between 0.5 to 0.65 TJ of heat and deliver it to the District Heating of the Municipality of Aalborg.

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

As a part of our Climate Change strategy, in the industrial plan 2020-2022, we included the construction of 2 Wind Turbine Generator (2 WTG with 4,200 kW) in the Aalborg plan. The energy produced will be used by the plant. According to the estimation prepared, 2 WTG will save the purchase of 26.000 MWh and will contribute to reduce CO2 emission of 25.000 tons CO2/year Even if, this will not impact our CO2 quotas for ETS it will have an indirect impact for the society, as a whole (communities and people).

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1400000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

2 WTG will save the purchase of approx 26.000 MWh. The calculation is made using the energy cost that the plant will save minus maintenance cost for the WTG.

Cost to realize opportunity

6800000

Strategy to realize opportunity and explanation of cost calculation

We have performed a scouting activities in order to look for the best solution. According to offers collected from the suppliers , an investment of 6,8 million EUR is estimated for the implementation of the WTG. In the amount, we included the WTG, civil works, connectino and cabling. The spending for the WTG will be partially covered by the Danish government (2.2 million €). The investment has been included in the 2020-2022 Industrial Plan.

Comment

C3. Business Strategy

C3.1

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

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

C3.1a

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

Yes, qualitative, but we plan to add quantitative in the next two years

C3.1b

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

Climate-related scenarios and models applied	Details
2DS	<p>The climate-related scenario applied by Cementir is the 2DS used by IEA in the Cement Low-Carbon Technology Roadmap. As a result of this exercise, Cementir establishes its own targets to be align with the IEA roadmap. We considered 2022, 2030 and 2050 to define our short, mid and long-term time horizons. Climate-related scenario analysis is affecting: - our long-term strategy. Financial indicators are not anymore enough to evaluate the company health. In 2019, The Group set 25 Sustainability Targets to be achieve within 2030 and covering the priority areas for Cementir. The targets are related to the effort of Cementir for adopting all necessary measures and the most innovative technological solutions to minimize 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. Cementir will reduce CO2 emissions per ton of cement of about 30% by 2030. The target will be achieved through greater use of alternative fuels (77% of the total to produce grey cement within 2030) and renewable resources, reduction of thermal consumption and the clinker ratio of cements. Cutting our CO2 emissions is a priority of Cementir Group, but clearly, we cannot achieve a carbon neutral future alone in the long term (2050). For this reason, starting from 2019, Cementir supports the Danish Government in the most ambitious CO2 reduction project ever sponsored by a nation, providing our expertise and technology. In the Autumn 2019, the Danish government adopted a new binding climate law with the target of reducing the Danish CO2-emissions of 70% by 2030. Moreover, Cementir is actively committed in looking for partnership with other stakeholders (customer, supplier, competitors) for the development of breakthrough technology; - our fuel supply strategy. Until some years ago, only fossil fuels were used for cement production. For example, in 2019, for grey cement, the 31.4 % of fuels consumed come from alternative sources (i.e. RDF); - our electricity supply strategy. In 2021/2022, Cementir will implement for the first time Wind Turbine Generator inside a plant to satisfy internal electricity needs; - our products. the cement manufacturing is an CO2 intensive process. The cements currently produced and sold could be pushed out of the market due to their CO2 footprint. The development and commercialization of low-carbon cement is a priority for Cementir. Cementir developed a new type of cement (FUTURECEM™) based on limestone and calcinated clay, that can reduce the quantity of clinker in cement and therefore the CO2 emissions (from 30% to 50% lower CO2 content). The development phase is therefore concluded. Now Cementir started the commercialization; - our relationship with the Customers. The development of a new low-carbon cement required also the education of the Customers. The Customer must be trained and persuaded about the positive implication of the new products; - our relationship with the suppliers. Cutting our CO2 emissions is a priority of Cementir Group, but clearly, we cannot achieve a carbon neutral future alone. In 2019, Cementir started to monitor the CO2 emissions of the 55% of Top Group suppliers (representing approx. 40% of the total purchase value) via CDP Supply Chain Program; - our financial planning and capital allocation process. To accomplish sustainability Targets Cementir planned 100 million € of green investment in 2020-2022 period.</p>

C3.1d

(C3.1d) 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>Most climate experts agree that the world must take urgent action to cut emissions and we cannot deny that cement manufacturing is an energy and CO2 intensive process. We will reduce CO2 emissions per ton of cement of about 30% by 2030. 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. 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. An important achievement in 2019 was the conclusion of the Danish “Green Concrete II” (Green Transformation of Cement and Concrete Production) project: the whole value chain of construction, as well as universities and research institutes have been involved. In the project, cement based on FUTURECEM™ as well as new resource saving concrete recipes were developed and tested. Testing in full-scale structures documented excellent fresh concrete performance and suitability for industrialisation as well as good durability. Life-cycle analyses were performed to document up to 30% CO2 reduction, compared to conventional concrete.</p>
Supply chain and/or value chain	Yes	<p>Environmental metrics have been included in the evaluation of our suppliers. Cementir is monitoring CO2 emissions of 55% of top Group suppliers (representing approx. 40% of the total purchases by value) Case Study: To promote awareness among suppliers of their impact on climate change, 55 suppliers (40% 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. In this way Cementir could: - Monitor the scope 3 emission of its supply chain; - Monitor the action undertaken by the supplier to manage the climate change risk; - Spread awareness of suppliers on climate change. - develop CO2 reduction actions combined with the suppliers. Climate change is also affecting the suppliers landscape. For example, Fuel supply strategy has been changed. Until some years ago, only fossil fuels were used for cement production, while in 2019, for grey cement, the 31.4 % of fuels consumed come from alternative sources (i.e. RDF). Due to this shift in the energy consumption, new suppliers have been scouting and adding to the Cementir Suppliers list.</p>
Investment in R&D	Yes	<p>In the last years, Cementir R&D was focused on the development of a low carbon products as FUTURECEM™. Recently, in Denmark, we also prepared a feasibility study for addressing an opportunity for conversion from fossil fuels to gas on the main burners of the kilns in Aalborg Portland. Pre-analysis has been carried out to estimate the investment needed for the establishment of a gas line to Aalborg plant and the installation of multi-fuel main burners for all kilns. The Pre-analysis assumes a partial conversion whereby basic heating oil is replaced by gas, plus the consumption of gas in specific period of the year. According to the preliminary analysis performed, an investment of 9 million EUR is needed for the implementation of the gas infrastructure and related multi-fule main burners. According to the simulation prepared by the R&D department, this partial conversion could lead to a reduction of about 27.000 ton of CO2, yearly. the R&D team is still evaluating all opportunities and risk related to the operation.</p>
Operations	Yes	<p>Cementir established the Group Sustainability Committee (GSC) with the primary objective of assisting the Board of Directors in defining the sustainability strategy, indicating the main objectives and areas of intervention to be reflected in the Industrial Plan and providing indications and recommendations to the Board of Directors and other Bodies within the company on policies, guidelines and KPIs linked to sustainability objectives. The Group set 25 Sustainability Targets covering the priority areas for Cementir. 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. Cementir will reduce CO2 emissions per ton of cement of about 30% by 2030. The target will be achieved through greater use of alternative fuels (77% of the total to produce grey cement within 2030) and renewable resources, reduction of thermal consumption and the clinker ratio of cements. To accomplish the mentioned targets, according to the Industrial Plan 2020 - 2022, Cementir will spend 100 million euros for green investments that include, among others: • construction of an 8 MW wind farm for the needs of Aalborg plant; • waste heat recovery in our Danish and Turkish plants; • expansion of district heating to 50,000 families in Aalborg; • increase in the use of alternative fuels from current 40% to 80% in Belgium</p>

C3.1e

(C3.1e) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Capital allocation	Capital Allocation: To accomplish the Sustainability targets, according to the Industrial Plan 2020 - 2022, Cementir will spend 100 million euros for green investments that include, among others: • construction of an 8 MW wind farm for the needs of Aalborg plant; • waste heat recovery in Danish and Turkish plants; • expansion of district heating to 50,000 families in Aalborg; • increase in the use of alternative fuels from current 40% to 80% in Belgium Revenues: Cementir plan to sell a new low carbon cement (FUTURCEM). As explained in the section 2.4a, in the period 2020-2022, Cementir planned the sales of 350.000 ton of FUTURCEM equal to 5 million EUR of additional revenues In addition, the Aalborg plant recovers excess 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. We are investing to expand the heating to 50,000 families by 2022. As explained in the section 2.4a, Cementir could improve the supply of energy of additional 0.6 TJ. According to the agreement in place with the municipality of Aalborg, the supply of this additional energy could produce extra profit between 2.9 and 4.3 million EUR, yearly.

C3.1f

(C3.1f) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

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

2019

Target coverage

Product level

Scope(s) (or Scope 3 category)

Scope 1

Intensity metric

Metric tons CO2e per metric ton of cement

Base year

1990

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

721

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

87

Target year

2022

Targeted reduction from base year (%)

9.6

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

651.784

% change anticipated in absolute Scope 1+2 emissions

0

% change anticipated in absolute Scope 3 emissions

0

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

696

% of target achieved [auto-calculated]

36.1188164586223

Target status in reporting year

Underway

Is this a science-based target?

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

Please explain (including target coverage)

Cementir has set CO2 emission reduction targets, using a 1990 baseline, for grey and white cement production. The CO2 emission reduction targets cover all products. Concerning Grey Cement, in 1990 the CO2 emission was 721 KgCO2/TCE and in 2019 696 KgCO2/TCE. In 2022 (see Int 1) , it will be 652 Kg CO2/TCE (-10% comparing 1990), in 2025 (see Int 2) it will be 574 Kg CO2/TCE (-20% comparing 1990) and in 2030 (see Int 2) it will be 500 Kg CO2/TCE (-31% comparing 1990) The targets established by the Group have been deployed in each single plant and per year and were included in the Industrial Plan 2020-2022 approved by the Board of Directors of Cementir Hold. The deployment per plant and year is needed also for linking CO2 reduction targets to the monetary incentives plan of the management. Cementir set to develop a Science Based Target within 2021.

