PT Semen Indonesia (Persero) Tbk

2025 CDP Corporate Questionnaire 2025

Word version

Important: this export excludes unanswered questions
This document is an export of your organization's CDP questionnaire response. It contains all data points for questions that are answered or in progress. There may be questions or data points that you have been requested to provide, which are missing from this document because they are currently unanswered. Please note that it is your responsibility to verify that your questionnaire response is complete prior to submission. CDP will not be liable for any failure to do so.
Read full terms of disclosure

.

Contents

C1. Introduction

(1.1) In which language are you submitting your response?

Select from:

☑ English

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

Select from:

☑ IDR

(1.3) Provide an overview and introduction to your organization.

(1.3.2) Organization type

Select from:

☑ State owned organization

(1.3.3) Description of organization

SIG is State-Owned Enterprise which focus on integrated building materials and solutions provider. SIG's shareholder consist of Republic of Indonesia hold 51.2% of shares and public hold 48.8% of shares.
[Fixed row]

(1.4) State the end date of the year for which you are reporting data. For emissions data, indicate whether you will be providing emissions data for past reporting years.

(1.4.1) End date of reporting year

12/30/2024

(1.4.2) Alignment of this reporting period with your financial reporting period

Select from:

☑ Yes

(1.4.3) Indicate if you are providing emissions data for past reporting years

Select from:

☑ Yes

(1.4.4) Number of past reporting years you will be providing Scope 1 emissions data for

Select from:

☑ 3 years

(1.4.5) Number of past reporting years you will be providing Scope 2 emissions data for

Select from:

☑ 3 years

(1.4.6) Number of past reporting years you will be providing Scope 3 emissions data for

Select from:

☑ Not providing past emissions data for Scope 3

[Fixed row]

(1.4.1) What is your organization's annual revenue for the reporting period?

36186127000000

(1.5) Provide details on your reporting boundary.

(1.5.1) Is your reporting boundary for your CDP disclosure the same as that used in your financial statements?

Select from:

☑ No

(1.5.2) How does your reporting boundary differ to that used in your financial statement?

We use operational control for our Sustainability Report and CDP Disclosure, Therefore, it encompasses all plants over which we exercise direct operational control; our cement plants.
[Fixed row]

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

ISIN code - bond

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ Yes

(1.6.2) Provide your unique identifier

IDA0000978B7 and IDA0001290B6

ISIN code - equity

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ Yes

(1.6.2) Provide your unique identifier

1E0001827041

CUSIP number

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ No

Ticker symbol

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ Yes

(1.6.2) Provide your unique identifier

SMGR

SEDOL code

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ No

LEI number

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ No

D-U-N-S number

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ No

Other unique identifier

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ No

[Add row]

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

Select all that apply

☑ Indonesia

(1.12) Which part of the concrete value chain does your organization operate in?

Select all that apply

☑ Limestone quarrying

☑ Clinker production

☑ Portland cement manufacturing

☑ Blended cement

☑ Alternative 'low CO2' cementitious materials production

(1.24) Has your organization mapped its value chain?

	Value chain mapped	Primary reason for not mapping your upstream value chain or any value chain stages	Explain why your organization has not mapped its upstream value chain or any value chain stages
	Select from: ☑ No, but we plan to do so within the next two years	*Select from:* ☑ Lack of internal resources, capabilities, or expertise (e.g., due to organization size)	*SIG has planned to mapped this value chain in the next few years due to prioritization iniatitive internally*

[Fixed row]

(1.24.1) Have you mapped where in your direct operations or elsewhere in your value chain plastics are produced, commercialized, used, and/or disposed of?

	Plastics mapping	Primary reason for not mapping plastics in your value chain	Explain why your organization has not mapped plastics in your value chain
	Select from: ☑ No, and we do not plan to within the next two years	*Select from:* ☑ Other, please specify :The only value chain that involve plastic is where our cement product are packed. Our cement bag are mainly come from kraft cement bag.	*The bag for cement packaging are purchased from our supplier and It is mainly coming from kraft cement bag.*

[Fixed row]

C2. Identification, assessment, and management of dependencies, impacts, risks, and opportunities

(2.1) How does your organization define short-, medium-, and long-term time horizons in relation to the identification, assessment, and management of your environmental dependencies, impacts, risks, and opportunities?

Short-term

(2.1.1) From (years)

0

(2.1.3) To (years)

3

(2.1.4) How this time horizon is linked to strategic and/or financial planning

We have conducted climate-related scenario planning, including risk, opportunity, and time boundaries using TCFD Framework. The time-horizon for short-term (0-3 years) is defined as it generally corresponds with the company's operational and business cycle.

Medium-term

(2.1.1) From (years)

4

(2.1.3) To (years)

10

(2.1.4) How this time horizon is linked to strategic and/or financial planning

We have conducted climate-related scenario planning, including risk, opportunity, and time boundaries using TCFD Framework. The time-horizon for medium-term (4-10 years) is defined as it generally corresponds with the company's investment or capital allocation cycle.

Long-term

(2.1.1) From (years)

11

(2.1.2) Is your long-term time horizon open ended?

Select from:

☑ Yes

(2.1.4) How this time horizon is linked to strategic and/or financial planning

We have conducted climate-related scenario planning, including risk, opportunity, and time boundaries using TCFD Framework. The time-horizon for long-term (>10 years) is defined as it generally corresponds with the company's broader climate transition/physical impacts.
[Fixed row]

(2.2) Does your organization have a process for identifying, assessing, and managing environmental dependencies and/or impacts?

	Process in place	Dependencies and/or impacts evaluated in this process
	Select from: ☑ Yes	*Select from:* ☑ Both dependencies and impacts

[Fixed row]

(2.2.1) Does your organization have a process for identifying, assessing, and managing environmental risks and/or opportunities?

	Process in place	Risks and/or opportunities evaluated in this process	Is this process informed by the dependencies and/or impacts process?
	Select from: ☑ Yes	*Select from:* ☑ Both risks and opportunities	*Select from:* ☑ Yes

[Fixed row]

(2.2.2) Provide details of your organization's process for identifying, assessing, and managing environmental dependencies, impacts, risks, and/or opportunities.

Row 1

(2.2.2.1) Environmental issue

Select all that apply

☑ Climate change

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Impacts

☑ Risks

(2.2.2.3) Value chain stages covered

Select all that apply

☑ Direct operations

(2.2.2.4) Coverage

Select from:

☑ Full

(2.2.2.7) Type of assessment

Select from:

☑ Qualitative and quantitative

(2.2.2.8) Frequency of assessment

Select from:

☑ Annually

(2.2.2.9) Time horizons covered

Select all that apply

☑ Long-term

(2.2.2.10) Integration of risk management process

Select from:

☑ Integrated into multi-disciplinary organization-wide risk management process

(2.2.2.11) Location-specificity used

Select all that apply

☑ National

(2.2.2.12) Tools and methods used

Enterprise Risk Management

☑ Enterprise Risk Management

Other

☑ External consultants

☑ Materiality assessment

☑ Scenario analysis

(2.2.2.13) Risk types and criteria considered

Policy

☑ Carbon pricing mechanisms

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ Customers

☑ Investors

☑ Regulators

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ No

(2.2.2.16) Further details of process

SIG alongside an external consultant utilized TCFD Framework to assessed Climate Risk and opportunities. First, the consultant introduced our company with different types of climate-related risk and opportunities that could be relevant to the cement industry according to peers benchmark. Next, together with the consultant, we measure materiality and likelihood of risks using 2 scenarios: Net-zero 2050 scenario and current existing policy scenario. These scenarios represent a high transitional risk future and high physical risk future. On this phase, it is figured that carbon tax as policy risk is very likely to happened and is material to the cement industry since cement production emits a significant amount of CO2 from raw materials processing and fuel combustion (direct) but also electricity (indirect) and there is an emerging regulation in Indonesia to control carbon emission by initiating an imposition of CO2 taxes generates a high level key risk that will disrupt cost transformation program being held by SIG. This regulation has not yet been applied to the cement industry yet since cement industry carbon cap is yet to be set. However, If in the future the cap is set, the cement industry will most likely be looking at a hefty tax if we go above the carbon cap. Lastly, we calculate the potential business and financial impact. After analysing the likelihood, materiality, and potential impact. carbon tax policy risk is a priority to the company.

Row 2

(2.2.2.1) Environmental issue

Select all that apply

☑ Climate change

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

(2.2.2.3) Value chain stages covered

Select all that apply

☑ Direct operations

(2.2.2.4) Coverage

Select from:

☑ Full

(2.2.2.7) Type of assessment

Select from:

☑ Qualitative and quantitative

(2.2.2.8) Frequency of assessment

Select from:

☑ Annually

(2.2.2.9) Time horizons covered

Select all that apply

☑ Short-term

☑ Medium-term

(2.2.2.10) Integration of risk management process

Select from:

☑ Integrated into multi-disciplinary organization-wide risk management process

(2.2.2.11) Location-specificity used

Select all that apply

☑ National

(2.2.2.12) Tools and methods used

Enterprise Risk Management

☑ Enterprise Risk Management

Other

☑ External consultants

☑ Materiality assessment

☑ Scenario analysis

(2.2.2.13) Risk types and criteria considered

Market

☑ Other market, please specify :Increasing of Fuel Cost

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ Customers

☑ Regulators

☑ Suppliers

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ No

(2.2.2.16) Further details of process

SIG alongside an external consultant utilized TCFD Framework to assessed Climate Risk and opportunities. First, the consultant introduced our company with different types of climate-related risk and opportunities that could be relevant to the cement industry according to peers benchmark. Next, together with the consultant, we measure materiality and likelihood of risks using 2 scenarios: Net-zero 2050 scenario and current existing policy scenario. These scenarios represent a high transitional risk future and high physical risk future. On this phase, market risk as part of the transition risk is also identified. On this phase, it is identified that increasing cost of fuels such as coal and diesel is material and very likely. Fuel cost took a major role in the company's cost structure, thus if fuel cost shows an increasing trend throughout the years, it will significantly impact the operational cost. Lastly, we assessed the potential business and financial impact. A substantial result in the materiality, likelihood, and impact assessment indicates that the increasing cost of fuel should be one of the prioritised market risk. To manage this risk, SIG diligently increase the substitution of fossil fuels with alternative fuels.

Row 3

(2.2.2.1) Environmental issue

Select all that apply

☑ Climate change

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

(2.2.2.3) Value chain stages covered

Select all that apply

☑ Direct operations

(2.2.2.4) Coverage

Select from:

☑ Full

(2.2.2.7) Type of assessment

Select from:

☑ Qualitative and quantitative

(2.2.2.8) Frequency of assessment

Select from:

☑ Annually

(2.2.2.9) Time horizons covered

Select all that apply

☑ Short-term

☑ Medium-term

(2.2.2.10) Integration of risk management process

Select from:

☑ Integrated into multi-disciplinary organization-wide risk management process

(2.2.2.11) Location-specificity used

Select all that apply

☑ National

(2.2.2.12) Tools and methods used

Other

☑ Scenario analysis

(2.2.2.13) Risk types and criteria considered

Market

☑ Other market, please specify :Increasing of Electricity Cost

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ Regulators

☑ Suppliers

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ No

(2.2.2.16) Further details of process

Using the same process as the previous risk, the second prioritized market risk is the increasing cost of electricity. This risk is very material for cement industry due to its contribution in the energy mix. It is also a highly probable due to the increse of energy sources utilized to generate electricity by PLN. The increase cost of electricity will certainly burden the operational cost of electricity. To manage this risk, SIG has gradually increase the contribution of renewable energy in its electricity mix using solar photovoltaics and hydro power plants. Not only that, SIG also re-use the waste heat from pre-heater to be converted into electricity (waste heat recovery power generation)

Row 4

(2.2.2.1) Environmental issue

Select all that apply

☑ Climate change

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Impacts

☑ Risks

(2.2.2.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Downstream value chain

(2.2.2.4) Coverage

Select from:

☑ Full

(2.2.2.7) Type of assessment

Select from:

☑ Qualitative and quantitative

(2.2.2.8) Frequency of assessment

Select from:

☑ As important matters arise

(2.2.2.9) Time horizons covered

Select all that apply

☑ Long-term

(2.2.2.10) Integration of risk management process

Select from:

☑ Integrated into multi-disciplinary organization-wide risk management process

(2.2.2.11) Location-specificity used

Select all that apply

☑ Local

(2.2.2.12) Tools and methods used

Other

☑ Scenario analysis

(2.2.2.13) Risk types and criteria considered

Acute physical

☑ Flood (coastal, fluvial, pluvial, ground water)

☑ Heavy precipitation (rain, hail, snow/ice)

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ Customers

☑ Employees

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ No

(2.2.2.16) Further details of process

In assessing physical risk, the company also works with the same consultant. First, we mapped out SIG key-assets to define key-locations and potential climate risk and opportunity of Indonesia cement sector. After defining the key-locations, current baseline risk levels are identified for each key-locations to know the level of risk exposure each location has and what activity of the risk drives the impact. From the baseline assessment, it is identified that most of the key-locations are highly exposed with sea-level rise and flood risk (urban and river flood). The major impact of this risk includes damage to assets. Therefore, the company has insure the assets and some key-assets is equipped with early warning system.

Row 5

(2.2.2.1) Environmental issue

Select all that apply

☑ Climate change

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Risks

(2.2.2.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Downstream value chain

(2.2.2.4) Coverage

Select from:

☑ Full

(2.2.2.7) Type of assessment

Select from:

☑ Qualitative and quantitative

(2.2.2.8) Frequency of assessment

Select from:

☑ As important matters arise

(2.2.2.9) Time horizons covered

Select all that apply

☑ Long-term

(2.2.2.10) Integration of risk management process

Select from:

☑ Integrated into multi-disciplinary organization-wide risk management process

(2.2.2.11) Location-specificity used

Select all that apply

☑ Local

(2.2.2.12) Tools and methods used

Other

☑ Scenario analysis

(2.2.2.13) Risk types and criteria considered

Chronic physical

☑ Changing temperature (air, freshwater, marine water)

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ Customers

☑ Employees

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ No

(2.2.2.16) Further details of process

In assessing physical risk, the company also works with the same consultant. First, we mapped out SIG key-assets to define key-locations and potential climate risk and opportunity of Indonesia cement sector. After defining the key-locations, current baseline risk levels are identified for each key-locations to know the level of risk exposure each location has and what activity of the risk drives the impact. From the baseline assessment, it is identified that most of the key-locations are also exposed with rising temperature risk even though not as high as flood risk. This risk impacted productivity of the employee greatly and could potentially derived to manufacturing delays or reduction in production and generate revenue loss. Therefore, the company has managed this risk with sufficient health and safety management system to protect workers from heat stress.