Target reference number

Int 2

Year target was set

2019

Target coverage

Product level

Scope(s) (or Scope 3 category)

Scope 1

Intensity metric

Metric tons CO2e per metric ton of cement

Base year

1990

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

721

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

87

Target year

2025

Targeted reduction from base year (%)

20.4

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

573.916

% change anticipated in absolute Scope 1+2 emissions

0

% change anticipated in absolute Scope 3 emissions

0

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

696

% of target achieved [auto-calculated]

16.9970900981752

Target status in reporting year

Underway

Is this a science-based target?

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

Please explain (including target coverage)

Cementir has set CO2 emission reduction targets, using a 1990 baseline, for grey and white cement production. The CO2 emission reduction targets cover all products. Concerning Grey Cement, in 1990 the CO2 emission was 721 KgCO2/TCE and in 2019 696 KgCO2/TCE. In 2022 (see Int 1) , it will be 652 Kg CO2/TCE (-10% comparing 1990), in 2025 (see Int 2) it will be 574 Kg CO2/TCE (-20% comparing 1990) and in 2030 (see Int 2) it will be 500 Kg CO2/TCE (-31% comparing 1990) The targets established by the Group have been deployed in each single plant and per year and were included in the Industrial Plan 2020-2022 approved by the Board of Directors of Cementir Hold. The deployment per plant and year is needed also for linking CO2 reduction targets to the monetary incentives plan of the management. Cementir set to develop a Science Based Target within 2021.

Target reference number

Int 3

Year target was set

2019

Target coverage

Product level

Scope(s) (or Scope 3 category)

Scope 1

Intensity metric

Metric tons CO2e per metric ton of cement

Base year

1990

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

721

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

83

Target year

2030

Targeted reduction from base year (%)

30.7

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

499.653

% change anticipated in absolute Scope 1+2 emissions

0

% change anticipated in absolute Scope 3 emissions

0

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

696

% of target achieved [auto-calculated]

11.2944833225659

Target status in reporting year

Underway

Is this a science-based target?

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

Please explain (including target coverage)

Cementir has set CO2 emission reduction targets, using a 1990 baseline, for grey and white cement production. The CO2 emission reduction targets cover all products. Concerning Grey Cement, in 1990 the CO2 emission was 721 KgCO2/TCE and in 2019 696 KgCO2/TCE. In 2022 (see Int 1) , it will be 652 Kg CO2/TCE (-10% comparing 1990), in 2025 (see Int 2) it will be 574 Kg CO2/TCE (-20% comparing 1990) and in 2030 (see Int 2) it will be 500 Kg CO2/TCE (-31% comparing 1990) The targets established by the Group have been deployed in each single plant and per year and were included in the Industrial Plan 2020-2022 approved by the Board of Directors of Cementir Hold. The deployment per plant and year is needed also for linking CO2 reduction targets to the monetary incentives plan of the management. Cementir set to develop a Science Based Target within 2021.

Target reference number

Int 4

Year target was set

2019

Target coverage

Product level

Scope(s) (or Scope 3 category)

Scope 1

Intensity metric

Metric tons CO2e per metric ton of cement

Base year

1990

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

1238

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

13

Target year

2022

Targeted reduction from base year (%)

30.65

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

858.553

% change anticipated in absolute Scope 1+2 emissions

0

% change anticipated in absolute Scope 3 emissions

0

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

926

% of target achieved [auto-calculated]

82.224922057626

Target status in reporting year

Underway

Is this a science-based target?

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

Please explain (including target coverage)

Cementir has set CO2 emission reduction targets, using a 1990 baseline, for grey and white cement production. The CO2 emission reduction targets cover all products. Concerning White Cement, in 1990 the CO2 emission was 1238 KgCO2/TCE and in 2019 926KgCO2/TCE. In 2022 (see Int 4) , it will be 859 Kg CO2/TCE (-31% comparing 1990), in 2025 (see Int 5) it will be 847 Kg CO2/TCE (-32% comparing 1990) and in 2030 (see Int 6) it will be 808 Kg CO2/TCE (-35% comparing 1990) The targets established by the Group have been deployed in each single plant and per year and were included in the Industrial Plan 2020-2022 approved by the Board of Directors of Cementir Hold. The deployment per plant and year is needed also for linking CO2 reduction targets to the monetary incentives plan of the management. Cementir set to develop a Science Based Target within 2021.

Target reference number

Int 5

Year target was set

2019

Target coverage

Product level

Scope(s) (or Scope 3 category)

Scope 1

Intensity metric

Metric tons CO2e per metric ton of cement

Base year

1990

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

1238

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

13

Target year

2025

Targeted reduction from base year (%)

31.6

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

846.792

% change anticipated in absolute Scope 1+2 emissions

0

% change anticipated in absolute Scope 3 emissions

0

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

926

% of target achieved [auto-calculated]

79.7529702869062

Target status in reporting year

Underway

Is this a science-based target?

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

Please explain (including target coverage)

Cementir has set CO2 emission reduction targets, using a 1990 baseline, for grey and white cement production. The CO2 emission reduction targets cover all products. Concerning White Cement, in 1990 the CO2 emission was 1238 KgCO2/TCE and in 2019 926KgCO2/TCE. In 2022 (see Int 4) , it will be 859 Kg CO2/TCE (-31% comparing 1990), in 2025 (see Int 5) it will be 847 Kg CO2/TCE (-32% comparing 1990) and in 2030 (see Int 6) it will be 808 Kg CO2/TCE (-35% comparing 1990) The targets established by the Group have been deployed in each single plant and per year and were included in the Industrial Plan 2020-2022 approved by the Board of Directors of Cementir Hold. The deployment per plant and year is needed also for linking CO2 reduction targets to the monetary incentives plan of the management. Cementir set to develop a Science Based Target within 2021.

Target reference number

Int 6

Year target was set

2019

Target coverage

Product level

Scope(s) (or Scope 3 category)

Scope 1

Intensity metric

Metric tons CO2e per metric ton of cement

Base year

1990

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

1238

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

13

Target year

2030

Targeted reduction from base year (%)

34.7

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

808.414

% change anticipated in absolute Scope 1+2 emissions

0

% change anticipated in absolute Scope 3 emissions

0

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

926

% of target achieved [auto-calculated]

72.6280651604102

Target status in reporting year

Underway

Is this a science-based target?

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

Please explain (including target coverage)

Cementir has set CO2 emission reduction targets, using a 1990 baseline, for grey and white cement production. The CO2 emission reduction targets cover all products. Concerning White Cement, in 1990 the CO2 emission was 1238 KgCO2/TCE and in 2019 926KgCO2/TCE. In 2022 (see Int 4) , it will be 859 Kg CO2/TCE (-31% comparing 1990), in 2025 (see Int 5) it will be 847 Kg CO2/TCE (-32% comparing 1990) and in 2030 (see Int 6) it will be 808 Kg CO2/TCE (-35% comparing 1990) The targets established by the Group have been deployed in each single plant and per year and were included in the Industrial Plan 2020-2022 approved by the Board of Directors of Cementir Hold. The deployment per plant and year is needed also for linking CO2 reduction targets to the monetary incentives plan of the management. Cementir set to develop a Science Based Target within 2021.

Target reference number

Int 7

Year target was set

2019

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 2 (location-based)

Intensity metric

Metric tons CO2e per metric ton of product

Base year

2017

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

0.06675

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

97

Target year

2030

Targeted reduction from base year (%)

21

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

0.0527325

% change anticipated in absolute Scope 1+2 emissions

-20

% change anticipated in absolute Scope 3 emissions

0

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

0.065102

% of target achieved [auto-calculated]

11.7567326556091

Target status in reporting year

Underway

Is this a science-based target?

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

Please explain (including target coverage)

The 97% of Scope 2 emissions of Cementir are related to cement production. Concerning Scope 2 emissions, Cementir established a 2030 reduction target that cover all cement plants. In 2030, Cementir will reduce the CO2 per ton of cement of 21%. From 67 kg CO2 per TCE in 2017 to 53 Kg CO2 per TCE in 2030

C4.2

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

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

Product level

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

2022

Figure or percentage in target year

36

Figure or percentage in reporting year

68.6

% of target achieved [auto-calculated]

49.0625

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes. The Group decided to reduce CO2 emissions per ton of cement of about 30% by 2030. The target, which differentiates between grey cement (31% by 2030) and white cement (35% by 2030) will be achieved through greater use of alternative fuels and renewable resources, and reduction of thermal consumption and clinker ratio of cements. Specific targets for alternative fuels, clinker ratio and CO2 emissions have been established in order to accomplish the 2030 goals.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

Cementir has set Fossil fuel reduction targets, using 1990 as baseline, for grey and white cement production. The Fossil Fuels reduction targets cover all products and they are expressed as percentage in the total fuel mix. Concerning Grey Cement, in 1990 the 100% of fuels used in the production was fossil. In 2019, the fossil fuels were the 68.6% of the total. In 2022 (see Oth1) , it will be the 64%, in 2025 (see Oth 2) it will be 57% and in 2030 (see Oth 3) it will be 23%. The targets established by the Group have been deployed in each single plant and per year and were included in the Industrial Plan 2020-2022 approved by the Board of Directors of Cementir Hold. The deployment per plant and year is needed also for linking the fossil fuels reduction targets to the monetary incentives plan of the management

Target reference number

Oth 2

Year target was set

2019

Target coverage

Product level

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

2025

Figure or percentage in target year

57

Figure or percentage in reporting year

68.6

% of target achieved [auto-calculated]

73.0232558139535

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes. The Group decided to reduce CO2 emissions per ton of cement of about 30% by 2030. The target, which differentiates between grey cement (31% by 2030) and white cement (35% by 2030) will be achieved through greater use of alternative fuels and renewable resources, and reduction of thermal consumption and clinker ratio of cements. Specific targets for alternative fuels, clinker ratio and CO2 emissions have been established in order to accomplish the 2030 goals.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