Row 6

(2.2.2.1) Environmental issue

Select all that apply

☑ Water

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

(2.2.2.3) Value chain stages covered

Select all that apply

☑ Direct operations

(2.2.2.4) Coverage

Select from:

☑ Full

(2.2.2.7) Type of assessment

Select from:

☑ Qualitative and quantitative

(2.2.2.8) Frequency of assessment

Select from:

☑ As important matters arise

(2.2.2.9) Time horizons covered

Select all that apply

☑ Short-term

(2.2.2.10) Integration of risk management process

Select from:

☑ Integrated into multi-disciplinary organization-wide risk management process

(2.2.2.11) Location-specificity used

Select all that apply

☑ Local

(2.2.2.12) Tools and methods used

Other

☑ Scenario analysis

(2.2.2.13) Risk types and criteria considered

Acute physical

☑ Drought

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ Employees

☑ Local communities

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ No

(2.2.2.16) Further details of process

Water risk is assessed using the same process as the other physical risk. However, during the baseline risk level, the company alongside the consultant utilized WRI Aqueduct map to identify which of our key-locations are on the water-stressed zone. There are several location in water-stressed zone and based on both scenario, it is very likely that risk of draught would increase to a moderate level. Therefore, SIG is managing this risk by reducing consumption and reducing waterwithdrawal through water recycling.

Row 7

(2.2.2.1) Environmental issue

Select all that apply

☑ Climate change

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Opportunities

(2.2.2.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Downstream value chain

(2.2.2.4) Coverage

Select from:

☑ Full

(2.2.2.7) Type of assessment

Select from:

☑ Qualitative and quantitative

(2.2.2.8) Frequency of assessment

Select from:

☑ Annually

(2.2.2.9) Time horizons covered

Select all that apply

☑ Short-term

☑ Medium-term

☑ Long-term

(2.2.2.11) Location-specificity used

Select all that apply

☑ Local

(2.2.2.12) Tools and methods used

Other

☑ Scenario analysis

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ Customers

☑ Investors

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ No

(2.2.2.16) Further details of process

During all of the risk assessment process, not only do we identify negative impact but we also identify positive impact that could potentially leverage our business and finance performance while still contributing to the environment. Development of low-emission products is a big opportunity in a climate-transition business ecosystem. The market of green portfolio segment is merging, that's why this opportunity could be a game-changer in the cement industry. To seize the opportunity, SIG has developed several types of green cement products and our 61% of our revenue derived from the sales of green cement.
[Add row]

(2.2.7) Are the interconnections between environmental dependencies, impacts, risks and/or opportunities assessed?

(2.2.7.1) Interconnections between environmental dependencies, impacts, risks and/or opportunities assessed

Select from:

☑ Yes

(2.2.7.2) Description of how interconnections are assessed

In Indonesia, a company must conduct an environmental impact assessment document prior to building a plant/factory. In preparing this document, the company identified dependencies and potential impact. At present, the company continuously monitor its resource need such as water, raw materials, fuel, etc. During risk and opportunities assessment using TCFD framework, the consultant compare the current dependencies and current condition of resources according to the key-locations. Companies' dependencies and resource are then simulated and forecasted using the net-zero 2050 scenarios and current existing policy scenario. As a result, there are several risk identified alongside its potential impacts and in defining risk-management efforts, the company has also identified opportunities. [Fixed row]

(2.3) Have you identified priority locations across your value chain?

(2.3.1) Identification of priority locations

Select from:

☑ Yes, we have identified priority locations

(2.3.2) Value chain stages where priority locations have been identified

Select all that apply

☑ Direct operations

(2.3.3) Types of priority locations identified

Sensitive locations

☑ Areas important for biodiversity

☑ Areas of limited water availability, flooding, and/or poor quality of water

(2.3.4) Description of process to identify priority locations

We conduct both assessment with consultant. First for the biodiversity, initial assessment was conducted using IBAT. The company submits the coordinate location of each plants. The consultant then assessed the level of biodiversity using IBAT. There are several indicators assessed: Distance to Key Biodiversity Area and number of biodiversity species. Each indicator generated scores, the more significant the results are the higher the score. The priority locations are the ones with the higher

score. The assessment for water availability utilized the WRI Aqueduct map to identify water-stressed areas. The locations that falls under the water-stress areas were then compared with their water dependencies. These locations then became the priority for a more ambitious water management. Lastly for the flood assessment, the company alongside the consultant mapped out the coordinate for each plant locations Then, we identified the proximity between the plants and the river/coast. Next, using the net-zero 2050 and current existing policy scenario, the likelihood of flood is identified. After, identifying which plants has the highest likelihood for flood, the key-plants were then prioritized based on revenue generated, assuming if the flood happens it will generate significant loss, not only from damaged assets, but from revenue loss and finally prioritized locations are identified.

(2.3.5) Will you be disclosing a list/spatial map of priority locations?

Select from:

☑ Yes, we will be disclosing the list/geospatial map of priority locations

(2.3.6) Provide a list and/or spatial map of priority locations

sustainability-report-sig-2024-final-04082025.pdf
[Fixed row]

(2.4) How does your organization define substantive effects on your organization?

Risks

(2.4.1) Type of definition

Select all that apply

☑ Quantitative

(2.4.2) Indicator used to define substantive effect

Select from:

☑ Direct operating costs

(2.4.3) Change to indicator

Select from:

☑ Absolute increase

(2.4.5) Absolute increase/ decrease figure

799000000000

(2.4.6) Metrics considered in definition

Select all that apply

☑ Time horizon over which the effect occurs

☑ Likelihood of effect occurring

(2.4.7) Application of definition

This effect derived from the carbon tax risk. However, the number deviates considerably since it was calculated using the estimated carbon tax rate at IDR 30.000 / t CO2 multiplied by the total tonnes of absolute emission, when it should be multiplied by the gap between the cap and the company's emission, but there are no set threshold for Indonesian cement industry yet.

Opportunities

(2.4.1) Type of definition

Select all that apply

☑ Quantitative

(2.4.2) Indicator used to define substantive effect

Select from:

☑ Other, please specify :Sales volume of green cement

(2.4.3) Change to indicator

Select from:

☑ % increase

(2.4.4) % change to indicator

Select from:

☑ 1-10

(2.4.6) Metrics considered in definition

Select all that apply

☑ Time horizon over which the effect occurs

(2.4.7) Application of definition

In the agenda of climate transition, SIG identified the opportunity to produce low-carbon/green cement products to meet the trend of green portofolio, competitive advantage, and to reduce carbon emission. By 2029, we projected an increase of 2% for low-carbon cement demand compared to 2024.

Risks

(2.4.1) Type of definition

Select all that apply

☑ Quantitative

(2.4.2) Indicator used to define substantive effect

Select from:

☑ Revenue

(2.4.3) Change to indicator

Select from:

☑ % decrease

(2.4.4) % change to indicator

Select from:

☑ 1-10

(2.4.6) Metrics considered in definition

Select all that apply

☑ Frequency of effect occurring

☑ Likelihood of effect occurring

(2.4.7) Application of definition

Several key-locations are identified as highly-likely for river or coastal flooding. annual revenue generated from plants impacted by coastal flood could potentially reduce on average by ~1-1,2% by 2050 and annual revenue generated from plants impacted by river flood could potentially reduce on average by ~0.7-1% by 2050

Risks

(2.4.1) Type of definition

Select all that apply

☑ Quantitative

(2.4.2) Indicator used to define substantive effect

Select from:

☑ Direct operating costs

(2.4.3) Change to indicator

Select from:

☑ % increase

(2.4.4) % change to indicator

Select from:

☑ 21-30

(2.4.6) Metrics considered in definition

Select all that apply

☑ Time horizon over which the effect occurs

(2.4.7) Application of definition

As the world transition away from coal, electricity and coal prices are expected to increase. Since in Indonesia, electricity is supplied by national power company (PLN) it will affect all of our cement plants. In the long-term, tariffs are expected to stabilize, with SIG experiencing a 20-40% increase in overall energy spending by 2050
[Add row]

(2.5) Does your organization identify and classify potential water pollutants associated with its activities that could have a detrimental impact on water ecosystems or human health?

(2.5.1) Identification and classification of potential water pollutants

Select from:

☑ Yes, we identify and classify our potential water pollutants

(2.5.2) How potential water pollutants are identified and classified

SIG continues to make efforts to save clean water and pay special attention to the management of water discharge that is returned to the river body. SIG collaborates with accredited laboratories to manage and monitor our water discharge quality routinely. The sampling report is submitted to regulatory body and other relevant parties. Throughout 2024, the quality of our water discharges were better than the quality standards stipulated in the Regulation of the Minister of Environment. The sampling method and quality testing have been carried out by accredited parties that comply with regulatory testing standards.
[Fixed row]

(2.5.1) Describe how your organization minimizes the adverse impacts of potential water pollutants on water ecosystems or human health associated with your activities.

Row 1

(2.5.1.1) Water pollutant category

Select from:

☑ Inorganic pollutants

(2.5.1.2) Description of water pollutant and potential impacts

The company rarely discharge water to river body. However if there are water to discharge, prior to discharging, the company assessed the water quality including inorganic pollutants. The inorganic pollutants include mercury, cadmium, copper, lead, ammonia, and sulfides. These pollutants if not maintained or minimized as few as possible could lead to toxicity and contaminations to body water which then could led to health issues.

(2.5.1.3) Value chain stage

Select all that apply

☑ Direct operations

(2.5.1.4) Actions and procedures to minimize adverse impacts

Select all that apply

☑ Beyond compliance with regulatory requirements

☑ Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

(2.5.1.5) Please explain

The company must comply with the national regulation of water discharge quality threshold. Thus, all of our cement plants are equipped with water treatment plant and waste-water treatment plant to process the water and to achieve water quality better than regulatory threshold. The WTP and WWTP are equipped with various treatment tools, such as filtration, osmosis, sedimentation, and others. After the water is processed a sample is taken to the laboratory to ensure that all the indicators are in acceptable or better quality compare to the national threshold.

Row 2

(2.5.1.1) Water pollutant category

Select from:

☑ Oil

(2.5.1.2) Description of water pollutant and potential impacts

The company rarely discharge water to river body. However if there are water to discharge, prior to discharging, the company assessed the water quality including oil pollutants. If not maintained or minimized as few as possible, this pollutant could lead to toxicity and contaminations to body water which then could led to health issues.

(2.5.1.3) Value chain stage

Select all that apply

☑ Direct operations

(2.5.1.4) Actions and procedures to minimize adverse impacts

Select all that apply

☑ Beyond compliance with regulatory requirements

☑ Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

(2.5.1.5) Please explain

The company must comply with the national regulation of water discharge quality threshold. Thus, all of our cement plants are equipped with water treatment plant and waste-water treatment plant to process the water and to achieve water quality better than regulatory threshold. The WTP and WWTP are equipped with various treatment tools, such as filtration, osmosis, sedimentation, and others. After the water is processed a sample is taken to the laboratory to ensure that all the indicators are in acceptable or better quality compare to the national threshold.
[Add row]

C3. Disclosure of risks and opportunities

(3.1) Have you identified any environmental risks which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?

Climate change

(3.1.1) Environmental risks identified

Select from:

☑ Yes, only within our direct operations

(3.1.2) Primary reason why your organization does not consider itself to have environmental risks in your direct operations and/or upstream/downstream value chain

Select from:

☑ Insufficient data

(3.1.3) Please explain

Through out the years, climate change has always been a material risk for cement industry, including 2024. since it is a 'hard to abate' industry. The climate change risk provides the most substantive effect on the organization and on section 2, we defined and described the potential for physical risk regarding climate change for our company. The long-term risk from climate change of rising temperature needed to be mitigated starting now. Thus, decarbonization will maintain to be a material topic for the company. First, Green House Gas (GHG) emission posed a major risk towards our company, strategically and operationally. SIG has a financial strategy initiative called Sustainability-linked loan (SLL). Our SLL is a loan agreement with 12 bank institutions where the interest rate is tied to predefined sustainability targets called Sustainable Performance Target (SPT) which is our annual carbon intensity emission targets. Thus, if SIG is able to achieve SPT or even perform a better carbon emission intensity, the interest rate would be discounted. However, if SIG is unable to achieve the SPT, there would be a penalty in the form of higher interest rate. Next, SIG ambitiously practice its decarbonizing initiatives to eventually go below the carbon cap set by the Indonesian government. Currently, the carbon cap and tax mechanism for cement industry is yet to be applied. However, the government has just finished the decarbonization roadmap for Indonesia cement industry. The carbon emission cap and tax mechanism is expected to be adopted in the next two or three years. Related to the operations, decarbonization initiatives directly impact to the production processes such as the amount of alternative fuel and material needed to be utilized, the amount of electricity consumed, the number of low-carbon cement products being produced, and others. This kind of changes would certainly effect the costs and revenue generation. SIG has identified the risk of climate change for direct operations. As for the upstream activities, we are still unable to conduct risk assessment due to insufficient data from the suppliers, since climate change is not yet a strategic issue for our suppliers.

Water

(3.1.1) Environmental risks identified

Select from:

☑ Yes, only within our direct operations

(3.1.2) Primary reason why your organization does not consider itself to have environmental risks in your direct operations and/or upstream/downstream value chain

Select from:

☑ Not an immediate strategic priority

(3.1.3) Please explain

Risk related to water also maintained to be the most material for cement industry, including for reporting year 2024. However, our priority towards water risk for this year is mostly driven by compliance and water consumption efficiency. We have water treatment plant facilities in our production site which main function is to processed used or waste water from cement production and sanity/office usage to be clean and process water. The clean and process water then can be re-used for water utility in the cement production or as clean water use in the office. While water discharge is processes through waste water treatment in order to comply and achieve waste water quality below the regulated threshold. Additionally, we acknowledged that some of our plants are located in the water-stress area based on Aqueduct WRI Map. Therefore, the company policy is to increase harvested rain-water to reduce water withdrawal from ground-water or surface water. The mean for harvesting rain-water is by building water pond or bozem in the production and mining site.
[Fixed row]

(3.1.1) Provide details of the environmental risks identified which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future.