Cementir has set Fossil fuel reduction targets, using 1990 as baseline, for grey and white cement production. The Fossil Fuels reduction targets cover all products and they are expressed as percentage in the total fuel mix. Concerning Grey Cement, in 1990 the 100% of fuels used in the production was fossil. In 2019, the fossil fuels were the 68.6% of the total. In 2022 (see Oth1) , it will be the 64%, in 2025 (see Oth 2) it will be 57% and in 2030 (see Oth 3) it will be 23%. The targets established by the Group have been deployed in each single plant and per year and were included in the Industrial Plan 2020-2022 approved by the Board of Directors of Cementir Hold. The de2019ployment per plant and year is needed also for linking the fossil fuels reduction targets to the monetary incentives plan of the management

Target reference number

Oth 3

Year target was set

2019

Target coverage

Product level

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

23

Figure or percentage in reporting year

68.6

% of target achieved [auto-calculated]

40.7792207792208

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes. The Group decided to reduce CO2 emissions per ton of cement of about 30% by 2030. The target, which differentiates between grey cement (31% by 2030) and white cement (35% by 2030) will be achieved through greater use of alternative fuels and renewable resources, and reduction of thermal consumption and clinker ratio of cements. Specific targets for alternative fuels, clinker ratio and CO2 emissions have been established in order to accomplish the

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

Cementir has set Fossil fuel reduction targets, using 1990 as baseline, for grey and white cement production. The Fossil Fuels reduction targets cover all products and they are expressed as percentage in the total fuel mix. Concerning Grey Cement, in 1990 the 100% of fuels used in the production was fossil. In 2019, the fossil fuels were the 68.6% of the total. In 2022 (see Oth1) , it will be the 64%, in 2025 (see Oth 2) it will be 57% and in 2030 (see Oth 3) it will be 23%. The targets established by the Group have been deployed in each single plant and per year and were included in the Industrial Plan 2020-2022 approved by the Board of Directors of Cementir Hold. The de2019ployment per plant and year is needed also for linking the fossil fuels reduction targets to the monetary incentives plan of the management

Target reference number

Oth 4

Year target was set

2019

Target coverage

Product level

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

94

Figure or percentage in reporting year

96.1

% of target achieved [auto-calculated]

65.0000000000001

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes. The Group decided to reduce CO2 emissions per ton of cement of about 30% by 2030. The target, which differentiates between grey cement (31% by 2030) and white cement (35% by 2030) will be achieved through greater use of alternative fuels and renewable resources, and reduction of thermal consumption and clinker ratio of cements. Specific targets for alternative fuels, clinker ratio and CO2 emissions have been established in order to accomplish the

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

Cementir has set Fossil fuel reduction targets, using 1990 as baseline, for grey and white cement production. The Fossil Fuels reduction targets cover all products and they are expressed as percentage in the total fuel mix. Concerning White Cement, in 1990 the 100% of fuels used in the production was fossil. In 2019, the fossil fuels were the 96.1% of the total. In 2030 (see Oth 4) it will be 94%. The demand for consistency in the color of white cement is much higher than for grey as there is a high attention to the purity of the color. Alternative fuels could affect the color and for this reason their utilization is drastically limited in the production of white cement.

C4.3

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

Yes

C4.3a

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

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	1	27000
To be implemented*	4	370000
Implementation commenced*		
Implemented*	2	35340
Not to be implemented		

C4.3b

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

Initiative category & Initiative type

Energy efficiency in production processes	Machine/equipment replacement
---	-------------------------------

Estimated annual CO2e savings (metric tonnes CO2e)

34640

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

275000

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

52000

Payback period

<1 year

Estimated lifetime of the initiative

3-5 years

Comment

Installation of a new main burner to improve clinker quality and reduce the clinker factor of the white cement produced in the plant located in Malesya. The cement production remains the same at the different clinker factor. Consequently, there is a savings in the lower usage of clinker in the mix and consequently a potential reduction of clinker production for the same amount of cement and therefore a saving in CO2.

Initiative category & Initiative type

Energy efficiency in production processes	Machine/equipment replacement
---	-------------------------------

Estimated annual CO2e savings (metric tonnes CO2e)

700

Scope(s)

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

70000

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

50000

Payback period

<1 year

Estimated lifetime of the initiative

3-5 years

Comment

Replacement of compressors used in the packaging area of the egyptian plant. The replacement has decreased the power consumption in packing of 1051200 KWH per year. Applying the average national emission rate for electricity produced in Egypt we estimated about 700 ton of CO2 saving.

C4.3c

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

Method	Comment
Internal price on carbon	For example, we apply an internal carbon price of 30 EUR to navigate GHG regulations such as the EU ETS. In Denmark, we prepared a feasibility study for addressing an opportunity for conversion from fossil fuels to gas on the main burners of the kilns in Aalborg Portland. Pre-analysis has been carried to estimate the investment needed for the establishment of a gas line to Aalborg plant and the installation of multi-fuel main burners for all kilns. The Pre-analysis assumes a partial conversion whereby basic heating oil is replaced by gas, plus the consumption of gas in specific period of the year. A partial conversion could lead to a reduction of about 27.000 ton of CO ₂ , yearly. Assuming a CO ₂ price of 30 EUR/ton, this reduction could mean 800.000 € of yearly saving. This is an example of how Cementir is using the internal price on carbon for navigating GHG regulations and addressing the investments versus initiative with a lower carbon impact .
Partnering with governments on technology development	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. For example, since November 2019, the Group has been involved in the most ambitious CO ₂ 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 CO ₂ 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 CO ₂ reduction achievable and will define the prerequisites (policy, research, innovation, subsidies, etc.) for such reductions.
Internal incentives/recognition programs	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 CO ₂ 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 2020-2022 Industrial plan approved by the BoD in November 2019.
Compliance with regulatory requirements/standards	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 described in the C2.3a, due to the expected changes in the Emissions Trading System (ETS) a deficit of CO ₂ quotas in the European plants is assumed starting from 2021. according to the possible scenario, the potential financial impact could be around 23 million € of additional yearly cost starting from 2022. The estimation assumes a CO ₂ price of 30 EUR (the internal carbon price applied by Cementir) and a total allowances deficit of 780.000 quotas (see C2.3a) Among other, in order to manage this issue investments in Belgium have been commenced to raise the kiln usage of alternative fuels from the current 40% to 80%. An yearly, CO ₂ reduction of 88.000 ton is expected.

C4.5

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

Yes

C4.5a

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

Level of aggregation

Group of products

Description of product/Group of products

FUTURECEM™ is a patented Technology that relies on the synergy between calcined clay and limestone filler which allows for more than 40% clinker replacement in cement, whilst keeping the same performance of CEM I Portland cement. Due to the mentioned decrease in the clinker content, FUTURECEM™ allows a 30% CO₂ emissions reduction in cement production. It is a proven innovation, which has been used for building two bridges in Denmark (see project "Green Concrete II", an R&D project supported by the Danish Innovation Fund and Cementir Group via the Danish legal entity Aalborg Portland). In March 2020, Bureau Veritas certified the compliance of FUTURECEM™ with the requirements in cement standard (EN 197-1:2011). 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. FUTURECEM™ is used for the production of cement, but also Ultra-High Performance Concrete Premix and decorative applications (facade cladding, urban furniture)

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

Low-carbon product and avoided emissions

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

Other, please specify (FUTURECEM technology is fully acknowledged as a solution for clinker ratio reduction in the roadmap for "Low Carbon transition in the cement industry" by the International Energy Agency – 2018)

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

1

% of total portfolio value

<Not Applicable>

Asset classes/ product types

<Not Applicable>

Comment

In 2014 - 2019 period, the new technology has been tested with innovative solutions in the production of ready-mixed concrete in the Danish project Green Concrete II, by building structures used for testing new technologies in real-life conditions (a rail bridge, a road bridge, indoor wall and floor). Within this project, FUTURECEM™ has been tested at full-scale in construction parts for infrastructure as well as in an indoor floor and wall in the new concrete laboratory at the Danish Technological Institute (DTU). Such demonstrations showed that FUTURECEM™ can be implemented in the concrete industry, while maintaining conventional production and execution technologies. In Aalborg (the Danish cement plant), the first full-scale production trial was performed in 2019. From September 2019 to Spring 2020, the trial productions and internal sampling/testing within Group's company was carried out for concrete applications. In March 2020, Bureau Veritas certified the first cement based on FUTURECEM™ in accordance to European cement standard EN 197-1:2011. From Q3 2020 deliveries are planned to selected group of customers. Full market launch is expected by the end of 2020. In June 2019, Cementir started the assessment on FUTURECEM™ feasibility in terms of production, sourcing and standards also in the Belgium Plant. This project will be finished by mid 2021 and trial productions will be planned following the same path done in Aalborg (the Danish cement plant). From 2021, similar projects are scheduled to start in the other plants, including also white cement production. In 2020-2022 period, the Group has planned the sales of 350.000 ton. Starting from 2023, the annual production is expected to grow year by year reaching 1 Million ton in 2027.

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

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.

C5.2

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

IPCC Guidelines for National Greenhouse Gas Inventories, 2006

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)

7161850

Start date

January 1 2019

End date

December 31 2019

Comment

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

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)

7493039

Start date

January 1 2018

End date

December 31 2018

Comment

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

Past year 2

Gross global Scope 1 emissions (metric tons CO2e)

7711243

Start date

January 1 2017

End date

December 31 2017

Comment

In 2017, Cementir Group acquired Belgium plant. This acquisition changed the Group structurally. The difference between Scope 1 emissions in 2016 versus 2017 is mainly related to Belgium plant. In 2017, the Scope 1 emissions increased of about 1.4 million ton (from 6.2 to 7.6) but the Belgium plant alone issued 1.2 million ton of CO2. We reported Scope 1 emissions for all segments: Cement, Aggregates, Ready Mix Concrete, Concrete prefabricated products, Waste Management and Recycling.