Climate change

(3.1.1.1) Risk identifier

Select from:

☑ Risk1

(3.1.1.3) Risk types and primary environmental risk driver

Policy

☑ Carbon pricing mechanisms

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Direct operations

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ Indonesia

(3.1.1.9) Organization-specific description of risk

Cement production emits significant amount for carbon emission. Around 80% of the emission derived from direct processes such as the calcination process / raw material processing and burning of fuels (scope 1), 10-15% from purchase of electricity (scope 2) and 5% from scope 3. As a result, any mechanism for carbon control is an important risk management aspect to align our strategy and financial planning on a regular basis. Currently, there is an emerging regulation in Indonesia to control carbon emission, carbon tax. Carbon tax utilizes carbon cap mechanism where industries must comply to the carbon cap threshold (currently only available for coal power plant industries) or they must pay the carbon tax. This mechanism will eventually apply to cement sector and if the same carbon tax is deployed to the cement sector, SIG will have to pay IDR 30,000 for every metric ton of CO2 exceeding the carbon cap. Thus, carbon tax generates a key risk that will disrupt cost management in the company.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Increased indirect [operating] costs

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Long-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ Very likely

(3.1.1.14) Magnitude

Select from:

☑ High

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

This risk will affect indirect operational expenses due to increase of tax liability. The increased payment of tax will disrupt the amount of profit generated and the overall cashflows. However, the carbon tax is yet to be implemented to the cement sector as there is no cement sector decarbonisations roadmap yet and no carbon cap threshold set yet.

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ No

(3.1.1.26) Primary response to risk

Infrastructure, technology and spending

☑ Increase environment-related capital expenditure

(3.1.1.27) Cost of response to risk

2000000000000

(3.1.1.28) Explanation of cost calculation

This amount derived from the Annual General Meeting where 98,5% of shareholders agree that 80% of the cash-form Proceeds from Rights Issue will be allocated for the improvement of ESG and circular economy, which is around IDR 2.000.000.000.000. This amount is also reported to the Financial Services Authority of Indonesia

(3.1.1.29) Description of response

We have an allocation of ESG CAPEX of around IDR 2.000.000.000.000 until 2029. This CAPEX could only be specifically used for ESG mitigation efforts, especially decarbonization. For the past two year, ESG CAPEX utilization revolved around increasing alternative fuel capacity by upgrading or purchasing necessary facilities, including Hydrogen-rich Gas (HRG). This decarbonization efforts are taken to reduce the risk of carbon tax by complying to the carbon cap threshold if it is eventually set for the cement sector industry.

Water

(3.1.1.1) Risk identifier

Select from:

☑ Risk2

(3.1.1.3) Risk types and primary environmental risk driver

Acute physical

☑ Flooding (coastal, fluvial, pluvial, groundwater)

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Direct operations

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ Indonesia

(3.1.1.7) River basin where the risk occurs

Select all that apply

☑ Other, please specify :Pangkep, Cileungsi

(3.1.1.9) Organization-specific description of risk

Regarding water-related risk, flooding from either coastal, river, or urban is a material physical risk for the company. In 2024, precipitation through rain is becoming more frequent. Additionally, several plants of SIG (Narogong, Tonasa, and Cilacap) have a close distance with rivers and coastal. Although flood has never occurred towards the plant, the company has conducted some management efforts.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Decreased revenues due to reduced production capacity

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Long-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ About as likely as not

(3.1.1.14) Magnitude

Select from:

☑ Low

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

The risk of flood could potentially disrupt the production and distribution process of cement production and sever the assets of the company. Thus, declining the revenue and causing significant capital expenses for asset replacement or repairment.

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ No

(3.1.1.26) Primary response to risk

Policies and plans

☑ Increase insurance coverage

(3.1.1.29) Description of response

Since, the risk of flood is as likely as not. The first recommended response conducted by the company was to cover all assets with insurance. Next, the company has equipped several plants with early warning system to enhance operational continuity and preparedness and ensure safety.

Climate change

(3.1.1.1) Risk identifier

Select from:

☑ Risk3

(3.1.1.3) Risk types and primary environmental risk driver

Market

☑ Other market risk, please specify :Increase cost of fossil fuels and electricity

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Direct operations

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ Indonesia

(3.1.1.9) Organization-specific description of risk

Cement production is an energy-intensive process and cost of fuels and energy is significant to the cost structure of the company. With the climate transition, it is forecasted that fossil fuel such as coal and electricity will continuously become more expensive due to market and regulation shift towards climate transition. Therefore, this will significantly increase the company's operational expenses.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Increased direct costs

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Short-term

☑ Medium-term

☑ Long-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ Likely

(3.1.1.14) Magnitude

Select from:

☑ Medium-high

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

The risk of increased cost for fossil fuels and electricity would effect the operational expenditure significantly for the need of fuel and electricity purchases. Thus, this will also increase the production cost of cement, meaning adjustment for pricing is necessary and will lead to a challenging price competition with peers.

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ No

(3.1.1.26) Primary response to risk

Compliance, monitoring and targets

☑ Implementation of environmental best practices in direct operations

(3.1.1.29) Description of response

The company has established its Thermal Substitution Rate (TSR) target which drives decarbonization but also fossil fuel consumption reduction. In order to achieve the desired TSR, the company has gradually increase its alternative fuel consumption, which consist of biomass, refused-derived fuel, and industrial waste. Additionally, to increase capacity of alternative fuel consumption, the allocation of ESG CAPEX also allows the company to upgrade feeding facilities and purchase more alternative fuels.

Climate change

(3.1.1.1) Risk identifier

Select from:

☑ Risk4

(3.1.1.3) Risk types and primary environmental risk driver

Chronic physical

☑ Heat stress

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Direct operations

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ Indonesia

(3.1.1.9) Organization-specific description of risk

The trend of climate transition and global warming has significant impact towards industries. In our case, it is identified as risk of increasing temperature that will lead to heatwaves and effecting the employees' productivity as well as health and safety leading to heat stress.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Disruption in production capacity

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Long-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ Likely

(3.1.1.14) Magnitude

Select from:

☑ Medium

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

The heat stress would effect significantly on employees' productivity. Decrease in employees' productivity, would lead to decrease or delays in production capacity and even delays in distribution. This will certainly disrupt revenue generation. Not to mention, health claim from employee would increase due to heat affect on health and well-being.

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ Yes

(3.1.1.23) Anticipated financial effect figure in the long-term – minimum (currency)

610000

(3.1.1.24) Anticipated financial effect figure in the long-term – maximum (currency)

1200000

(3.1.1.25) Explanation of financial effect figure

This number derived from productivity loss per hour per 100 employees. The minimum amount derived from the Net Zero 2050 scenario while the maximum amount using the current existing scenario.

(3.1.1.26) Primary response to risk

Compliance, monitoring and targets

☑ Improve monitoring of direct operations

(3.1.1.29) Description of response

SIG has implemented several initiatives to reduce heat stress risk, such as 100% of the employees are allowed annual complete medical check up and applied health and safety measures related to working outdoors and around high-temperature equipment. Cooling facilities around plants and offices are available.
[Add row]

(3.1.2) Provide the amount and proportion of your financial metrics from the reporting year that are vulnerable to the substantive effects of environmental risks.

Climate change

(3.1.2.1) Financial metric

Select from:

☑ Assets

(3.1.2.4) Amount of financial metric vulnerable to physical risks for this environmental issue (unit currency as selected in 1.2)

10546000000000

(3.1.2.5) % of total financial metric vulnerable to physical risks for this environmental issue

Select from:

☑ 21-30%

(3.1.2.7) Explanation of financial figures

The financial figures are the total asset value of assets with high potential risk of flood (Cilacap Plant, Narogong Plant, and Tonasa Plant) and the percentage is the accumulated share of total asset value of those mentioned plants owned by the company.

Climate change

(3.1.2.1) Financial metric

Select from:

☑ OPEX

(3.1.2.2) Amount of financial metric vulnerable to transition risks for this environmental issue (unit currency as selected in 1.2)

9902430760040

(3.1.2.3) % of total financial metric vulnerable to transition risks for this environmental issue

Select from:

☑ 31-40%

(3.1.2.7) Explanation of financial figures

One of our material transition risk is the increasing cost of coal and electricity. Thus, the financial impact would be significant on the operational expenses for coal and electricity purchase. Our total cost for coal and electricity purchase in 2024 is IDR 9.940.430.760.040 or 34,6% of the company's total OPEX

Climate change

(3.1.2.1) Financial metric

Select from:

☑ Liabilities

(3.1.2.2) Amount of financial metric vulnerable to transition risks for this environmental issue (unit currency as selected in 1.2)

265142000000

(3.1.2.3) % of total financial metric vulnerable to transition risks for this environmental issue

Select from:

☑ 1-10%

(3.1.2.7) Explanation of financial figures

Other material transition risk is carbon pricing implementation through carbon tax. If carbon cap alongside carbon tax is implemented. This will cause substantial impact towards tax liabilities. For the provided figure of vulnerable financial metric, we compared the proportion of 'other tax liability' category (IDR 265.142.000.000) assuming the burden of carbon tax would be included in that category with the total short-term liability fee.
[Add row]

(3.2) Within each river basin, how many facilities are exposed to substantive effects of water-related risks, and what percentage of your total number of facilities does this represent?

Row 1

(3.2.1) Country/Area & River basin

Indonesia

☑ Other, please specify :Sungai Cileungsi, Sungai Pangkep, Nusakambangan Coast

(3.2.2) Value chain stages where facilities at risk have been identified in this river basin

Select all that apply

☑ Direct operations

(3.2.3) Number of facilities within direct operations exposed to water-related risk in this river basin

3

(3.2.4) % of your organization's total facilities within direct operations exposed to water-related risk in this river basin

Select from:

☑ 26-50%

(3.2.10) % organization's total global revenue that could be affected

Select from:

☑ 1-10%

(3.2.11) Please explain

For water-related risk, river/coastal flooding are deemed to be material and fall in revenue is one of the potential impact of the risk. Cilacap, Narogong, and Tonasa Plant are identified to be at risk of river/coastal flood due to its proximity to the river or coast. Therefore, the annual revenue generated from the impacted plant could potentially reduce on average by ~0,7-1% by 2050 and 1-1,8% by 2080, depending on the climate scenario
[Add row]

(3.3) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

	Water-related regulatory violations
	Select from: ☑ No

[Fixed row]

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

Select from:

☑ No, but we anticipate being regulated in the next three years

(3.5.4) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Currently, there is no specific regulation imposed regarding carbon pricing mechanism. However, the Government of Indonesia is gradually finishing decarbonization roadmap for each sectors, cement sector's roadmap had just finished this year but we are expecting for the launch in 2026 and carbon cap and tax implementation for cement industry in the next two or three years. As a state-owned enterprise, it is SIG purpose to support the government commitment to achieve the Enhanced National Determined Contribution while still contributing financial returns to the country as well. Thus, SIG established sustainability roadmap which integrates the business practices with ESG initiatives to achieve sustainable economics. The roadmap is consisted of three pillars: 1) Driving sustainable solutions and innovations The first pillar focused on how the company produce and promotes environmental contributions through continuous development of sustainable products and solutions, some products and solutions include: Non-OPC bulk cement: contributing to the environment by utilizing more environmentally friendly raw material and is specifically designed to suit consumers' specific need/characteristic for their projects Cement bag and PwrPro products: Lower carbon emission by up to 38% and has been awarded with green label from the Green Product Council Indonesia SpeedCreete: readymix solutions that sets and solidify the concrete in short time, perfect for road construction. Contributing to less carbon emission by reducing road congestion from road maintenance work due to the rapid setting time. ThruCreete: readymix product with the ability to absorb water, preventing puddles and flood. Ground Granulated Blast Furnace Slag (GBBFS): alternative material that can be combined with OPC cement to be a solid and durable concrete to reduce cement consumption in producing concrete Our green cement and products are produced with alternative raw material to reduce the carbon emission generated from clinker or cement processing. 2) Protecting The Environment We pledge to provide protection to each branch of environment, especially climate and energy. Our initiatives in managing climate and energy issues include: Decarbonization effort through: Gradual increase of alternative fuel consumption (e.g., biomass, RDF, and industrial waste) to substitute coal Gradual increase of alternative raw material to substitute clinker Utilizing Renewable Energy sources for electricity generation through solar photovoltaics and hydro power plants Converting waste heat from kiln and pre-heater to electricity through Waste Heat Recovery Power Generator (WHRPG) Energy management: Implementation of ISO 5001 Energy efficiency through Advanced Plant Controller improve efficiency of energy management which refers to Government Regulation No.70 of 2009 concerning Energy Conservation Manage coal and raw material quality standards to achieve optimum coal and raw material index Our waste management also contributes significantly towards energy generation and decarbonization through: Continuously enhance our waste management unit (Nathabumi) to expand its capacity and capability in delivering

industrial and municipal waste treatment through co-processing, where waste is utilized as heat energy in cement production Utilizing some of industrial waste such as fly ash, bottom ash, copper slag etc as alternative raw material for cement production. Our waste management unit also offers governments, industries, and communities a sustainable solution for handling waste, reducing reliance on practices that generate higher CO_2 emissions (e.g., uncontrolled burning or dumping). 3) Creating Value for People and Community Not only for the environment, we thrive to create positive impact for the community and society as well. In order to achieve this, we have several focus: Occupational Health and Safety Ethics & Compliance Employment Community Development By integrating those three pillars, executing all initiatives building those pillars, alongside proactive risk management, and consistent monitoring, SIG has equipped itself if the carbon tax were to be applied. Decarbonization remains to be the key-action to avoid tax liability caused by carbon tax and reduce any potential of environmental risk.

(3.6) Have you identified any environmental opportunities which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?