Past year 3

Gross global Scope 1 emissions (metric tons CO2e)

6286675

Start date

January 1 2016

End date

December 31 2016

Comment

In 2017, Cementir Group acquired Belgium plant. This acquisition changed the Group structurally. The difference between Scope 1 emissions in 2016 versus 2017 is mainly related to Belgium plant. In 2017, the Scope 1 emissions increased of about 1.4 million ton (from 6.2 to 7.7) but the Belgium plant alone issued 1.2 million ton of CO2. 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. Scope 2 market-based figure was calculated 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.

C6.3

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

Reporting year

Scope 2, location-based

630114

Scope 2, market-based (if applicable)

470293

Start date

January 1 2019

End date

December 31 2019

Comment

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

Past year 1

Scope 2, location-based

668920

Scope 2, market-based (if applicable)

505368

Start date

January 1 2018

End date

December 31 2018

Comment

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

Past year 2

Scope 2, location-based

692327

Scope 2, market-based (if applicable)

644174

Start date

January 1 2017

End date

December 31 2017

Comment

In 2017, Cementir Group acquired Belgium plant. This acquisition changed the Group structurally. The difference between Scope 2 emissions in 2016 versus 2017 is mainly related to Belgium plant. In 2017, the Scope 2 emissions calculated according to the location method increased of about 90,000 ton (from 603.000 to 692.000) but the Belgium plant alone issued 66.000 ton. We reported Scope 2 emissions for all segments: Cement, Aggregates, Ready Mix Concrete, Concrete prefabricated products, Waste Management and Recycling.

Past year 3

Scope 2, location-based

603189

Scope 2, market-based (if applicable)

598830

Start date

January 1 2016

End date

December 31 2016

Comment

In 2017, Cementir Group acquired Belgium plant. This acquisition changed the Group structurally. The difference between Scope 2 emissions in 2016 versus 2017 is mainly related to Belgium plant. In 2017, the Scope 2 emissions calculated according to the location method increased of about 90,000 ton (from 603.000 to 692.000) but the Belgium plant alone issued 66.000 ton. 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, not yet calculated

Metric tonnes 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

The emissions related to purchased goods and services are relevant for Cementir Group. For this reason, in 2020, Cementir started to monitor the CO₂ emissions of 55% of top Group suppliers (representing approx. 40% of the total purchases by value in 2019) through the CDP supply chain program. Through this monitoring activity, we will calculate the CO₂ emission of our main supplier of goods (limestone, clay, fly ashes, slag) and services (maintenance).

Capital goods

Evaluation status

Not relevant, explanation provided

Metric tonnes 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

We perform our estimations according to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance developed by WBCSD Cement Sustainability Initiative. According to the mentioned Guidance, for a cement company, the scope 3 emissions related to capital goods are less than 0.5% of the total emissions. For this reason, we evaluate this category not relevant for Cementir

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

Evaluation status

Relevant, not yet calculated

Metric tonnes 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

The emissions related to Fuel-and-energy-related activities are relevant for Cementir Group. For this reason, in 2020, Cementir started to monitor the CO₂ emissions of 55% of top Group suppliers (representing approx. 40% of the total purchases by value in 2019) through the CDP supply chain program. Through this monitoring activity, we will calculate the CO₂ emission of our main supplier of fuel and energy (petcoke, coal, alternative fuels used in the kilns)

Upstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Metric tonnes 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

The emissions related to Upstream transportation and distribution are relevant for Cementir Group. For this reason, in 2020, Cementir started to monitor the CO₂ emissions of 55% of top Group suppliers (representing approx. 40% of the total purchases by value in 2019) through the CDP supply chain program. Through this monitoring activity, we will calculate the CO₂ emission of our main supplier of transportation of raw materials and fuels (road transportation and sea carrier).

Waste generated in operations

Evaluation status

Not relevant, explanation provided

Metric tonnes 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

We perform our estimations according to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance developed by the Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development (WBCSD). According to the mentioned Guidance, the following category (see below) are not considered relevant for cement companies (see "Relevance of Scope 3 categories to the cement sector" in the mentioned Guidance and the Corporate Value Chain Scope 3 Accounting and Reporting Standard): - Waste generated in operations; - Upstream leased assets; - Use of sold products; - End of life of sold products; - Downstream leased assets; - Franchises; - Investments.

Business travel

Evaluation status

Not relevant, explanation provided

Metric tonnes 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

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 4.000 total employees), moreover, starting from January 2020, due to the new 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. Due to the mentioned reasons, the Group decided to focus the analysis on other more relevant categories.

Employee commuting

Evaluation status

Not relevant, explanation provided

Metric tonnes 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

Most employees live close to the plants. Moreover, starting from January 2020, due to the new 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. Due to the mentioned reasons, the Group decided to focus the analysis on other more relevant categories.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes 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

We perform our estimations according to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance developed by the Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development (WBCSD). According to the mentioned Guidance, the following category (see below) are not considered relevant for cement companies (see "Relevance of Scope 3 categories to the cement sector" in the mentioned Guidance and the Corporate Value Chain Scope 3 Accounting and Reporting Standard): - Waste generated in operations; - Upstream leased assets; - Use of sold products; - End of life of sold products; - Downstream leased assets; - Franchises; - Investments.

Downstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Metric tonnes 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

The emissions related to Downstream transportation and distribution are relevant for Cementir Group. For this reason, in 2020, Cementir started to monitor the CO2 emissions of 55% of top Group suppliers (representing approx. 40% of the total purchases by value in 2019) through the CDP supply chain program. Through this monitoring activity, we will calculate the CO2 emission of our main supplier of distribution of cement to the customers (road transportation and sea carrier).

Processing of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes 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

We perform our estimations according to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance developed by the Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development (WBCSD). Below we report the comment provided by the Guidance about this type of emissions. Cement is processed to produce concrete products. Scope 3 covers downstream processes that include mixing of concrete ingredients (water, aggregates, additives and admixtures). It excludes further concrete product processes such as its implementation in buildings or engineering works. Estimates of the scale of the emissions from this category show that the main source of GHG emissions during downstream processes is electricity consumption at the mixing plant. Typically these represent less than 2% of Scope 1 and 2 emissions for cement manufacturing.

Use of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes 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

We perform our estimations according to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance developed by the Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development (WBCSD). According to the mentioned Guidance, the following category (see below) are not considered relevant for cement companies (see "Relevance of Scope 3 categories to the cement sector" in the mentioned Guidance and the Corporate Value Chain Scope 3 Accounting and Reporting Standard): - Waste generated in operations; - Upstream leased assets; - Use of sold products; - End of life of sold products; - Downstream leased assets; - Franchises; - Investments.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes 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

We perform our estimations according to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance developed by the Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development (WBCSD). According to the mentioned Guidance, the following category (see below) are not considered relevant for cement companies (see "Relevance of Scope 3 categories to the cement sector" in the mentioned Guidance and the Corporate Value Chain Scope 3 Accounting and Reporting Standard): - Waste generated in operations; - Upstream leased assets; - Use of sold products; - End of life of sold products; - Downstream leased assets; - Franchises; - Investments.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes 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

We perform our estimations according to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance developed by the Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development (WBCSD). According to the mentioned Guidance, the following category (see below) are not considered relevant for cement companies (see "Relevance of Scope 3 categories to the cement sector" in the mentioned Guidance and the Corporate Value Chain Scope 3 Accounting and Reporting Standard): - Waste generated in operations; - Upstream leased assets; - Use of sold products; - End of life of sold products; - Downstream leased assets; - Franchises; - Investments.

Franchises

Evaluation status

Not relevant, explanation provided

Metric tonnes 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

We perform our estimations according to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance developed by the Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development (WBCSD). According to the mentioned Guidance, the following category (see below) are not considered relevant for cement companies (see "Relevance of Scope 3 categories to the cement sector" in the mentioned Guidance and the Corporate Value Chain Scope 3 Accounting and Reporting Standard): - Waste generated in operations; - Upstream leased assets; - Use of sold products; - End of life of sold products; - Downstream leased assets; - Franchises; - Investments.

Investments

Evaluation status

Not relevant, explanation provided

Metric tonnes 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

We perform our estimations according to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance developed by the Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development (WBCSD). According to the mentioned Guidance, the following category (see below) are not considered relevant for cement companies (see "Relevance of Scope 3 categories to the cement sector" in the mentioned Guidance and the Corporate Value Chain Scope 3 Accounting and Reporting Standard): - Waste generated in operations; - Upstream leased assets; - Use of sold products; - End of life of sold products; - Downstream leased assets; - Franchises; - Investments.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Metric tonnes 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

We perform our estimations according to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance developed by the Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development (WBCSD). According to the mentioned Guidance, the following category is not considered relevant for cement companies

Other (downstream)

Evaluation status

Not relevant, explanation provided

Metric tonnes 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

We perform our estimations according to the Cement Sector Scope 3 GHG Accounting and Reporting Guidance developed by the Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development (WBCSD). According to the mentioned Guidance, the following category is not considered relevant for cement companies

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	282485	CO2 equivalent emissions deriving from biomass combustion for the cement production.

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

0.00642

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

7791965

Metric denominator

unit total revenue

Metric denominator: Unit total

1211828000

Scope 2 figure used

Location-based

% change from previous year

5.76

Direction of change

Decreased

Reason for change

In 2019, the intensity figure decreased to 6.42 Kg CO2/EUR from 6.82 Kg CO2/EUR (value related to 2018). From 2018 to 2019, the total CO2 emissions decreased while the turnover increased. This led to a decrease also in the ratio.

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	0.9297	0.8896	0.0795
Cement equivalent	0.7614	0.7285	0.0651
Cementitious products	0.7668	0.7337	0.0656
Low-CO2 materials	0.5482	0.5235	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	2202900
Belgium	1322426
Sweden	6165
France	1724
Turkey	2216600
Egypt	324561
Malaysia	346335
China	484218
Norway	13706
United Kingdom of Great Britain and Northern Ireland	454
United States of America	242761

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	2222772
Belgium Region	1324150
Turkey CEM BU	2215490
Asia Pacific	830553
Egypt CEM BU	324561
North American Region	242761
Waste Management BU	1565

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	2191403	57.05276	9.978676
Belgium_1	1309219	50.595716	3.481121
Turkey_1	1028894	38.42608	27.216053
Turkey_2	496095	41.799189	26.691284
Turkey_3	472528	38.664642	39.237156
Turkey_4	208960	40.575994	43.010445
Malesia	346335	4.591978	101.09
China	484218	30.535	117.104
US_1	123645	39.96	-76.72
US_2	118131	31.54	-97.14
Egypt	324561	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	7099110
Concrete Production	38574
Aggregates and other products (concrete prefabricated products)	22601
Waste Management and Recycling	1565

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	7099110	6792738	
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)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)
Denmark	117653	58989	325906	251927
Belgium	88517	78073	306527	194299
Sweden	532	0	2073	2073
France	284	284	1125	0
Turkey	247032	190678	350895	0
Egypt	28677	38769	61538	0
Malaysia	40778	25123	46871	0
China	79772	49746	79771	0
Norway	250	2680	6764	440
United Kingdom of Great Britain and Northern Ireland	1986	1049	3018	0
United States of America	24633	24902	48394	0

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	118435	61670
Belgium Region	88801	78357
Turkey CEM BU	243400	187874
Asia Pacific Region	120550	74869
Egypt CEM BU	28677	38769
North American Region	24633	24902
Waste BU	5618	3852

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	115827	58074
Belgium_1	84433	67640
Turkey_1	117165	90437
Turkey_2	53938	41633
Turkey_3	49516	38220
Turkey_4	20461	15793
Malesia	40778	25123
China	79772	49746
US_1	10963	12427
US_2	11874	10679
Egypt_1	28677	38769

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	607028	448542
Concrete Production	5076	5899
Aggregates and other products (concrete prefabricated products)	12392	12392
Waste Management and Recycling	5618	3852

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	607028	448542	
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?

Decreased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	18121	Decreased	0.23	The consumption of renewable electricity increased of 35.729 Mwh in 2019 comparing 2018. To estimate the emissions saved, we multiply this amount of renewable electricity for the average CO2 intensity of electricity purchased in 2019 (507kg CO2/MWh). In this way, we estimate a CO2 saving of 18,121 metric tons CO2e
Other emissions reduction activities	35340	Decreased	0.42	initiatives implemented in 2019 as described in C4.3b. Installation of a new main burner to improve clinker quality and reduce the clinker factor of the white cement produced in the plant located in Malesya and replacement of compressors used in the packaging area of the egyptian plant.
Divestment	0	No change		
Acquisitions	0	No change		
Mergers	0	No change		
Change in output	376145	Decreased	4.61	In 2019, comparing 2018, the clinker production decreased of 404.587 ton. Multiplying this amount with average emission factor of Cemntir in 2019 (0.9297 as reported in the question CE6.11), this clinker reduction generated a reduction in CO2 of about 376,145
Change in methodology	0	No change		
Change in boundary	0	No change		
Change in physical operating conditions	0	No change		
Unidentified	0	No change		
Other	59612	Increased		Difference that is not allocated to any specific reason because related to inherent interdependencis between variuos different levers.

C7.9b

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

Location-based

C8. Energy

C8.1

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

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

C8.2

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

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

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	803400	7412162	8215562
Consumption of purchased or acquired electricity	<Not Applicable>	278939	953944	1232883
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>	1082339	8366106	9448445

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)	8073005
Consumption of purchased or acquired electricity	<Not Applicable>	1188424
Consumption of other purchased or acquired energy (heat, steam and/or cooling)	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	9261429

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.

Fuels (excluding feedstocks)

Coal

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

2047629

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>

Emission factor

96.85012

Unit

kg CO2 per GJ

Emissions factor source

IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas.

Comment

Weighted average emission factor for Coal used for cement production

Fuels (excluding feedstocks)

Petroleum Coke

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

3425348

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>

Emission factor

95.53116

Unit

kg CO2 per GJ

Emissions factor source

IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas.

Comment

Weighted average emission factor for Petcoke used for cement production

Fuels (excluding feedstocks)

Natural Gas

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

493849

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>

Emission factor

56.10128

Unit

kg CO2e per GJ

Emissions factor source

IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas.

Comment

Fuels (excluding feedstocks)

Other, please specify (Refuse-derived fuel)

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

1280144

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>

Emission factor

86.59865

Unit

kg CO2e per GJ

Emissions factor source

IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas.

Comment

Weighted average emission factor (without biomass) for RDF (Refuse-derived fuel) used for cement production.

Fuels (excluding feedstocks)

Animal/Bone Meal

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

308329

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>

Emission factor

93.28553

Unit

kg CO2e per GJ

Emissions factor source

IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas.

Comment

Weighted average emission factor (without biomass) for Meat and Bone meal used for cement production.

Fuels (excluding feedstocks)

Tires

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

119756

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>

Emission factor

90.6

Unit

kg CO2e per GJ

Emissions factor source

IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas.

Comment

Weighted average emission factor (without biomass) for tyres used for cement production.

Fuels (excluding feedstocks)

Lignite Coal

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

97891

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>

Emission factor

101.1

Unit

kg CO2e per GJ

Emissions factor source

IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas.

Comment

Weighted average emission factor for lignite used for cement production.

Fuels (excluding feedstocks)

Fuel Oil Number 1

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

88133

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>

Emission factor

76.24173

Unit

kg CO2e per GJ

Emissions factor source

IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas.

Comment

Weighted average emission factor for fuel oil used for cement production, aggregate production and concrete production (consumption for aggregate production and

concrete is a very limited part of the total)

Fuels (excluding feedstocks)

Fuel Oil Number 2

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

68904

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>

Emission factor

73.3

Unit

kg CO2e per GJ

Emissions factor source

IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas.

Comment

Weighted average emission factor for used oil used for cement production.

Fuels (excluding feedstocks)

Gas Oil

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

31851

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>

Emission factor

74.1

Unit

kg CO2e per GJ

Emissions factor source

IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas.

Comment

Weighted average emission factor for gas oil used for cement production.

Fuels (excluding feedstocks)

Vegetable Oil

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

24832

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>

Emission factor

110

Unit

kg CO2e per GJ

Emissions factor source

IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas.

Comment

Weighted average emission factor (without biomass) for sunflower oil used for cement production.

Fuels (excluding feedstocks)

Diesel

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

133103

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>

Emission factor

74

Unit

kg CO2e per GJ

Emissions factor source

IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas.

Comment

Weighted average emission factor for diesel consumption in all companies of the Group

Fuels (excluding feedstocks)

Other, please specify (paper)

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

43892

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>

Emission factor

200

Unit

kg CO2e per GJ

Emissions factor source

IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas.

Comment

Weighted average emission factor (without biomass) for paper used for cement production.

Fuels (excluding feedstocks)

Plastics

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

16299

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>

Emission factor

111.01638

Unit

kg CO2e per GJ

Emissions factor source

IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas.

Comment

Weighted average emission factor (without biomass) for rubber and plastics used for cement production.

Fuels (excluding feedstocks)

Other, please specify (Other residual fuels used (mainly Dry Sewage Sludge))

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

35601

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>

Emission factor

56.9637

Unit

kg CO2e per GJ

Emissions factor source

IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas.

Comment

Weighted average emission factor (without biomass) for all other fuels (mainly Dry Sewage Sludge in the cement production) used in the Group

C-CE8.2c

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

Fuels (excluding feedstocks)

Coal

Heating value

LHV

Total MWh fuel consumed for cement production activities

2047629

MWh fuel consumed at the kiln

2047629

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>

Fuels (excluding feedstocks)

Petroleum Coke

Heating value

LHV

Total MWh fuel consumed for cement production activities

3425348

MWh fuel consumed at the kiln

3425348

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>

Fuels (excluding feedstocks)

Fuel Oil Number 1

Heating value

LHV

Total MWh fuel consumed for cement production activities

86121

MWh fuel consumed at the kiln

86121

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>

Fuels (excluding feedstocks)

Lignite Coal

Heating value

LHV

Total MWh fuel consumed for cement production activities

97891

MWh fuel consumed at the kiln

97891

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>

Fuels (excluding feedstocks)

Gas Oil

Heating value

LHV

Total MWh fuel consumed for cement production activities

31851

MWh fuel consumed at the kiln

31851

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>

Fuels (excluding feedstocks)

Liquefied Petroleum Gas (LPG)

Heating value

LHV

Total MWh fuel consumed for cement production activities

226

MWh fuel consumed at the kiln

0

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

226

MWh fuel consumed for the self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Fuels (excluding feedstocks)

Natural Gas

Heating value

LHV

Total MWh fuel consumed for cement production activities

488237

MWh fuel consumed at the kiln

488237

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>

Fuels (excluding feedstocks)

Other, please specify (District Heating)

Heating value

LHV

Total MWh fuel consumed for cement production activities

2253

MWh fuel consumed at the kiln

0

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

2253

MWh fuel consumed for the self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Fuels (excluding feedstocks)

Fuel Oil Number 2

Heating value

LHV

Total MWh fuel consumed for cement production activities

68904

MWh fuel consumed at the kiln

68904

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>

Fuels (excluding feedstocks)

Plastics

Heating value

LHV

Total MWh fuel consumed for cement production activities

16299

MWh fuel consumed at the kiln

16299

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>

Fuels (excluding feedstocks)

Tires

Heating value

LHV

Total MWh fuel consumed for cement production activities

119756

MWh fuel consumed at the kiln

119756

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>

Fuels (excluding feedstocks)

Other, please specify (Paper)

Heating value

LHV

Total MWh fuel consumed for cement production activities

43892

MWh fuel consumed at the kiln

43892

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>

Fuels (excluding feedstocks)

Animal/Bone Meal

Heating value

LHV

Total MWh fuel consumed for cement production activities

308329

MWh fuel consumed at the kiln

308329

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>

Fuels (excluding feedstocks)