	Environmental opportunities identified
Climate change	*Select from:* ☑ Yes, we have identified opportunities, and some/all are being realized
Water	*Select from:* ☑ Yes, we have identified opportunities, and some/all are being realized

[Fixed row]

(3.6.1) Provide details of the environmental opportunities identified which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future.

Climate change

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp1

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Markets

☑ Increased availability of products with reduced environmental impact [other than certified products]

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Direct operations

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ Indonesia

(3.6.1.8) Organization specific description

As climate change becomes an emerging and trending topic, consumer preference would shift into a greener options. SIG has identified development and/or expansion of low-carbon cement products as its material opportunity and SIG has continuously develop and provide sustainable solutions with innovative products and services as stated in point C4.5a. With various option of sustainable products, in line with the global and Indonesia commitment towards climate mitigation and adaptation, a new value proposition will emerge for SIG as a leader in building material solution provider. This opportunity would potentially increase revenue, increase marketshare, and increase loyalty in climate-conscious customers.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Increased revenues resulting from increased demand for products and services

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Short-term

☑ Medium-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ Likely (66–100%)

(3.6.1.12) Magnitude

Select from:

☑ Medium

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

The development low carbon cement products will affect diversification of product deliver to the The development and expansion of low carbon cement products will affect diversification of product options to the consumer and cater to the climate-conscious customer as the climate transition topic is emerging. Most importantly, these products cater to infrastructure or property company to fulfil their green portfolio requirement. Thus, this opportunity is expected to increase revenue, increase market-share amongst green building developer, and increase loyalty for climate-conscious customer.

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ Yes

(3.6.1.17) Anticipated financial effect figure in the short-term - minimum (currency)

22418061657267

(3.6.1.23) Explanation of financial effect figures

The financial effect figures derived from anticipated revenue increase from the sales of green cement products. We have projected the % of demand increase for green cement products until 2029. Assuming pricing stays the same, the expected revenue derived selling price / ton times the expected ton sold.

(3.6.1.24) Cost to realize opportunity

20504124545226

(3.6.1.25) Explanation of cost calculation

The cost calculation derived from our internal data of production cost per ton of green cement products. The displayed number would be the total production cost of the expected ton of green cement product demand in 2029.

(3.6.1.26) Strategy to realize opportunity

To realize this opportunity, the company has several strategy: 1. Continuous R&D for low-carbon products SIG has continuously thrive to provide products that contributes to the environment while still maintaining its high quality. This achievement is supported with robust research and development processes. SIG also innovates and diversify its low-carbon products portfolio to ensure it caters to the varying needs of consumer and potentially opens the opportunity to a new market segment. 2. Proactively advocating to the respective government SIG alongside the Indonesia Cement Association actively dialogues with the national government to promote the utilization of green cement products in national projects and encourage developers to shift to more eco-friendly options. 3. Branding and Marketing SIG is proud to be the top Indonesian brand for cement and material. As cement manufacturing company with the largest marketshare in Indonesia. Acknowledging our strength, SIG starts reinvigorating Indonesia Pride and nationalism in marketing, which produced trust, comfort, and familiarity to the customer, making SIG brands as their top choice for cement products. Then, Top with displaying SIG efforts in decarbonizing efforts and its sustainability vision.

Water

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp1

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Markets

☑ Stronger competitive advantage

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Direct operations

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ Indonesia

(3.6.1.8) Organization specific description

SIG has also developed several climate-resilient products such as the earthquake-proof precised interlock brick up to the flood-solution thrucreete. Thus, parallel with climate-mitigation and adaptation effort from the consumer, climate-resilient products are potential to provide competitive advantage towards the company

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Increased revenues resulting from increased demand for products and services

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

☑ Long-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ More likely than not (50–100%)

(3.6.1.12) Magnitude

Select from:

☑ Medium-low

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

As an archipelago country, Indonesia is prone towards natural disasters and the long-term impact of climate change. Thus, we have developed and innovate climate-resilient products to enhance climate-resilient infrastructure. Thus, in the long term, the purchases from these products will increase revenue and diversify products portfolio

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ No

(3.6.1.26) Strategy to realize opportunity

To realize this opportunity, the company has several strategy: 1. Continuous R&D for climate-resilient products SIG has continuously thrive to provide products that contributes to the environment while still maintaining its high quality. This achievement is supported with robust research and development processes. SIG also innovates and diversify products portfolio to ensure it caters to the varying needs of consumer and potentially opens the opportunity to a new market segment. 2. Branding and Marketing SIG is proud to be the top Indonesian brand for cement and material. As cement manufacturing company with the largest marketshare in Indonesia. Acknowledging our strength, SIG starts reinvigorating Indonesia Pride and nationalism in marketing, which produced trust, comfort, and familiarity to the customer, making SIG brands as their top choice for cement products. Then, Top with displaying SIG sustainability vision and initiatives to create awareness of the climate-resilient products

Climate change

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp2

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Energy source

☑ Use of low-carbon energy sources

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Direct operations

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ Indonesia

(3.6.1.8) Organization specific description

SIG, through its waste management unit called Nathabumi is providing industrial and municipal waste treatment solutions through co-processing methods where the waste is burned inside our kiln which can then be used as a source of heat energy in the cement production process replacing the use of coal. In addition, some types of industrial waste such as fly ash, bottom ash, copper slag etc, can be used as an alternative raw material for cement. Currently the implementation of waste management is being duplicated as best practice into SIG facilities. This initiatives is being treated as one of the main focus and corporate risk in SIG to gain more efficiency.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Reduced direct costs

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Short-term

☑ Medium-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ Very likely (90–100%)

(3.6.1.12) Magnitude

Select from:

☑ Medium

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

To transition into low carbon cement production processes, SIG has developed new business unit called Nathabumi that focusing on the use of alternative fuel from industrial waste, biomass, and RDF. The new business unit will generate revenue from a new business streamline, while also reducing operational cost from using alternative fuels.

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ No

(3.6.1.25) Explanation of cost calculation

The cost to realize the opportunity is related to the capex for the expand the waste management facility, increasing the feeding capacity, storage facilities, etc. The capex is assumed to be spent gradually within 10 years to increase Thermal Substitution Rate (TSR)

(3.6.1.26) Strategy to realize opportunity

1. ESG CAPEX Allocation SIG has allocated ESG Capex around IDR 2 trillion to be spent for initiatives that support the achievement of sustainability. In the case of alternative fuels, allocation towards the business unit Nathabumi is provided to further increase the capacity of waste processing to be converted to fuel. Some key actions include: purchasing shredder for waste processing, purchasing dryer to ensure the quality of the waste.
[Add row]

(3.6.2) Provide the amount and proportion of your financial metrics in the reporting year that are aligned with the substantive effects of environmental opportunities.

Climate change

(3.6.2.1) Financial metric

Select from:

☑ Revenue

(3.6.2.2) Amount of financial metric aligned with opportunities for this environmental issue (unit currency as selected in 1.2)

22963389

(3.6.2.3) % of total financial metric aligned with opportunities for this environmental issue

Select from:

☑ 61-70%

(3.6.2.4) Explanation of financial figures

For 2024, our revenue generated from green cement products are 61% of the total revenue. our green cement products consist of bag cement products (PCC), green concrete products, and low-carbon bulk cement or non-OPC cement.
[Add row]

C4. Governance

(4.1) Does your organization have a board of directors or an equivalent governing body?

(4.1.1) Board of directors or equivalent governing body

Select from:

☑ Yes

(4.1.2) Frequency with which the board or equivalent meets

Select from:

☑ More frequently than quarterly

(4.1.3) Types of directors your board or equivalent is comprised of

Select all that apply

☑ Executive directors or equivalent

☑ Independent non-executive directors or equivalent

(4.1.4) Board diversity and inclusion policy

Select from:

☑ Yes, and it is publicly available

(4.1.5) Briefly describe what the policy covers

Our policy addressed diversity as the whole company and not just specifically for the Board. In our policy, it is stated that the company is committed to providing fair and equal employment opportunity in accordance with their functions and tasks to all the Board of Commissioners, Board of Directors and Employees. The company recruits workers, provides training, determines compensation, develop career paths, and determines other job requirements, regardless of relgion/belief background, race/ethnicity, personal relationships (friendship and kindship), skin color, nationality, gender (including pregnancy), age disability, veteran status or other special conditions that are protected by the applicable laws and regulations, while still using the criteria for ability, qualifications (such as education, experience, competence, etc) and other criteria related to work as the sole basis for all decisions relating to all Board of Commissioners (BOC), Board of Directors (BOD), Employees, and the Job Applicants. Currently we have one female in our boards of director as director of operations.

(4.1.6) Attach the policy (optional)

kebijakan-kesempatan-kerja-yang-adil.pdf
[Fixed row]

(4.1.1) Is there board-level oversight of environmental issues within your organization?

	Board-level oversight of this environmental issue
Climate change	*Select from:* ☑ Yes
Water	*Select from:* ☑ Yes
Biodiversity	*Select from:* ☑ Yes

[Fixed row]

(4.1.2) Identify the positions (do not include any names) of the individuals or committees on the board with accountability for environmental issues and provide details of the board's oversight of environmental issues.

Climate change

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply

☑ Chief Executive Officer (CEO)

☑ Chief Financial Officer (CFO)

☑ Chief Operating Officer (COO)

☑ Chief Procurement Officer (CPO)

☑ Other, please specify :Chief of Marketing and Branding, Chief of Business Development, Vice-CEO

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

☑ Board mandate

☑ Individual role descriptions

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

☑ Scheduled agenda item in every board meeting (standing agenda item)

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Reviewing and guiding the assessment process for dependencies, impacts, risks, and opportunities

☑ Overseeing reporting, audit, and verification processes

☑ Approving corporate policies and/or commitments

☑ Overseeing the setting of corporate targets

☑ Monitoring progress towards corporate targets

(4.1.2.7) Please explain

GHG emission including decarbonization is a part of all the Boards' Performance Index. Thus, climate change becomes a regular agenda and a focus in our business. Major initiatives are implemented to achieve decarbonization target, therefore policies and CAPEX has to be on the board's oversight. We also conducted GHG assurance with third-party consultant to be reported to bank institutions regarding the progress of Sustainability-Linked Loan.

Water

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply

☑ Chief Operating Officer (COO)

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

☑ Individual role descriptions

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

☑ Scheduled agenda item in every board meeting (standing agenda item)

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Monitoring progress towards corporate targets

☑ Overseeing and guiding major capital expenditures

(4.1.2.7) Please explain

Water is one of the material topic of environment, especially to industry such as ours. Monitoring each water component such as water withdrawal, consumption, and even discharge is done by the environment team of each plants, which then would be collected by environment team of the holding and is reported to the director of operation. Our company has a target of freshwater withdrawal reduction of 11,5% by 2030. The company has now achieve way above the target by 55% and is planning to refresh the target as soon as possible.

Biodiversity

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply

☑ Chief Operating Officer (COO)

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

☑ Board mandate

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

☑ Sporadic – agenda item as important matters arise

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Monitoring compliance with corporate policies and/or commitments

(4.1.2.7) Please explain

For biodiversity, according to the national regulations, our company has the obligations of conducting reclamation to every post-mined land that we own. Thus, each reclamation are continuously monitored and reported in the sustainability report. Beyond that, SIG has also identified species of flora and fauna that falls under IUCN red list around the plants of SIG and has conducted several initiatives to protect the whole ecosystem and biodiversity as explained in the sustainability report. [Fixed row]

(4.2) Does your organization's board have competency on environmental issues?

Climate change

(4.2.1) Board-level competency on this environmental issue

Select from:

☑ Yes

(4.2.2) Mechanisms to maintain an environmentally competent board

Select all that apply

☑ Having at least one board member with expertise on this environmental issue

(4.2.3) Environmental expertise of the board member

Experience

☑ Executive-level experience in a role focused on environmental issues

Water

(4.2.1) Board-level competency on this environmental issue

Select from:

☑ Yes

(4.2.2) Mechanisms to maintain an environmentally competent board

Select all that apply

☑ Having at least one board member with expertise on this environmental issue

(4.2.3) Environmental expertise of the board member

Experience

☑ Executive-level experience in a role focused on environmental issues

[Fixed row]

(4.3) Is there management-level responsibility for environmental issues within your organization?

	Management-level responsibility for this environmental issue
Climate change	*Select from:* ☑ Yes
Water	*Select from:* ☑ Yes
Biodiversity	*Select from:* ☑ Yes

[Fixed row]

(4.3.1) Provide the highest senior management-level positions or committees with responsibility for environmental issues (do not include the names of individuals).

Climate change

(4.3.1.1) Position of individual or committee with responsibility

Executive level

☑ Chief Executive Officer (CEO)

(4.3.1.2) Environmental responsibilities of this position

Dependencies, impacts, risks and opportunities

☑ Assessing future trends in environmental dependencies, impacts, risks, and opportunities

Engagement

☑ Managing public policy engagement related to environmental issues

Policies, commitments, and targets

☑ Measuring progress towards environmental corporate targets

☑ Setting corporate environmental policies and/or commitments

Strategy and financial planning

☑ Implementing the business strategy related to environmental issues

(4.3.1.4) Reporting line

Select from:

☑ Reports to the board directly

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ More frequently than quarterly

(4.3.1.6) Please explain

Climate issues through GHG emission reduction performance is a material topic in the cement industry, including our company. It is shown by how decarbonization is one of the key-performance index of all BoD. Therefore the highest senior management-level with responsibility to climate change is the CEO. GHG emission performance is always one of the agenda for Board meeting every months due to its importance on its achievement. The achivement of the target will affect BOD's performance and Sustainability Linked-Loan performance. On this matter, CEO will report to board of commissioner on its regular meeting.

Water

(4.3.1.1) Position of individual or committee with responsibility

Executive level

☑ Chief Operating Officer (COO)

(4.3.1.2) Environmental responsibilities of this position

Policies, commitments, and targets

☑ Measuring progress towards environmental corporate targets

Strategy and financial planning

☑ Managing major capital and/or operational expenditures relating to environmental issues

(4.3.1.4) Reporting line

Select from:

☑ Reports to the Chief Executive Officer (CEO)

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ Annually

(4.3.1.6) Please explain

The company has set freshwater withdrawal reduction target by 2030. However, the monitoring and reporting goes beyond water withdrawal, the environment team continuously monitors and report the water withdrawal, water consumption, and even water discharge to the COO and this information is annually disclosed in the sustainability report. To achieve this target, the COO also monitor the CAPEX to implement several facilities such as the water recycling plant and water treatment plant.
[Add row]

(4.5) Do you provide monetary incentives for the management of environmental issues, including the attainment of targets?

Climate change

(4.5.1) Provision of monetary incentives related to this environmental issue

Select from:

☑ Yes

(4.5.2) % of total C-suite and board-level monetary incentives linked to the management of this environmental issue

5

(4.5.3) Please explain

The figure 5% is represented by how the board is responsible for a total of 20 collegial KPI and the achievement of decarbonization target is one of them. Therefore, the figure derived from the composition of decarbonization KPI from the total number of collegial KPI

Water

(4.5.1) Provision of monetary incentives related to this environmental issue

Select from:

☑ No, and we do not plan to introduce them in the next two years

[Fixed row]

(4.5.1) Provide further details on the monetary incentives provided for the management of environmental issues (do not include the names of individuals).

Climate change

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Board/Executive board

(4.5.1.2) Incentives

Select all that apply

☑ Bonus - % of salary

(4.5.1.3) Performance metrics

Targets

☑ Achievement of environmental targets

Emission reduction

☑ Reduction in emissions intensity

☑ Increased share of renewable energy in total energy consumption

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Short-Term Incentive Plan, or equivalent, only (e.g. contractual annual bonus)

(4.5.1.5) Further details of incentives

As mention previously, decarbonization through the achievement of intensity target is one of the company's collegial KPI and the achievement of KPI defines the amount of annual bonus that can be obtained by BoD. Not only that, the performance of decarbonization target could potentially impact the financial performance if not achieve as it is tied to the Sustainability-Linked Loan. Meaning, if decarbonization target is not achieved, there will be a higher interest rate for SIG's loan.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

The position of incentives provides encouragement and focus on decarbonization target, alongside the binding of the target with the sustainability-linked loan. It is proven by how the company is able to achieve decarbonization to 570 kgCO2/ton cement equivalent for 2024, way beyond the annual target of 579kgCO2/ton cement eq.
[Add row]

(4.6) Does your organization have an environmental policy that addresses environmental issues?

	Does your organization have any environmental policies?
	Select from: ☑ Yes

[Fixed row]

(4.6.1) Provide details of your environmental policies.

Row 1

(4.6.1.1) Environmental issues covered

Select all that apply

☑ Climate change

(4.6.1.2) Level of coverage

Select from:

☑ Organization-wide

(4.6.1.3) Value chain stages covered

Select all that apply

☑ Direct operations

(4.6.1.4) Explain the coverage

In 2024, SIG has established and published a public environmental policy that provides an umbrella commitment to ensure effective environmental management for our business and operations across the organization through several initiatives such as: Minimizing environmental impacts from our operational activities by reducing emissions and Implement energy efficiency and resource conservation efforts to minimize environmental impacts and address the challenges posed by climate crisis.

From this policy, we also rooted down to environmental governance guidelines to provide clear procedure and step-by-step actions to ensure GHG emission reduction throughout our company.

(4.6.1.5) Environmental policy content

Environmental commitments

☑ Commitment to comply with regulations and mandatory standards

☑ Commitment to take environmental action beyond regulatory compliance

☑ Commitment to stakeholder engagement and capacity building on environmental issues

☑ Other environmental commitment, please specify :1.Minimize environmental impacts from our operational activities by reducing emissions, effluents, and waste, and managing our waste responsibly 2. Implement energy efficiency and resource conservation efforts to minimize environmental impacts

(4.6.1.6) Indicate whether your environmental policy is in line with global environmental treaties or policy goals

Select all that apply

☑ Yes, in line with the Paris Agreement

(4.6.1.7) Public availability

Select from:

☑ Publicly available

(4.6.1.8) Attach the policy

environmental-policy.pdf

Row 2

(4.6.1.1) Environmental issues covered

Select all that apply

☑ Water

(4.6.1.2) Level of coverage

Select from:

☑ Organization-wide

(4.6.1.3) Value chain stages covered

Select all that apply

☑ Direct operations

(4.6.1.4) Explain the coverage

In 2024, SIG has established and published a public environmental policy that provides an umbrella commitment to ensure effective environmental management for our business and operations across the organization through several initiatives such as minimizing environmental impacts from our operational activities by reducing emissions, effluents, and waste, and managing our waste responsibly. From this policy, we also rooted down to environmental governance guidelines to provide clear procedure and step-by-step actions to ensure responsible water management throughout our company. From those policies, our company has also developed a target of freshwater withdrawal reduction for 2030.

(4.6.1.5) Environmental policy content

Environmental commitments

☑ Commitment to comply with regulations and mandatory standards

Water-specific commitments

☑ Commitment to control/reduce/eliminate water pollution

☑ Commitment to reduce water consumption volumes

☑ Commitment to reduce water withdrawal volumes

(4.6.1.6) Indicate whether your environmental policy is in line with global environmental treaties or policy goals

Select all that apply

☑ Yes, in line with Sustainable Development Goal 6 on Clean Water and Sanitation

(4.6.1.7) Public availability

Select from:

☑ Publicly available

(4.6.1.8) Attach the policy

environmental-policy.pdf

Row 3

(4.6.1.1) Environmental issues covered

Select all that apply

☑ Biodiversity

(4.6.1.2) Level of coverage

Select from:

☑ Organization-wide

(4.6.1.3) Value chain stages covered

Select all that apply

☑ Direct operations

(4.6.1.4) Explain the coverage

In 2024, SIG has established and published a public environmental policy that provides an umbrella commitment to ensure effective environmental management for our business and operations across the organization through several initiatives such as conducting protection efforts towards the environment, including protected, threatened, endangered, and critically endangered species through conservation programs.

(4.6.1.5) Environmental policy content

Environmental commitments

☑ Commitment to comply with regulations and mandatory standards

☑ Commitment to respect legally designated protected areas

☑ Commitment to stakeholder engagement and capacity building on environmental issues

(4.6.1.6) Indicate whether your environmental policy is in line with global environmental treaties or policy goals

Select all that apply

☑ No, but we plan to align in the next two years

(4.6.1.7) Public availability

Select from:

☑ Publicly available

(4.6.1.8) Attach the policy

environmental-policy.pdf
[Add row]

(4.10) Are you a signatory or member of any environmental collaborative frameworks or initiatives?

	Are you a signatory or member of any environmental collaborative frameworks or initiatives?
	Select from: ☑ No, but we plan to within the next two years

[Fixed row]

(4.11) In the reporting year, did your organization engage in activities that could directly or indirectly influence policy, law, or regulation that may (positively or negatively) impact the environment?

	External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the environment	Indicate whether your organization has a public commitment or position statement to conduct your engagement activities in line with global environmental treaties or policy goals
	Select all that apply ☑ Yes, we engaged directly with policy makers	*Select from:* ☑ No, but we plan to have one in the next two years

[Fixed row]

(4.11.1) On what policies, laws, or regulations that may (positively or negatively) impact the environment has your organization been engaging directly with policy makers in the reporting year?

Row 1

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

Indonesia Cement Association

(4.11.1.2) Environmental issues the policy, law, or regulation relates to

Select all that apply

☑ Climate change

(4.11.1.3) Focus area of policy, law, or regulation that may impact the environment

Environmental impacts and pressures

☑ Emissions – CO2

(4.11.1.4) Geographic coverage of policy, law, or regulation

Select from:

☑ National

(4.11.1.5) Country/area/region the policy, law, or regulation applies to

Select all that apply

☑ Indonesia

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

Select from:

☑ Support with minor exceptions

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

Currently, the ministry of Industry is finishing the decarbonization roadmap for IPPU sector, including for the cement industry. During the workshop or discussion we negotiate on the carbon reduction target and figure that might be implemented in years to come and challenge the feasibility of those figure. We also pushed the ministry of industry to encourage the utilization of green cement to help achieve our decarbonization target.

(4.11.1.8) Type of direct engagement with policy makers on this policy, law, or regulation

Select all that apply

☑ Ad-hoc meetings

☑ Discussion in public forums

☑ Responding to consultations

(4.11.1.9) Funding figure your organization provided to policy makers in the reporting year relevant to this policy, law, or regulation (currency)

0

(4.11.1.10) Explain the relevance of this policy, law, or regulation to the achievement of your environmental commitments and/or transition plan, how this has informed your engagement, and how you measure the success of your engagement

The highly anticipated decarbonization roadmap for the cement industry has a high possibility to influence the carbon cap and tax mechanism if implemented to the cement industry. If the carbon cap is to be implemented, it will most likely mirror the decarbonization roadmap, and our company as the users will have to adjust our initiatives and operations to be able to meet below the carbon cap to avoid tax liabilities in the future.

(4.11.1.11) Indicate if you have evaluated whether your organization's engagement on this policy, law, or regulation is aligned with global environmental treaties or policy goals

Select from:

☑ No, we have not evaluated

[Add row]

(4.12) Have you published information about your organization's response to environmental issues for this reporting year in places other than your CDP response?

Select from:

☑ Yes

(4.12.1) Provide details on the information published about your organization's response to environmental issues for this reporting year in places other than your CDP response. Please attach the publication.

Row 1

(4.12.1.1) Publication

Select from:

☑ In mainstream reports, in line with environmental disclosure standards or frameworks

(4.12.1.2) Standard or framework the report is in line with

Select all that apply

☑ GRI

☑ TCFD

(4.12.1.3) Environmental issues covered in publication

Select all that apply

☑ Climate change

☑ Water

☑ Biodiversity

(4.12.1.4) Status of the publication

Select from:

☑ Complete

(4.12.1.5) Content elements

Select all that apply

☑ Strategy

☑ Governance

☑ Emission targets

☑ Emissions figures

☑ Risks & Opportunities

☑ Water pollution indicators

☑ Content of environmental policies

☑ Value chain engagement

☑ Dependencies & Impacts

☑ Biodiversity indicators

☑ Public policy engagement

☑ Water accounting figures

(4.12.1.6) Page/section reference

Each content element is available and spreaded in our sustainability report. Please refer to the table of content on page 3-4 and GRI Index on page 276-281

(4.12.1.7) Attach the relevant publication

sustainability-report-sig-2024-final-04082025.pdf
[Add row]

C5. Business strategy

(5.1) Does your organization use scenario analysis to identify environmental outcomes?

Climate change

(5.1.1) Use of scenario analysis

Select from:

☑ Yes

(5.1.2) Frequency of analysis

Select from:

☑ Every three years or less frequently

Water

(5.1.1) Use of scenario analysis

Select from:

☑ Yes

(5.1.2) Frequency of analysis

Select from:

☑ Every three years or less frequently

[Fixed row]

(5.1.1) Provide details of the scenarios used in your organization’s scenario analysis.

Climate change

(5.1.1.1) Scenario used

Climate transition scenarios

☑ NGFS scenarios framework, please specify :NGFS supplementary by IPCC and IEA

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Acute physical

☑ Chronic physical

☑ Policy

☑ Market

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 1.5°C or lower

(5.1.1.7) Reference year

2022

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2050

☑ 2080

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Climate change (one of five drivers of nature change)

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

1. The physical and transition risks in the NGFS scenarios are driven by policy, coordination and technology levers and could be tailored to Indonesia's climate policies 2. The NGFS scenario builds upon the IPCC and IEA scenarios with an aim of providing a common reference framework 3. Time frame spans up to year 2050 4. Geographic coverage is more localised to Asia Pacific countries and provides granularity to Indonesia level 5. The data is open source and free for download and use by us

(5.1.1.11) Rationale for choice of scenario

NGFS has a very detailed repository of climate data and projections that is being used by central banks around the world to understand the financial implication of climate. Not only that, this scenario allows its users to tailor the scenario with Indonesia through its geographical coverage and policy-based information.

Water

(5.1.1.1) Scenario used

Climate transition scenarios

☑ NGFS scenarios framework, please specify :NGFS supplemented by IPCC and IEA

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Acute physical

☑ Chronic physical

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 1.5°C or lower

(5.1.1.7) Reference year

2022

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2050

☑ 2080

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Climate change (one of five drivers of nature change)

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

1. The physical and transition risks in the NGFS scenarios are driven by policy, coordination and technology levers and could be tailored to Indonesia's climate policies 2. The NGFS scenario builds upon the IPCC and IEA scenarios with an aim of providing a common reference framework 3. Time frame spans up to year 2050 4. Geographic coverage is more localised to Asia Pacific countries and provides granularity to Indonesia level 5. The data is open source and free for download and use by us

(5.1.1.11) Rationale for choice of scenario

NGFS has a very detailed repository of climate data and projections that is being used by central banks around the world to understand the financial implication of climate. Not only that, this scenario allows its users to tailor the scenario with Indonesia through its geographical coverage and policy-based information.
[Add row]

(5.1.2) Provide details of the outcomes of your organization's scenario analysis.

Climate change

(5.1.2.1) Business processes influenced by your analysis of the reported scenarios

Select all that apply

☑ Risk and opportunities identification, assessment and management

(5.1.2.2) Coverage of analysis

Select from:

☑ Organization-wide

(5.1.2.3) Summarize the outcomes of the scenario analysis and any implications for other environmental issues

Using NGFS, the company utilized Net Zero 2050 scenario and Current policies scenario. Transition risk identification was conducted by mapping SIG value chain, assessing materiality based on risk impact and likelihood. The two scenarios provide comparison on which risk are more material. For transition risk using net zero 2050 scenario, the most material risk (very likely and high impact) are: 1. Carbon pricing mechanism Carbon pricing mechanism through Carbon tax is highly likely to be implemented to cement industry in the next few years. This would affect our financial performance as tax liability would depend on the decarbonization of the company. Thus, the company since 2023 the company has allocate and utilized ESG CAPEX for decarbonization initiatives to achieve the ambitious decarbonization target to prepare if the carbon tax and cap is implemented. 2. Increase fossil fuel and electricity price As industries, law-makers, and consumer becomes more climate-concious, shift towards renewable and alternative energy sources are undeniable. To enforce this transition, fossil fuel price will be designed to be more expensive, thus making electricity more expensive as well. This risk has the potential to significantly impact SIG cost structure since energy and electricity purchase are major components of it. Thus, SIG gradually increased their effort to be less dependent on fossil fuel and fossil-based electricity. Each year SIG increase its alternative fuel consumption by utilizing more biomass, RDF, and industrial waste. Also, SIG has installed 6,5 MWp of solar panels, alongside hydro power plants, and obtaining energy efficiency through Waste Heat Recovery Power Generator (WHRPG). The identified material physical risks due to climate change, both are related to water. Therefore the physical risk will be elaborated in the row below.