Dried Sewage Sludge

Heating value

LHV

Total MWh fuel consumed for cement production activities
14533

MWh fuel consumed at the kiln
14533

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>

Fuels (excluding feedstocks)
Other, please specify (Refuse derived fuel)

Heating value
LHV

Total MWh fuel consumed for cement production activities
1280144

MWh fuel consumed at the kiln
1280144

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>

Fuels (excluding feedstocks)
Vegetable Oil

Heating value
LHV

Total MWh fuel consumed for cement production activities
24832

MWh fuel consumed at the kiln
24832

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>

Fuels (excluding feedstocks)
Other, please specify (Other fuels used inside the cement plants)

Heating value
LHV

Total MWh fuel consumed for cement production activities
16760

MWh fuel consumed at the kiln
0

MWh fuel consumed for the generation of heat that is not used in the kiln
16760

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	422730	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	422730	0
Steam	0	0

C8.2e

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

Sourcing method

Other, please specify (the information has been provided by the Suppliers / Utilities)

Low-carbon technology type

Wind

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

Denmark

MWh consumed accounted for at a zero emission factor

146659

Comment

Sourcing method

Other, please specify (the information has been provided by the Suppliers / Utilities)

Low-carbon technology type

Solar

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

Denmark

MWh consumed accounted for at a zero emission factor

11732

Comment

Sourcing method

Other, please specify (the information has been provided by the Suppliers / Utilities)

Low-carbon technology type

Biomass

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

Denmark

MWh consumed accounted for at a zero emission factor

43998

Comment

Sourcing method

Other, please specify (the information has been provided by the Suppliers / Utilities)

Low-carbon technology type

Hydropower

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

Denmark

MWh consumed accounted for at a zero emission factor

34220

Comment

Sourcing method

Other, please specify (the information has been provided by the Suppliers / Utilities)

Low-carbon technology type

Solar

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

Belgium

MWh consumed accounted for at a zero emission factor

2448

Comment

Sourcing method

Other, please specify (the information has been provided by the Suppliers / Utilities)

Low-carbon technology type

Wind

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

Belgium

MWh consumed accounted for at a zero emission factor

28394

Comment

Sourcing method

Other, please specify (the information has been provided by the Suppliers / Utilities)

Low-carbon technology type

Hydropower

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

Belgium

MWh consumed accounted for at a zero emission factor

3807

Comment

Sourcing method

Other, please specify (the information has been provided by the Suppliers / Utilities)

Low-carbon technology type

Biomass

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

Belgium

MWh consumed accounted for at a zero emission factor

5168

Comment

Sourcing method

Other, please specify (the information has been provided by the Suppliers / Utilities)

Low-carbon technology type

Hydropower

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

Sweden

MWh consumed accounted for at a zero emission factor

2073

Comment

Sourcing method

Other, please specify (the information has been provided by the Suppliers / Utilities)

Low-carbon technology type

Nuclear

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

Belgium

MWh consumed accounted for at a zero emission factor

154482

Comment

the electricity coming from nuclear sources has not been accounted as renewable in the other questions (for example in the 8.2a we did not include as renewable the nuclear electricity)

Sourcing method

Other, please specify (the information has been provided by the Suppliers / Utilities)

Low-carbon technology type

Nuclear

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

Denmark

MWh consumed accounted for at a zero emission factor

15318

Comment

the electricity coming from nuclear sources has not been accounted as renewable in the other questions (for example in the 8.2a we did not include as renewable the nuclear electricity)

C9. Additional metrics

C9.1

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

Description

Energy usage

Metric value

23.5

Metric numerator

Alternative fuel consumption for cement production

Metric denominator (intensity metric only)

total fuel consumption for cement production

% change from previous year

17.5

Direction of change

Increased

Please explain

Utilization of alternative fuels for thermal energy production in place of non-renewable fossil fuels. In 2019, 23.5% of the thermal energy needed in the cement production process was generated from alternative fuels. In 2018 the percentage was 20.0%. By 2030, the Group will increase the proportion of alternative fuels in the fuel mix to 77% to produce grey cement and 6% for white cement. The aforementioned targets have been differentiated per each plant and mid-term targets have 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	The Cementir Group developed a new type of cement (FUTURECEM™) responsible for fewer CO2 emissions (from 30% to 50% lower CO2 content). 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 40% 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. FUTURECEM™ technology will contribute largely to the Group's goal of reducing CO2 emissions by an average 30% per ton of cement by 2030. From 2014-2019, the Cementir Group, participated together with researcher institutions and a range of stakeholders and Customers from 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™ has been 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). In the 2020-2022, the Group planned an investment of 500.000 EUR for the production of 350.000 ton of FUTURECEM™. Starting from 2023, the annual production is expected to grow year by year reaching the 1 million ton in 2027.

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%		Since 1990, Aalborg Portland has delivered district heating to the Municipality of Aalborg. In order to produce cement, raw materials such as limestone and sand must be burned at temperatures of up to 1500°C. Due to this high temperature process, the Aalborg Portland cement factory has enormous supplies of excess heat. One of the main sources of waste heat is the flue gas streams from the white kilns. The solution to this energy loss was to implement a heat recovery system, in which the flue gasses from the five white kilns of Aalborg plant are utilized in heat exchanger installations to transfer the thermal energy from the flue gas to Aalborg's district heating network. The Aalborg plant recovers excess 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 2019, Aalborg Portland delivered about 1.6 million GJ of energy to the Municipality of Aalborg. The annual CO2 savings related to this heat recovery system has been estimated in 150,000 ton. The calculation is based on the amount of CO2, that is not be emitted from the local coal-fired power station, because the total needs are partially covered by the heat coming from Aalborg plant. Basically, in this way, the energy that has already been produced during the cement production is recycled and delivered to the district heating so that the energy does not have to be produced twice. According to the engineering project developed by the Aalborg plant and the Municipality, Aalborg plant could improve the supply of energy of additional 0.6 TJ. The grey cement kiln of Aalborg Portland is currently not equipped with waste heat recovery. In the industrial Plan 2020-2022, we included the heat recovery project for the kiln n.87 in the Aalborg plant. This heat can be delivered to the district heating system (see 2.4a for details)
Low clinker cement	Full/commercial-scale demonstration	≤20%		The Cementir Group developed a new type of cement (FUTURECEM™) responsible for fewer CO2 emissions (from 30% to 50% lower CO2 content). 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 40% 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. FUTURECEM™ technology will contribute largely to the Group's goal of reducing CO2 emissions by an average 30% per ton of cement by 2030. In MArch 2020, Bureau Veritas certified the compliance of FutureCEM™ with the requirements in cement standard (EN 197-1:2011). In the 2020-2022, the Group planned an investement of 500.000 EUR for the production of 350.000 ton of FUTURECEM™ . Starting from 2023, the annual production is expected to grown year by year reaching the 1 million ton in 2027.

C10. Verification

C10.1

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

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	No emissions data provided

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

Cementir Holding NV_Opinion RdS_ENG_DEF_04.03.20_ML .pdf
 Cementir Holding NV_Opinion RdS_ENG_DEF_04.03.20_ML_.pdf

Page/ section reference

Limited assurance from external Auditor (PricewaterhouseCoopers) on the 2019 Sustainability Report. The Sustainability Report and related assurance is also available on Corporate Website https://www.cementirholding.com/sites/default/files/documenti/2020-03/2019%20Sustainability%20Report_final.pdf

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

Cementir Holding NV_Opinion RdS_ENG_DEF_04.03.20_ML .pdf
2019 Sustainability Report_final.pdf

Page/ section reference

Limited assurance from external Auditor (PricewaterhouseCoopers) on the 2019 Sustainability Report. See pag 110 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/2020-03/2019%20Sustainability%20Report_final.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	Other, please specify (Energy Consumptionsn declared in the Sustainability Report)	ISAE3000	all the energy consumptions (fossil fuels, Alternative fuels, electricity) have been certified by the external auditor PWC. See pag 110 of Sustainability Report Cementir Holding NV_Opinion RdS_ENG_DEF_04.03.20_ML .pdf 2019 Sustainability Report_final.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

49.2

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1 2019

Period end date

December 31 2019

Allowances allocated

2957176

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO2e

3540659

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?

In order to support the transition to the phase 4 of the new European Trading System which will come into force in 2021 bringing more strict CO2 free credit allocation, Cementir Group has developed a strategy which is focused on the following pillars:

- Reduction of CO2 emissions per ton of cement of about 30% by 2030
- Fossil fuels and clinker replacement with alternative fuels and alternative mineral additives
- Development of low-carbon cement (FUTURECEM™).
- Energy recovery (Aalborg Portland recovers surplus heat from production to supply district heating to the citizens of Aalborg. In 2019 the district heating covered the needs of 36.000 households)

To guarantee the development of the Group's Climate Change Strategy and to achieve the Group's Sustainability Targets, in the 2020 - 2022 Industrial Plan we have planned an investment of 100 million € which will include, among other things: construction of an 8 MW wind farm to adequately supply the Aalborg plant; • waste heat recovery in our Danish and Turkish plants; expansion of district heating to 50,000 families in Aalborg; increase in the use of alternative fuels from the current 40% to 80% in Belgium.

For example, in Denmark, we prepare a feasibility study for addressing an opportunity for conversion from fossil fuels to gas on the main burners of the kilns in Aalborg Portland. Pre-analysis has been carried to estimate the investment needed for the establishment of a gas line to Aalborg plant and the installation of multi-fuel main burners for all kilns. The Pre-analysis assumes a partial conversion whereby basic heating oil is replaced by gas, plus the consumption of gas in specific period of the year.

A partial conversion could led to a reduction of about 27.000 ton of CO2, yearly. Assuming a CO2 price of 30 EUR/ton, this reduction could mean 800.000 € of saving, yearly. This is an exmapple of how Cementir is using internal price on carbon for addressing the investments.