Water

(5.1.2.1) Business processes influenced by your analysis of the reported scenarios

Select all that apply

☑ Risk and opportunities identification, assessment and management

(5.1.2.2) Coverage of analysis

Select from:

☑ Business activity

(5.1.2.3) Summarize the outcomes of the scenario analysis and any implications for other environmental issues

For physical risk identification using the NGFS, due to its ability to provide granular information on Indonesia, we detailed our method to be specific towards Indonesia. First, we mapped out the coordinate of SIG's key-assets. Next, we identified baseline risk levels of each plant locations. From this baseline, it can be identified which plants is highly exposed to physical risk. Lastly, using the same two policy scenario: net-zero 2050 and current existing policy, we detected material locations with increased risk and the material physical risk itself. The physical risk includes: 1. Coastal and river flood Flooding frequency could potentially increase due to extreme weather events and increase sea-levels. The impact of flood relates to devaluation of plants, fall in revenues and increase operational spending. To mitigate this risk, SIG has equipped some plants with early warning system and has provided all assets with insurance.
[Fixed row]

(5.2) Does your organization's strategy include a climate transition plan?

(5.2.1) Transition plan

Select from:

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

(5.2.3) Publicly available climate transition plan

Select from:

☑ No

(5.2.4) Plan explicitly commits to cease all spending on, and revenue generation from, activities that contribute to fossil fuel expansion

Select from:

☑ Yes

(5.2.5) Description of activities included in commitment and implementation of commitment

SIG has identified and simulates initiatives that will highly contributes to the achievement of 1,5 degree alignment. In climate transition initiatives, it is wildly known that cement industry cannot eliminate coal 100% use due to high thermal energy demand for calcination process. Thus, SIG has established climate transition plan consisting off significant contributing indicators including significantly reduce coal dependence by increasing thermal substitution rate to 53%, this indicator also needs to be complemented with clinker factor reduction to 62% and thermal energy efficiency. Not only direct emissions, SIG also plans to gradually increase renewable energy installation to increase RE-sourced electricity for its electricity mix and scope 2 reduction. All of this initiatives are supported by the shareholders. Shown by the agreement for ESG CAPEX allocation of IDR 2 Trillion agreed in the 2023 AGM

(5.2.7) Mechanism by which feedback is collected from shareholders on your climate transition plan

Select from:

☑ We have a different feedback mechanism in place

(5.2.8) Description of feedback mechanism

Initially, the urgency of climate transition was shared among the shareholders. Thus, our company provided ESG CAPEX in 2023 right issue and was eventually approved in the 2023 AGM. The climate transition plan to utilize this capex remains internal, however shareholders could be informed about this plan through sustainability report and the ESG CAPEX is also annually reported to shareholders through annual AGM

(5.2.9) Frequency of feedback collection

Select from:

☑ Annually

(5.2.10) Description of key assumptions and dependencies on which the transition plan relies

It can be concluded that most of ESG CAPEX will be utilized for decarbonization initiatives. However, it does not rule out the possibility that ESG CAPEX could also be use for other environmental aspect (e.g., water recycling plant construction)

(5.2.11) Description of progress against transition plan disclosed in current or previous reporting period

The progress towards 1,5 degree alignment revolves around the thermal substitution rate increase and clinker factor reduction. In 2024, the company has reduce CF to 66% and achieve TSR of 7,56%
[Fixed row]

(5.3) Have environmental risks and opportunities affected your strategy and/or financial planning?

(5.3.1) Environmental risks and/or opportunities have affected your strategy and/or financial planning

Select from:

☑ Yes, both strategy and financial planning

(5.3.2) Business areas where environmental risks and/or opportunities have affected your strategy

Select all that apply

☑ Products and services

☑ Operations

[Fixed row]

(5.3.1) Describe where and how environmental risks and opportunities have affected your strategy.

Products and services

(5.3.1.1) Effect type

Select all that apply

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

Despite having its specific risk, climate change provides great opportunity for the company, especially related to products. The urgency for climate transition drives major stakeholders to push for decarbonization, this includes: 1. Push from investors to developers on green property and green building which requires green/low-carbon material 2. Law enforcement from the government regarding the utilization of green cement 3. Increasing awareness from customers on low-carbon products. These drivers provide clarity on potential increase demand for low-carbon cement products. Our company is quick to grab this opportunity as now we have various low-carbon cement products and still continuously conducts R&D to provide more sustainable products that cater to every customer's need. By 2024, low-carbon cement products has contributed to 61% of our total revenue and is expected to grow throughout the next years.

Operations

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

For direct operations, risk of carbon pricing mechanism through carbon tax implementation becomes one of the motivation to integrate decarbonization in the company's business strategy. The adjustment in the strategy consist of the establishment of annual decarbonization targets as milestones of the company's decarbonization and a form of preparation if the carbon cap for cement industry were to be implemented, Allocation of ESG CAPEX as a main tool, to the sustainability-linked loan as one of the decarbonization drivers and opportunities. Related to the same risk and tackling the other risk of increased fuel price, SIG has found the opportunity to utilized alternative fuels and reduce a big part of cost structure, the fuel cost. Not only that, SIG has the opportunity to further leverage the utilization of alternative fuel by establish waste management unit as a business line. This waste management business allows other industries to disposed their waste by converting their remaining energy to alternative fuel for cement production.
[Add row]

(5.3.2) Describe where and how environmental risks and opportunities have affected your financial planning.

Row 1

(5.3.2.1) Financial planning elements that have been affected

Select all that apply

☑ Direct costs

(5.3.2.2) Effect type

Select all that apply

☑ Opportunities

(5.3.2.3) Environmental issues relevant to the risks and/or opportunities that have affected these financial planning elements

Select all that apply

☑ Climate change

(5.3.2.4) Describe how environmental risks and/or opportunities have affected these financial planning elements

The opportunity of using more alternative fuels allows the company to reduce coal price from our cost structure. This become significant, since cost of coal is a major component of cost structure and this also allows the company avoid the volatile price of coal. Second, the waste management business line allows the company to generate more revenue.
[Add row]

(5.4) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition
	Select from:

	Identification of spending/revenue that is aligned with your organization's climate transition
	☑ No, but we plan to in the next two years

[Fixed row]

(5.5) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

(5.5.1) Investment in low-carbon R&D

Select from:

☑ Yes

(5.5.2) Comment

Yes, SIG has allocate expenses for sustainable products R&D. SIG has established some of the most notable low-carbon cement in Indonesia. sustainable products R&D also covers the R&D and innovation process of sustainable concrete solutions and ensure domestic content in the products to further support the national economy and well-being of society.
[Fixed row]

(5.5.1) Provide details of your organization's investments in low-carbon R&D for cement production activities over the last three years.

Row 1

(5.5.1.1) Technology area

Select from:

☑ Low clinker cement

(5.5.1.2) Stage of development in the reporting year

Select from:

☑ Full/commercial-scale demonstration

(5.5.1.3) Average % of total R&D investment over the last 3 years

75

(5.5.1.4) R&D investment figure in the reporting year (unit currency as selected in 1.2) (optional)

5467772711

(5.5.1.6) Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

Our R&D investment for low clinker cement is crucial to achieve our company's vision in becoming a pioneer in the building materials industry that empowers stakeholders to create sustainable living in the future. Especially through the achievement of our decarbonization target and sustainable business. R&D investment allows our company to continuously innovate low-carbon cement products while still maintaining its high quality. Through low-carbon cement, decarbonization performance becomes significant due to high clinker substitution therefore, reducing energy utilization intensity.
[Add row]

(5.9) What is the trend in your organization’s water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

	Water-related CAPEX (+/- % change)
	0.1

[Fixed row]

(5.10) Does your organization use an internal price on environmental externalities?

	Use of internal pricing of environmental externalities	Environmental externality priced
	Select from: ☑ Yes	*Select all that apply* ☑ Carbon

[Fixed row]

(5.10.1) Provide details of your organization's internal price on carbon.

Row 1

(5.10.1.1) Type of pricing scheme

Select from:

☑ Other, please specify :cost efficiency

(5.10.1.2) Objectives for implementing internal price

Select all that apply

☑ Conduct cost-benefit analysis

(5.10.1.3) Factors considered when determining the price

Select all that apply

☑ Alignment with the price of a carbon tax

(5.10.1.4) Calculation methodology and assumptions made in determining the price

Carbon tax mechanism is yet to be implemented for cement industry. However, to conduct cost efficiency analysis, we assumed the carbon price stays the same as the current regulation which is IDR 30.000/tCO2eq. We conduct cost-efficiency analysis through cost-benefit methodology such as MACC, the goal of the calculation is to calculate the cost-efficiency obtained from several decarbonization initiatives such as coal substitution, electric vehicle, and others. Additionally, it provides clarity on which initiatives should be prioritized based on its low cost and high impact.

(5.10.1.5) Scopes covered

Select all that apply

☑ Scope 1

☑ Scope 2

(5.10.1.6) Pricing approach used – spatial variance

Select from:

☑ Uniform

(5.10.1.10) Minimum actual price used (currency per metric ton CO2e)

30009

(5.10.1.11) Maximum actual price used (currency per metric ton CO2e)

30000

(5.10.1.12) Business decision-making processes the internal price is applied to

Select all that apply

☑ Capital expenditure

(5.10.1.13) Internal price is mandatory within business decision-making processes

Select from:

☑ Yes, for all decision-making processes

(5.10.1.14) % total emissions in the reporting year in selected scopes this internal price covers

(5.10.1.15) Pricing approach is monitored and evaluated to achieve objectives

Select from:

☑ Yes

(5.10.1.16) Details of how the pricing approach is monitored and evaluated to achieve your objectives

Pricing are continuously monitored and evaluated by keeping up to date with the national regulations of carbon tax.
[Add row]

(5.11) Do you engage with your value chain on environmental issues?

Suppliers

(5.11.1) Engaging with this stakeholder on environmental issues

Select from:

☑ No, but we plan to within the next two years

(5.11.3) Primary reason for not engaging with this stakeholder on environmental issues

Select from:

☑ Not an immediate strategic priority

(5.11.4) Explain why you do not engage with this stakeholder on environmental issues

We have always communicated to suppliers to support our ESG initiatives through contracts. However, we have not detailed the aspiration we have for suppliers in supporting our environmental goals. However, we included suppliers in our materiality survey to identify which sustainability topics are deemed to be material for SIG to disclose.

Customers

(5.11.1) Engaging with this stakeholder on environmental issues

Select from:

☑ Yes

(5.11.2) Environmental issues covered

Select all that apply

☑ Climate change

Investors and shareholders

(5.11.1) Engaging with this stakeholder on environmental issues

Select from:

☑ Yes

(5.11.2) Environmental issues covered

Select all that apply

☑ Climate change

Other value chain stakeholders

(5.11.1) Engaging with this stakeholder on environmental issues

Select from:

☑ No, but we plan to within the next two years

(5.11.3) Primary reason for not engaging with this stakeholder on environmental issues

Select from:

☑ Not an immediate strategic priority

(5.11.4) Explain why you do not engage with this stakeholder on environmental issues

In previous year, SIG focused on climate related issue and focusing communication with investor & shareholders. However, we included all stakeholders in our materiality survey to identify which sustainability topics are deemed to be material for SIG to disclose.
[Fixed row]

(5.11.9) Provide details of any environmental engagement activity with other stakeholders in the value chain.

Climate change

(5.11.9.1) Type of stakeholder

Select from:

☑ Investors and shareholders

(5.11.9.2) Type and details of engagement

Education/Information sharing

☑ Educate and work with stakeholders on understanding and measuring exposure to environmental risks

☑ Share information on environmental initiatives, progress and achievements

Innovation and collaboration

☑ Engage with stakeholders to advocate for policy or regulatory change

(5.11.9.3) % of stakeholder type engaged

Select from:

☑ 26-50%

(5.11.9.4) % stakeholder-associated scope 3 emissions

Select from:

☑ None

(5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

Investors are one of our main drivers in conducting decarbonization initiatives. It is a mutually-beneficial relationship since the investor needs the portfolio align with their sustainability goals and the company needs the enforcement to pursue decarbonization initiatives

(5.11.9.6) Effect of engagement and measures of success

Compiling recommendations from investors and creating a to-do list from those recommendation

Climate change

(5.11.9.1) Type of stakeholder

Select from:

☑ Customers

(5.11.9.2) Type and details of engagement

Education/Information sharing

☑ Share information about your products and relevant certification schemes

(5.11.9.3) % of stakeholder type engaged

Select from:

☑ 76-99%

(5.11.9.4) % stakeholder-associated scope 3 emissions

Select from:

☑ Less than 1%

(5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

Spreading awareness about out low-carbon products through various campaigns such as commercial, sponsorship, and others.

(5.11.9.6) Effect of engagement and measures of success

increase in sales and marketing engagement
[Add row]

C6. Environmental Performance - Consolidation Approach

(6.1) Provide details on your chosen consolidation approach for the calculation of environmental performance data.

Climate change

(6.1.1) Consolidation approach used

Select from:

☑ Operational control

(6.1.2) Provide the rationale for the choice of consolidation approach

This approach best reflects the company's direct responsibility and control to manage, monitor, and reduce greenhouse gas emissions from all activities it operates. It is aligned with the company's internal environmental management system, established emission reduction targets, and the company's environmental sustainability policies and governance.

Water

(6.1.1) Consolidation approach used

Select from:

☑ Operational control

(6.1.2) Provide the rationale for the choice of consolidation approach

This approach best reflects the company's direct responsibility and control to manage, monitor, and reduce water-related impacts from all activities it operates. It is aligned with the company's internal environmental management system, established water conservation and efficiency targets, and the company's environmental sustainability policies and governance.
[Fixed row]

C7. Environmental performance - Climate Change

(7.1) Is this your first year of reporting emissions data to CDP?