C11.2

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

No

C11.3

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

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 systems 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)

30

Variance of price(s) used

We apply an uniform pricing. The same price (30 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

For example, in Denmark, we prepare a feasibility study for addressing an opportunity for conversion from fossil fuels to gas on the main burners of the kilns in Aalborg Portland. Pre-analysis has been carried to estimate the investment needed for the establishment of a gas line to Aalborg plant and the installation of multi-fuel main burners for all kilns. The Pre-analysis assumes a partial conversion whereby basic heating oil is replaced by gas, plus the consumption of gas in specific period of the year. A partial conversion could led to a reduction of about 27.000 ton of CO2, yearly. Assuming a CO2 price of 30 EUR/ton, this reduction could mean 800.000 € of yearly saving. This is an example of how Cement is using the internal price on carbon for navigating GHG regulations and addressing the investments versus initiative with a lower carbon impact

C12. Engagement

C12.1

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

- Yes, our suppliers
- Yes, our customers
- Yes, other partners in the value chain

C12.1a

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

Type of engagement

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 55% of top Group suppliers (representing approx. 40% of the total purchases by value) through the CDP supply chain program)

% of suppliers by number

55

% total procurement spend (direct and indirect)

40

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

0

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) in order to promote the development of a sustainable cement business. For example, we decided to investigate the CO2 emissions of our suppliers in order to understand how to reduce them and how to develop mutually beneficial projects (for Cementir and the Suppliers). For this reason, 55 suppliers (40% 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. Once collected and measured the Scope 3 emissions, a measure of success will be the progressive decreasing of our Scope 3 emissions in order to aligning Cementir GHG emission with 1.5°C emissions scenarios . Cementir set to develop a Science Based Target within 2021.

Impact of engagement, including measures of success

In this way Cementir could: - Monitor the scope 3 emission of its supply chain - Monitor the action undertaken by the supplier to manage the climate change risk - Spreading awareness of suppliers on climate change. - Collaborate in Cementir Holding's reduction for Scope 3 emissions Cementir started the project in 2020. According to the past results of the CDP Supply Chain program, on average, the 67% of the suppliers involved provide the information requested. Therefore, in absence of previous data, we consider this as a challenging threshold of success for the first year. Once collected and measured the Scope 3 emissions, a measure of success will be the progressive decreasing of our Scope 3 emissions in order to aligning Cementir GHG emission with 1.5°C emissions scenarios . Cementir set to develop a Science Based Target within 2021.

Comment

C12.1b

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

Type of engagement

Collaboration & innovation

Details of engagement

Other, please specify (Development and testing of a low carbone cement (FUTURECEM™))

% of customers by number

1

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

0

Portfolio coverage (total or outstanding)

<Not Applicable>

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

The Cementir Group developed a new type of cement (FUTURECEM™) responsible for fewer CO2 emissions (from 30% to 50% lower CO2 content). 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. From 2014-2019, the Cementir Group, participated together with researcher institutions and a range of stakeholders and Customers from 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. FUTURECEM™ has been developed by our R&D department located in Denmark, for this reason the group of customers selected were danish customers from construction industry. In this project, FUTURECEM™ has been 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. Furthermore, similar performance as conventional concrete in terms of workability, strengths and other key parameters were achieved. In order to evaluate durability in aggressive environments, a number of long-term exposure sites have been established. Investigations at the Technical University of Denmark have shown that concrete based on FUTURECEM™ technology is resistant to corrosion by chloride from sea water or freeze-thaw salt as well, shows good carbonation resistance and resistance to alkali-silica reaction as well as no degradation by sulphate attack.

Impact of engagement, including measures of success

The 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 first cement based on FUTURECEM™ in accordance to European cement standard EN 197-1:2011. From September 2019 to Spring 2020, the trial productions and internal sampling/testing within Group's company were carried out for concrete applications. From Q3 2020 deliveries are planned to selected group of Customers while the full market launch is expected by the end of 2020. In 2020-2022 period, the Group has planned the sales of 350.000 ton of FUTURECEM™. Starting from 2023, the annual production is expected to grow year by year reaching 1 Million ton in 2027. The measures of success will be the respect of the sales planned for FUTURECEM™.

Type of engagement

Other, please specify (Green survey of Europe main market areas, in order to understand the dynamics of the green transition and Cementir role)

Details of engagement

Other, please specify (Survey along the Building Construction value chain to stakeholders in a range of sections, including precast, ready-mixed concrete, contractors, industrial mortar producers, as well as , architects, engineering firms, real estate, and government.)

% of customers by number

5

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

0

Portfolio coverage (total or outstanding)

<Not Applicable>

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

A sample of prioritized customers and stakeholders has been selected by our Regions Nordic & Baltic and Belgium (both regions combined account for more the half to the total turnover of the Group). We decided to launch a green survey along the Building Construction value chain to stakeholders in a range of sections, including precast, ready-mixed concrete, contractors, industrial mortar producers, as well as prescribers, architects, engineering firms, real estate, and government. The focus of our analysis was the North Europe (Scandinavia, France, Belgium, Netherlands). The goal of the survey was to understand the dynamics of the green transition and Cementir role. In particular, which role the FUTURECEM™ technology could play in the future

Impact of engagement, including measures of success

Between 2018 and 2019, we perform a survey to explore and figure out the status of the green transition in in North Europe (Scandinavia, France, Belgium, Netherlands), 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. A sample of prioritized customers and few stakeholders has been selected. We decided to launch a green survey along the Building Construction value chain to stakeholders in a range of sections, including precast, ready-mixed concrete, contractors, industrial mortar producers, as well as prescribers, architects, engineering firms, real estate, and government. The expected outcomes of this deeper green investigation will provide the input required to develop our Sustainable growth strategy and which role the FUTURECEM™ technology will play in the future. As explained in other part of the questionnaire (for example the 2.4a), the Cementir Group developed a new type of cement (FUTURECEM™) responsible for fewer CO2 emissions (from 30% to 50% lower CO2 content). 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. FUTURECEM™ technology will contribute largely to the Group's goal of reducing CO2 emissions by an average 30% per ton of cement by 2030. In March 2020, Bureau Veritas certified the compliance of FUTURECEM™ with the requirements in cement standard (EN 197-1:2011). (see 2.4a for the details concerning FUTURECEM™). In 2020-2022 period, the Group has planned the sales of 350.000 ton of FUTURECEM™ . Starting from 2023, the annual production is expected to grown year by year reaching 1 Million ton in 2027. The measures of success will be the respect of the sales planned for FUTURECEM™.

Type of engagement

Education/information sharing

Details of engagement

Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

31

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

0

Portfolio coverage (total or outstanding)

<Not Applicable>

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

All products sold by Aalborg Portland (the danish subsidiary of Cementir) are supported by the Environmental Product Declarations (EPD). Cementir decided to adopt the EPD for all product sold by Aalborg Portland (AP) because AP is the most important Region in term of turnover. It accounts for the 31% of the total Group Revenues. We started to develop EPD using turnover as rationale for selecting the group of Customers

Impact of engagement, including measures of success

All products sold by Aalborg Portland (the Danish subsidiary of Cementir) are supported by the Environmental Product Declarations (EPD). 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 product, that are, among other, the global warming potential, the ozone depletion potential and the acidification potential. Cementir Group is developing the EPD for the product sold by belgium region, the second most important in term of turnover. Once the EPD for belgium products will be finalized, the 52% of the total turnover will be covered by EPD. The goal is to inform our Customers and made them aware about the environmental impact of the products and push all competitors to declare this kind of information about the products sold.

Type of engagement

Other, please specify (Recovery of heat from kiln to deliver district heating to Aalborg Municipality)

Details of engagement

Other, please specify (Since 1990, Aalborg Portland recovers waste heat from the kiln to deliver district heating to the Municipality. In 2019, we delivered about 1.6 million GJ of recovered energy. In 2020-2022, we will increase the total energy delivered.)

% of customers by number

1

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

0

Portfolio coverage (total or outstanding)

<Not Applicable>

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

In order to implement the heat recovery system, the Aalborg plant had to establish a long-standing cooperation with Aalborg Forsyning, the company in charge for the Aalborg District Heating. In 2019, Aalborg Portland delivered about 1.6 million GJ of recovered energy to the Municipality of Aalborg. According to the engineering project developed by the Aalborg plant and the Municipality, Aalborg plant could improve the supply of energy of additional 0.6 TJ.

Impact of engagement, including measures of success

Since 1990, Aalborg Portland has delivered district heating to the Municipality of Aalborg. In order to produce cement, raw materials such as limestone and sand must be burned at temperatures of up to 1500°C. Due to this high temperature process, the Aalborg Portland cement factory has enormous supplies of excess heat. One of the main

sources of waste heat is the flue gas streams from the white kilns. The solution to this energy loss was to implement a heat recovery system, in which the flue gasses from the five white kilns of Aalborg plant are utilized in heat exchanger installations to transfer the thermal energy from the flue gas to Aalborg's district heating network. The Aalborg plant recovers excess 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 2019, Aalborg Portland delivered about 1.6 million GJ of energy to the Municipality of Aalborg. The annual CO2 savings related to this heat recovery system has been estimated in 150,000 ton. 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 Aalborg plant. Basically, in this way, the energy that has already been produced during the cement production is recycled and delivered to the district heating so that the energy does not have to be produced twice. According to the engineering project developed by the Aalborg plant and the Municipality, Aalborg plant could improve the supply of energy of additional 0.6 TJ. As of July 2020, only the kilns reserved for the production of white cement are equipped to recover heat and deliver it to the district heating. The kiln reserved for the production of grey cement is not equipped with waste heat recovery, but the installation of the equipment is possible. In the industrial Plan 2020-2022, we included the heat recovery project for this kiln. The heat recovered from this kiln will be delivered to the district heating system (see 2.4a for details). Measure of success will be the improving of energy delivered according to the engineering project developed by the Aalborg plant and the Municipality, jointly.

C12.1d

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

Cutting our CO2 emissions is a priority of Cementir Group, but clearly, we cannot achieve a carbon neutral future alone. For this reason, 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.

The other partners in the value chain involved are: Competitors, Research Academy and other international organization actively involve in the building of a sustainable economy (i.e. CDP), local communities.