Select from:

☑ No

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

	Has there been a structural change?
	Select all that apply ☑ No

[Fixed row]

(7.1.2) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?
	Select all that apply ☑ No

[Fixed row]

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

Select all that apply

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

☑ The Greenhouse Gas Protocol: Public Sector Standard

☑ The Greenhouse Gas Protocol: Scope 2 Guidance

☑ The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Standard

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

(7.3.1) Scope 2, location-based

Select from:

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

(7.3.3) Comment

All of Indonesia electricity is only authorized to be purchased from the National Electricity Company (PLN), no other private company could sell electricity in Indonesia. Therefore location-based approach is the best fit for our company since the company is based in Indonesia and purchase of electricity is from the same company across the country. Market-based approach is irrelevant since the electricity-market is not liberalized.
[Fixed row]

(7.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?

Select from:

☑ No

(7.5) Provide your base year and base year emissions.

Scope 1

(7.5.1) Base year end

12/30/2010

(7.5.2) Base year emissions (metric tons CO2e)

12408608

(7.5.3) Methodological details

First for disclaimer our baseline is way lower than our current emission because in 2010, SIG was only consisted of three plants: GHOPO, Semen Tonasa, and Semen Padang and right now SIG is consisted of 9 plants. Semen Gresik, Semen Baturaja, Semen Padang, SBI TQ, SBI Narogong, SBI Cilacap, SBI Lhoknga, GHoPO, and Semen Tonasa. Our calculation for scope 1 utilized the the GHG Protocol: Cement Protocol. This GHG Protocol aligns with the IPCC and WBCSD - Cement Sustainability Initiatives (CSI). As referred to the methodology, our scope 1 derived from direct operations of our company. Our scope 1 components consist of: 1. Kiln Fuel Combustion As explained in the GHG protocol, we calculated our emission from fuel combustion by accounting the volume of fuel (liter), classified to each type of fuel (biomass, alternative fuel, fossil fuel). Next, we converted the mass to energy (J). The energy will then be multiplied with the respective emission factor of each types of fuel, resulting in the emission factor. We utilized the emission factor from CSI GNR Database 2. Onsite vehicle & drying minerals Our second scope 1 emission component derived from non-kiln fuel combustion in onsite vehicle and drying minerals facilities (finish mill). Both utilized IDO as fuel. Similar to the kiln fuel combustion, the calculation derived from the converted volume of IDO to energy, then multiplied with the emission factor the emission factor from CSI GNR Database 3. Calcination of raw materials Lastly, the calcination of raw materials. calcination processes contributes to the most emission. the emission itself derived from the chemical process of decomposing limestone by heating it with high temperature. This process will the produce lime and carbon dioxide. Thus, we will calculate emission through the molar mass of CO2 produced.

Scope 2 (location-based)

(7.5.1) Base year end

12/30/2019

(7.5.2) Base year emissions (metric tons CO2e)

2497296

(7.5.3) Methodological details

Our scope 2 emission Our calculation for scope 2 utilized the the GHG Protocol: Cement Protocol. This GHG Protocol aligns with the IPCC and WBCSD - Cement Sustainability Initiatives (CSI). We used local-based approach as the purchase of electricity in Indonesia is only authorized through PLN, making market-based

approach irrelevant. We calculate our emission from purchased electricity (KWh) Then, this electricity converted to energy (GJ). The energy will then be multiplied with the emission factor regulated by Indonesia Ministry of Energy and Mineral Resources to get the emission figure.

Scope 3 category 1: Purchased goods and services

(7.5.1) Base year end

12/30/2024

(7.5.2) Base year emissions (metric tons CO2e)

545949

(7.5.3) Methodological details

On early 2025, we refined our scope 3 calculation for 2024 with third-party/consultant to provide clarity on the baseline figure as well as establishing procedure for the company's scope 3 calculation. We have calculated all of our scope 3 emission using the GHG protocol. For the first category: Purchased goods and services, we collaborated with the procurement team to obtain the data of goods and services purchased by the company in 2024. We use the average method to calculate this category. First, we calculate the emission of purchased goods by obtaining the mass of each purchased goods (tonnes) then we calculate with the emission factors of each goods. For services, we use the total spending ($) for each purchased services. Same as the goods, then we calculate these spending with the respective emission factor for each services. We referred to the US EPA for the emission factor as it provides more various types of goods and services. The emission from purchased goods and services will then be summed to obtain the total emission for category 1.

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

(7.5.1) Base year end

12/30/2024

(7.5.2) Base year emissions (metric tons CO2e)

286392

(7.5.3) Methodological details

On early 2025, we refined our scope 3 calculation for 2024 with third-party/consultant to provide clarity on the baseline figure as well as establishing procedure for the company's scope 3 calculation. We have calculated all of our scope 3 emission using the GHG protocol. For the third category, fuel-and-energy-related activities, we

calculated the upstream emission of our purchased fuel by average method - volume of purchased fuel: 1. collecting data of every types purchased fuel on the reporting year (tonnes), collaborating with procurement division 2. Calculated the energy content of the purchased fuel by multiplying energy factor (referred to Indonesia Ministry of Energy and Mineral Resources and UK government energy factor) with purchased volume 3. Lastly we obtained the emission by multiplying the result of energy with the emission factor (referred to UNFCCC and UK Government emission factor)

Scope 3 category 4: Upstream transportation and distribution

(7.5.1) Base year end

12/30/2024

(7.5.2) Base year emissions (metric tons CO2e)

274246

(7.5.3) Methodological details

On early 2025, we refined our scope 3 calculation for 2024 with third-party/consultant to provide clarity on the baseline figure as well as establishing procedure for the company's scope 3 calculation. We have calculated all of our scope 3 emission using the GHG protocol. For the fourth category, upstream transportation and distribution, we calculated our upstream transportation by: 1. Collecting our upstream transportation data by collaborating with procurement division to obtain types of vehicle, starting point and destination to calculate distance, and transported volume 2. Next, we multiply the distance with the transported to identify the efficiency of the transporting and to adjust with the emission factor (kgCO2/t.km) 3. Lastly, we calculated the emission by multiplying t.km result with emission factor of each types of transportation (referred to GCCA EPD emission factor)

Scope 3 category 5: Waste generated in operations

(7.5.1) Base year end

12/30/2024

(7.5.2) Base year emissions (metric tons CO2e)

1000

(7.5.3) Methodological details

On early 2025, we refined our scope 3 calculation for 2024 with third-party/consultant to provide clarity on the baseline figure as well as establishing procedure for the company's scope 3 calculation. We have calculated all of our scope 3 emission using the GHG protocol. For the fifth category, Waste generated in operations, we calculated the emissions by: 1. obtaining data of waste volume classified by non-hazardous and hazardous category and its treatment category. 2. For non-hazardous category, we mapped out the % composition of waste types for each treatment category referring to National Greenhouse Gas Inventory Implementation Guidelines to provide a more accurate emission calculation 3. Lastly to calculate the emission, each classification will be multiplied with the emission factor. For non-hazardous category the emission factor is according to its waste type and treatment type while the hazardous waste use the treatment type emission factor (emission factors referred to the UK government)

Scope 3 category 6: Business travel

(7.5.1) Base year end

12/30/2024

(7.5.2) Base year emissions (metric tons CO2e)

3371

(7.5.3) Methodological details

On early 2025, we refined our scope 3 calculation for 2024 with third-party/consultant to provide clarity on the baseline figure as well as establishing procedure for the company's scope 3 calculation. We have calculated all of our scope 3 emission using the GHG protocol. For the sixth category, Business Travel, we calculated the emissions by: 1. Collecting data on every business travel by collaborating with the general affairs division. The collected data includes: Number of person, Types of transport, starting point and destination to identify distance, types of tickets (e.g., business class, economy class, first class), and number of nights spent in the hotel 2. We calculate the emission from transport by multiplying number of pax and distance (km) and the respective emission factor (referred to UK government emission factor) 3. We also calculate the emission from hotel by taking the number of nights spent times with number of pax and the emission factor (referred to UK Government emission factor) 4. Lastly, we summed the total of emission from hotel emission and transportation emission to obtain the total figure of emission for category 6

Scope 3 category 7: Employee commuting

(7.5.1) Base year end

12/30/2024

(7.5.2) Base year emissions (metric tons CO2e)

13048

(7.5.3) Methodological details

On early 2025, we refined our scope 3 calculation for 2024 with third-party/consultant to provide clarity on the baseline figure as well as establishing procedure for the company's scope 3 calculation. We have calculated all of our scope 3 emission using the GHG protocol. For the seventh category, Employee commuting, we calculated our emission through distance-data: 1. Distributing survey to the employees to obtain sample. The survey consisted question of types of vehicle, fuels, and distance between their house and office. The survey is filled by more than 1000 employees 2. we then take samples from the survey, by identifying % of respondents using each types of vehicles. we than take the % with the total employee to obtained rough number of employees for each vehicle 3. the emission is calculated by taking the km data of each type of vehicles through out the year times with the emission factor from types of fuel that is used by that vehicle

Scope 3 category 9: Downstream transportation and distribution

(7.5.1) Base year end

12/30/2024

(7.5.2) Base year emissions (metric tons CO2e)

323988

(7.5.3) Methodological details

On early 2025, we refined our scope 3 calculation for 2024 with third-party/consultant to provide clarity on the baseline figure as well as establishing procedure for the company's scope 3 calculation. We have calculated all of our scope 3 emission using the GHG protocol. For the ninth category, downstream transportation and distribution, we calculated the emissions by: 1. Collecting our downstream transportation data by collaborating with procurement division to obtain types of vehicle, starting point and destination to calculate distance, and transported volume 2. Next, we multiply the distance with the transported to identify the efficiency of the transporting and to adjust with the emission factor (kgCO2/t.km) 3. Lastly, we calculated the emission by multiplying t.km result with emission factor of each types of transportation (referred to GCCA EPD emission factor)

Scope 3 category 10: Processing of sold products

(7.5.1) Base year end

12/30/2024

(7.5.2) Base year emissions (metric tons CO2e)

71807

(7.5.3) Methodological details

On early 2025, we refined our scope 3 calculation for 2024 with third-party/consultant to provide clarity on the baseline figure as well as establishing procedure for the company's scope 3 calculation. We have calculated all of our scope 3 emission using the GHG protocol. For the tenth category, processing of sold products, we calculated the emissions by: 1. As stated in GHG protocol for cement sector, this category can be calculated with the electricity used to processed sold. Which according to GHG Protocol is 11 kWh/ton of cement processed. 2. We take the volume of sold products of RMX and precast (tonnes) which then will be processed by the customer and times it with 11 kWh to obtain the total electricity needs for processing. 3. Lastly the total electricity will then be multiplied with the electricity grid emission factor (referred to the Indonesia Ministry of Energy and Mineral Resources) to obtain the total emission figure

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

(7.5.1) Base year end

12/30/2024

(7.5.2) Base year emissions (metric tons CO2e)

22245

(7.5.3) Methodological details

On early 2025, we refined our scope 3 calculation for 2024 with third-party/consultant to provide clarity on the baseline figure as well as establishing procedure for the company's scope 3 calculation. We have calculated all of our scope 3 emission using the GHG protocol. For the twelfth category, end of life treatment of sold products, we calculated the emissions by: 1. End of life treatment of sold product could only be calculated based on the treatment of the packaging and demolition of building 2. We used the assumption from a scientific journal that 85% of concrete product end of life treatment is demolition and 15% is recycled. 3. Thus, first we calculated how many concrete produced based on the volume of our sold cement and RMX 4. Next from the volume of concrete, we assumed 85% end up being demolished and 15% is recycled. We assumed the waste from demolition would end up in landfill. 5. To obtain the emission value, the demolished waste is multiplied with the landfill emission factor and the recycled with the recycled emission factor. 6. For packaging, we calculated how many packaging bags we used based on volume of sold products. 7. After obtaining the number of bags, it is assumed that the treatment of the packaging bags is disposal to landfill. Thus, the emission derived fro the total number of bags times with the emission factor of landfill. 8. The total emission for this category is the summed emission from demolition and recycled waste with the emission from packaging waste treatment.
[Fixed row]

(7.6) What were your organization’s gross global Scope 1 emissions in metric tons CO2e?

Reporting year

(7.6.1) Gross global Scope 1 emissions (metric tons CO2e)

22841263

(7.6.3) Methodological details

Our calculation for scope 1 utilized the the GHG Protocol: Cement Protocol. This GHG Protocol aligns with the IPCC and WBCSD - Cement Sustainability Initiatives (CSI). As referred to the methodology, our scope 1 derived from direct operations of our company. Our scope 1 components consist of: 1. Kiln Fuel Combustion As explained in the GHG protocol, we calculated our emission from fuel combustion by accounting the volume of fuel (liter), classified to each type of fuel (biomass, alternative fuel, fossil fuel). Next, we converted the mass to energy (J). The energy will then be multiplied with the respective emission factor of each types of fuel, resulting in the emission factor. We utilized the emission factor from CSI GNR Database 2. Onsite vehicle & drying minerals Our second scope 1 emission component derived from non-kiln fuel combustion in onsite vehicle and drying minerals facilities (finish mill). Both utilized IDO as fuel. Similar to the kiln fuel combustion, the calculation derived from the converted volume of IDO to energy, then multiplied with the emission factor the emission factor from CSI GNR Database 3. Calcination of raw materials Lastly, the calcination of raw materials. calcination processes contributes to the most emission. the emission itself derived from the chemical process of decomposing limestone by heating it with high temperature. This process will the produce lime and carbon dioxide. Thus, we will calculate emission through the molar mass of CO2 produced. Our gross Scope 1 emission is direct emission from company's production activities. In our case, our scope 1 emission derived from all Kiln fuel combustion, Onsite vehicle and drying mineral components, and calcination of raw material activities. Our calculation for scope 1 has aligned with the GHG Protocol accounting method and WBCSD and we use the emission factor from U.S. Environmental Protection Agency (EPA).