For example, Cementir is a member of the Global Cement and Concrete Association (GCCA), with the aim of fostering innovation and collaboration with industry associations and inspiring architects, engineers and innovators across the globe and along the length of the built environment value chain. Through the GCCA, in 2019, Cementir joined Innovandi, a network connecting cement industry and scientific institutions to drive new ways of working and innovations.

Thought the GCCA, Cementir aims to document and improve the sustainability performance of the global cement and concrete sectors. To help achieve this objective, the as GCCA's Full Member, Cementir is required to:

- Set targets for the five pillars of the GCCA Sustainability Charter (Climate Change and Energy, Health & Safety, Circular Economy, Social Responsibilities, Environment and Nature)
- Publish company level sustainability performance
- Report standardised plant level sustainability data to the GCCA through an external service provider
- Encourage the implementation of the pillars of the Charter across the value chain.

In 2019, the Group became member of the Carbon Disclosure Project (CDP) in order to improve the Group's accountability for climate change and joined the ACT Project. The ACT - Assessing low Carbon Transition initiative, co-founded by the French Energy and Environmental Agency (ADEME) and the CDP, is an accountability framework and provides methodologies to assess how companies' strategies and actions are contributing to the Paris Agreement mitigation goals of remaining considerably below a 2°C temperature increase above pre-industrial levels. The objective of the project is to develop an assessment methodology for the cement sector to drive companies to act and lead them on a relevant low-carbon pathway in terms of their climate strategy, business model, product and services, investments, operations, GHG emissions and GHG management.

Cementir is also member of the European Cement Research Academy (ECRA). Cementir R&D Director in the Technical Advisory Board of ECRA. ECRA's most important research projects are related to the carbon capture and storage (CCS) technology. The goal of the project is to examine the technical and economic feasibility of this technology as a potential application in the cement industry. Cementir lays strong emphasis on the global perspective of this research and also on sustainability. This implies that not only CO2 emissions as such, but also the huge energy demand for operating CCS plants will be taken into account. ECRA's CCS project comprises five phases. Phases I, II and III have been completed and phase IV is currently underway, in which the possibility of initiating an industrial-scale oxyfuel kiln is being examined.

Cementir is involved in the periodical seminars and workshops arranged by ECRA to exchange views with people from different organization and countries. For example, in 2020 ECRA arranged seminars on the following topics: CO2 Value-Chains: Prerequisites for a Future CO2 Economy; The Future Composition of Cement and Concrete: Resources in a Material-Constrained World and State-of-the-Art Calciner Technology.

C12.3

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

- Direct engagement with policy makers
- Trade associations
- Other

C12.3a

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

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Other, please specify (Denmark's parliament adopted a new climate law to cut emissions 70% by 2030 (baseline 1990))	Support	In 2019, through Aalborg Portland, the Danish legal entity of Cementir, the Group was involved in the most ambitious CO2 reduction project sponsored by a national government. In autumn 2019 the Danish government made a broad political agreement with the main political parties to define a binding 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. This climate partnership, led by Aalborg Portland and composed of the main refining, chemicals and food Danish companies, 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 reduction. Please note that Aalborg Portland operations generate about the 40% of Cementir Revenues	As of April 2020, key policy recommendations are in progress. The climate partnership is working on: - 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.)

C12.3b

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

Yes

C12.3c

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

Trade association

The European Cement Association (CEMBUREAU), the representative organisation of the cement industry in Europe

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Cementir is member of The European Cement Association (CEMBUREAU) the representative organisation of the cement industry in Europe. Cementir is in the Board of the Association and in the Liaison Committee of the Cement industries in the European Union. It is also active member on several CEMBUREAU working groups focused on Climate Change and Energy. CEMBUREAU's Carbon Neutrality Roadmap sets out the cement industry's ambition to reach net zero emissions along the cement and concrete value chain by 2050. The Roadmap looks at how CO2 emissions can be reduced by acting at each stage of the value chain – clinker, cement, concrete, construction and (re)carbonation – to achieve zero net emissions by 2050. It quantifies the role of each technology in providing CO2 emissions savings, making concrete political and technical recommendations to support this objective. To get there, the sector will need decisive political action from the EU will be required in some key areas, including: the development of a pan-European CO2 transportation and storage network; decisive action on circular economy to support the use of non-recyclable waste and biomass waste in cement production; ambitious policies to reduce European building's CO2 footprint, based on a life-cycle approach, that incentivise the market uptake of low-carbon cements; a level playing field on carbon, regulatory certainty and an ambitious industrial transformation agenda. By 2030, CEMBUREAU aspires to be in line with the Paris Agreement's two degrees scenario, reducing CO2 emissions by 30% for cement and 40% down the value chain.

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

Cementir is member of The European Cement Association (CEMBUREAU) the representative organisation of the cement industry in Europe. Cementir is in the Board of the Association and in the Liaison Committee of the Cement industries in the European Union. It is also active member on several CEMBUREAU working groups focused on Climate Change and Energy. For example, R&D Director of Cementir is active member of Task Force "ETS Phase IV". The task force of Cembureau that developed the position of the association concerning the future evolution EU Emissions Trading System. The EU ETS works on the 'cap and trade' principle. Within the cap, companies receive or buy emission allowances which they can trade with one another as needed. After each year a company must surrender enough allowances to cover its emissions. We are currently in Phase III of the EU-ETS, which runs from 2013-2020. Phase IV of the EU-ETS, which will apply post-2020, is now being debated at EU level.

C12.3e

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

The quarry excavated in Belgium are managed according to the "Life in Quarry Project". Operating a quarry leads to the creation of temporary or permanent environments which have become rare in Belgium, such as cliffs, rocky or sandy surfaces, landslides, temporary stretches of water, chalk grasslands or sparse meadows. These habitats, generated by mining activity, can be of considerable interest from an ecosystem point of view as they enable the appearance and development of populations of pioneer species with a high biological value. Quarries can play a fundamental role in regulating green infrastructure in landscapes. In particular, when they are located in areas near urban centres, they can constitute important green corridors that animal species can use as transition zones (especially in the case of migratory species). The objective of the Life in Quarries project is to develop a methodology that makes it possible to optimise the biodiversity hosting capacity of quarries in Belgium. The project aims to implement biodiversity management measures during quarrying through dynamic management, and to rehabilitate the quarry at the end of extraction in order to stabilise the habitat. The Life in Quarries project is funded by the European Commission.

C12.3f

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

The Sustainability Committee monitors directly the activity supported and developed by the Cementir representatives worldwide.

For example, The Committee is quarterly updated concerning the commitment of Cementir on carbon related public policy and concerning any relevant trend or upcoming legislation concerning climate change. The activities performed by the trade associations participated by Cementir, as CEMBUREAU and GCCA and the other engagements with policy makers (as that one with Denmark Government) are quarterly reported to Sustainability Committee. In this way the Committee can evaluate the consistency of the activities performed with Cementir Climate Change Strategy.

In addition, the Group COO and Group CEO (both of them inside the Sustainability Committee) are directly involved in specific association as GGCA and they are informed anytime important matter arise.

Moreover, we set-up the Sustainability Working Group (SWG), composed by the COO, Group Chief Sales, Group Chief Internal Audit Office and the Head of Nordic & Baltic Region. The SWG act as the operational arm of the sustainability committee. Among other responsibilities, the SWG ensures 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.

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 voluntary sustainability report

Status

Complete

Attach the document

2019 Sustainability Report_final.pdf

Page/Section reference

Pag. 12 - Sustainability Targets set by Cementir Pag. 40 - The Sustainability Governance system in Cementir Pag. 58 - Climate change Strategy Pag. 59 - Climate change targets Pag. 65 - CO2 emissions Pag. 67 - Other air emissions (NOx, SOx, Dust, CO, VOC, HCL)

Content elements

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

Other, please specify (Green Investment planned in 2020-2022 Industrial Plan and Commitment on Carbon-related public policy)

Comment

Cementir publishes an annual Sustainability Report. The Report is compliant with GRI Sustainability Reporting Standards, 2016 (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 25 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 25 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 2019 actual status. Cementir plans to reduce CO2 emissions per ton of cement of about 30% by 2030. The target will be achieved through greater use of alternative fuels (77% of the total to produce grey cement within 2030) and renewable resources, reduction of thermal consumption and the clinker ratio of cements. 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. To guarantee the development of the Group's Climate Change Strategy and to achieve the Group's Sustainability Targets, in the 2020 - 2022 Industrial Plan we have planned investments for EUR 100 million.

Publication

Other, please specify (In the Corporate Website there is a dedicated section to Sustainability. See www.cementirholding.com)

Status

Complete

Attach the document

Page/Section reference

Section Sustainability of www.cementirholding.com (see "Our idea of future", "Strategy for Climate Change", "Sustainability Governance", "what's new")

Content elements

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

Comment

In the Corporate website is available a short description of the topics described in details in the Sustainability Reports (The 25 Sustainability Targets, Climate Change Strategy, FUTURECEM and so on). In addition, in Corporate website are periodically illustrated specific projects implemented by the plants (see the section "what's new". For example the energy saving project realized in Aalborg plant in 2019 (see <https://www.cementirholding.com/en/media/whats-new/cementir-holding-innovation-production>). Aalborg Portland, in collaboration with consultants and manufacturers of machinery, has designed an ingenious system of pipes and wires that pass the surplus heat from kiln to kiln. The new supply network is constructed of more than 250 meters of fully insulated pipes with a diameter ranging from 500 to 1,800 mm, a total of approx. 70 tons of pipes and about 60 tons of load bearing steel structures. The first white kiln has been switched on the new network, and the preliminary calculations show that Aalborg Portland now saves approx. 6,400 MWh per year. It has thus motivated to scale the project to the other four white cement kilns with a total savings potential of as much as 30 GWh per year. This corresponds to more than 7,800 Danish households' average electricity consumption per year or 3,500 tons of coal.

C15. Signoff

C-FI

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

C15.1

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

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

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

Please confirm below

I have read and accept the applicable Terms