Past year 1

(7.6.1) Gross global Scope 1 emissions (metric tons CO2e)

24676872

(7.6.2) End date

12/30/2023

(7.6.3) Methodological details

Our calculation for scope 1 utilized the the GHG Protocol: Cement Protocol. This GHG Protocol aligns with the IPCC and WBCSD - Cement Sustainability Initiatives (CSI). As referred to the methodology, our scope 1 derived from direct operations of our company. Our scope 1 components consist of: 1. Kiln Fuel Combustion As explained in the GHG protocol, we calculated our emission from fuel combustion by accounting the volume of fuel (liter), classified to each type of fuel (biomass, alternative fuel, fossil fuel). Next, we converted the mass to energy (J). The energy will then be multiplied with the respective emission factor of each types of fuel,

resulting in the emission factor. We utilized the emission factor from CSI GNR Database 2. Onsite vehicle & drying minerals Our second scope 1 emission component derived from non-kiln fuel combustion in onsite vehicle and drying minerals facilities (finish mill). Both utilized IDO as fuel. Similar to the kiln fuel combustion, the calculation derived from the converted volume of IDO to energy, then multiplied with the emission factor the emission factor from CSI GNR Database 3. Calcination of raw materials Lastly, the calcination of raw materials. calcination processes contributes to the most emission. the emission itself derived from the chemical process of decomposing limestone by heating it with high temperature. This process will the produce lime and carbon dioxide. Thus, we will calculate emission through the molar mass of CO2 produced. Our gross Scope 1 emission is direct emission from company's production activities. In our case, our scope 1 emission derived from all Kiln fuel combustion, Onsite vehicle and drying mineral components, and calcination of raw material activities. Our calculation for scope 1 has aligned with the GHG Protocol accounting method and WBCSD and we use the emission factor from U.S. Environmental Protection Agency (EPA).

Past year 2

(7.6.1) Gross global Scope 1 emissions (metric tons CO2e)

22126279

(7.6.2) End date

12/30/2022

(7.6.3) Methodological details

Our calculation for scope 1 utilized the the GHG Protocol: Cement Protocol. This GHG Protocol aligns with the IPCC and WBCSD - Cement Sustainability Initiatives (CSI). As referred to the methodology, our scope 1 derived from direct operations of our company. Our scope 1 components consist of: 1. Kiln Fuel Combustion As explained in the GHG protocol, we calculated our emission from fuel combustion by accounting the volume of fuel (liter), classified to each type of fuel (biomass, alternative fuel, fossil fuel). Next, we converted the mass to energy (J). The energy will then be multiplied with the respective emission factor of each types of fuel, resulting in the emission factor. We utilized the emission factor from CSI GNR Database 2. Onsite vehicle & drying minerals Our second scope 1 emission component derived from non-kiln fuel combustion in onsite vehicle and drying minerals facilities (finish mill). Both utilized IDO as fuel. Similar to the kiln fuel combustion, the calculation derived from the converted volume of IDO to energy, then multiplied with the emission factor the emission factor from CSI GNR Database 3. Calcination of raw materials Lastly, the calcination of raw materials. calcination processes contributes to the most emission. the emission itself derived from the chemical process of decomposing limestone by heating it with high temperature. This process will the produce lime and carbon dioxide. Thus, we will calculate emission through the molar mass of CO2 produced. Our gross Scope 1 emission is direct emission from company's production activities. In our case, our scope 1 emission derived from all Kiln fuel combustion, Onsite vehicle and drying mineral components, and calcination of raw material activities. Our calculation for scope 1 has aligned with the GHG Protocol accounting method and WBCSD and we use the emission factor from U.S. Environmental Protection Agency (EPA).

Past year 3

(7.6.1) Gross global Scope 1 emissions (metric tons CO2e)

24638443

(7.6.2) End date

12/30/2021

(7.6.3) Methodological details

Our calculation for scope 1 utilized the the GHG Protocol: Cement Protocol. This GHG Protocol aligns with the IPCC and WBCSD - Cement Sustainability Initiatives (CSI). As referred to the methodology, our scope 1 derived from direct operations of our company. Our scope 1 components consist of: 1. Kiln Fuel Combustion As explained in the GHG protocol, we calculated our emission from fuel combustion by accounting the volume of fuel (liter), classified to each type of fuel (biomass, alternative fuel, fossil fuel). Next, we converted the mass to energy (J). The energy will then be multiplied with the respective emission factor of each types of fuel, resulting in the emission factor. We utilized the emission factor from CSI GNR Database 2. Onsite vehicle & drying minerals Our second scope 1 emission component derived from non-kiln fuel combustion in onsite vehicle and drying minerals facilities (finish mill). Both utilized IDO as fuel. Similar to the kiln fuel combustion, the calculation derived from the converted volume of IDO to energy, then multiplied with the emission factor the emission factor from CSI GNR Database 3. Calcination of raw materials Lastly, the calcination of raw materials. calcination processes contributes to the most emission. the emission itself derived from the chemical process of decomposing limestone by heating it with high temperature. This process will the produce lime and carbon dioxide. Thus, we will calculate emission through the molar mass of CO2 produced. Our gross Scope 1 emission is direct emission from company's production activities. In our case, our scope 1 emission derived from all Kiln fuel combustion, Onsite vehicle and drying mineral components, and calcination of raw material activities. Our calculation for scope 1 has aligned with the GHG Protocol accounting method and WBCSD and we use the emission factor from U.S. Environmental Protection Agency (EPA).
[Fixed row]

(7.7) What were your organization’s gross global Scope 2 emissions in metric tons CO2e?

Reporting year

(7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

2221219

(7.7.4) Methodological details

Our scope 2 emission Our calculation for scope 2 utilized the the GHG Protocol: Cement Protocol. This GHG Protocol aligns with the IPCC and WBCSD - Cement Sustainability Initiatives (CSI). We used local-based approach as the purchase of electricity in Indonesia is only authorized through PLN, making market-based approach irrelevant. We calculate our emission from purchased electricity (KWh) Then, this electricity converted to energy (GJ). The energy will then be multiplied with the emission factor regulated by Indonesia Ministry of Energy and Mineral Resources to get the emission figure.

Past year 1

(7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

2655169

(7.7.3) End date

12/30/2023

(7.7.4) Methodological details

Our scope 2 emission Our calculation for scope 2 utilized the the GHG Protocol: Cement Protocol. This GHG Protocol aligns with the IPCC and WBCSD - Cement Sustainability Initiatives (CSI). We used local-based approach as the purchase of electricity in Indonesia is only authorized through PLN, making market-based approach irrelevant. We calculate our emission from purchased electricity (KWh) Then, this electricity converted to energy (GJ). The energy will then be multiplied with the emission factor regulated by Indonesia Ministry of Energy and Mineral Resources to get the emission figure.

Past year 2

(7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

2233260

(7.7.3) End date

12/30/2022

(7.7.4) Methodological details

Our scope 2 emission Our calculation for scope 2 utilized the the GHG Protocol: Cement Protocol. This GHG Protocol aligns with the IPCC and WBCSD - Cement Sustainability Initiatives (CSI). We used local-based approach as the purchase of electricity in Indonesia is only authorized through PLN, making market-based approach irrelevant. We calculate our emission from purchased electricity (KWh) Then, this electricity converted to energy (GJ). The energy will then be multiplied with the emission factor regulated by Indonesia Ministry of Energy and Mineral Resources to get the emission figure.

Past year 3

(7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

2206196

(7.7.3) End date

12/30/2021

(7.7.4) Methodological details

Our scope 2 emission Our calculation for scope 2 utilized the the GHG Protocol: Cement Protocol. This GHG Protocol aligns with the IPCC and WBCSD - Cement Sustainability Initiatives (CSI). We used local-based approach as the purchase of electricity in Indonesia is only authorized through PLN, making market-based approach irrelevant. We calculate our emission from purchased electricity (KWh) Then, this electricity converted to energy (GJ). The energy will then be multiplied with the emission factor regulated by Indonesia Ministry of Energy and Mineral Resources to get the emission figure.
[Fixed row]

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

Purchased goods and services

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

533417

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

☑ Spend-based method

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

0

(7.8.5) Please explain

Most suppliers in Indonesia have not yet measured or disclosed product-level GHG emissions due to limited capacity, inconsistent reporting standards, and data collection challenges. As a result, we continue to use the average-based method, classifying emissions by product category to ensure representativeness and transparency. This serves as a pragmatic interim approach until supplier-specific data becomes available.

Capital goods

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

There were no significant capital purchases made during the reporting year; therefore, emissions under the Capital Goods category are not applicable.

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

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

286392

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

☑ Fuel-based method

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

0

(7.8.5) Please explain

Most suppliers in Indonesia have not yet measured or disclosed product-level GHG emissions due to limited capacity, inconsistent reporting standards, and data collection challenges. As a result, we continue to use the average-based method, classifying emissions by product category to ensure representativeness and transparency. This serves as a pragmatic interim approach until supplier-specific data becomes available.

Upstream transportation and distribution

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

274246

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

☑ Distance-based method

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

0

(7.8.5) Please explain

Most suppliers in Indonesia have not yet measured or disclosed product-level GHG emissions due to limited capacity, inconsistent reporting standards, and data collection challenges. As a result, we continue to use the average-based method, classifying emissions by product category to ensure representativeness and transparency. This serves as a pragmatic interim approach until supplier-specific data becomes available.

Waste generated in operations

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

1000

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

☑ Waste-type-specific method

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

0

Business travel

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

3371

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

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

0

(7.8.5) Please explain

Most suppliers in Indonesia have not yet measured or disclosed product-level GHG emissions due to limited capacity, inconsistent reporting standards, and data collection challenges. As a result, we continue to use the average-based method, classifying emissions by product category to ensure representativeness and transparency. This serves as a pragmatic interim approach until supplier-specific data becomes available.

Employee commuting

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

13048

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

☑ Fuel-based method

☑ Distance-based method

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

13

Upstream leased assets

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

The company does not have any upstream leased assets; therefore, this category is not applicable for our Scope 3 emissions reporting.

Downstream transportation and distribution

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

323988

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

☑ Distance-based method

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

0

(7.8.5) Please explain

Most suppliers in Indonesia have not yet measured or disclosed product-level GHG emissions due to limited capacity, inconsistent reporting standards, and data collection challenges. As a result, we continue to use the average-based method, classifying emissions by product category to ensure representativeness and transparency. This serves as a pragmatic interim approach until supplier-specific data becomes available.

Processing of sold products

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

71807

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

☑ Average product method

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

0

Use of sold products

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Category 11 (Use of Sold Products) is not relevant for the cement industry, as cement is an intermediate product used in construction and does not directly consume energy or generate GHG emissions during its use phase. The main emissions occur during production and are accounted for under Scope 1 and 2.

End of life treatment of sold products

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

22245

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

☑ Average product method

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

0

Downstream leased assets

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

The company does not have any downstream leased assets; therefore, this category is not applicable for our Scope 3 emissions reporting.

Franchises

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Category 14 (Franchises) is not relevant for the cement industry, as the company does not operate under a franchise business model nor grant franchise rights to third parties. All operations are owned and controlled directly.

Investments

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Category 15 (Investments) is not relevant for the cement industry, as the company does not have investments in other entities that would give rise to Scope 3 emissions under the GHG Protocol boundary. Our reporting boundary is limited to operations under our direct control.
[Fixed row]

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

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

	Verification/assurance status
	☑ Third-party verification or assurance process in place

[Fixed row]

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

Row 1

(7.9.1.1) Verification or assurance cycle in place

Select from:

☑ Annual process

(7.9.1.2) Status in the current reporting year

Select from:

☑ Complete

(7.9.1.3) Type of verification or assurance

Select from:

☑ Third party verification/assurance underway

(7.9.1.4) Attach the statement

EdVGrRrOqJtMk9ImGPcfe7UBNiaf2sZDpVKHCfFj-X537w.pdf,sustainability-report-sig-2024-final-04082025.pdf

(7.9.1.5) Page/section reference

289-290
[Add row]

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

Row 1

(7.9.2.1) Scope 2 approach

Select from:
☑ Scope 2 location-based

(7.9.2.2) Verification or assurance cycle in place

Select from:
☑ Annual process

(7.9.2.3) Status in the current reporting year

Select from:
☑ Complete

(7.9.2.4) Type of verification or assurance

Select from:
☑ Limited assurance

(7.9.2.5) Attach the statement

sustainability-report-sig-2024-final-04082025.pdf

(7.9.2.6) Page/ section reference

289-290
[Add row]

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

Row 1

(7.9.3.1) Scope 3 category

Select all that apply

- ☑ Scope 3: Business travel
- ☑ Scope 3: Employee commuting
- ☑ Scope 3: Processing of sold products
- ☑ Scope 3: Purchased goods and services
- ☑ Scope 3: Waste generated in operations
- ☑ Scope 3: End-of-life treatment of sold products
- ☑ Scope 3: Upstream transportation and distribution
- ☑ Scope 3: Downstream transportation and distribution
- ☑ Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)

(7.9.3.2) Verification or assurance cycle in place

Select from:

☑ Annual process

(7.9.3.3) Status in the current reporting year

Select from:

☑ Complete

(7.9.3.4) Type of verification or assurance

Select from:

☑ Limited assurance

(7.9.3.5) Attach the statement

sustainability-report-sig-2024-final-04082025.pdf

(7.9.3.6) Page/section reference

289-290
[Add row]

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

Select from:
☑ Decreased

(7.10.1) 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 renewable energy consumption

(7.10.1.1) Change in emissions (metric tons CO2e)

708619

(7.10.1.2) Direction of change in emissions

Select from:
☑ Decreased

(7.10.1.3) Emissions value (percentage)

2.59

(7.10.1.4) Please explain calculation

To obtain the reduction figure, we identify the difference between the absolute emission scope 1 + 2 of 2024 and 2023. Then from the absolute emission formula we traced what indicator contributes to significant difference. As a result, 1.560.941 tCO2e or 5,71% of emission reduction derived from utilization of alternative raw

material as a substitution of clinker, this makes clinker substitution the main contributor for emission reduction. Second, 708.619 tCO2e of emission reduction came from the use of renewable energy-sourced electricity and alternative fuel such as biomass. The percentage of emission value is calculated from the difference of emission between 2024 and 2023 compared to 2023 emission.

Other emissions reduction activities

(7.10.1.1) Change in emissions (metric tons CO2e)

1560941

(7.10.1.2) Direction of change in emissions

Select from:

☑ Decreased

(7.10.1.3) Emissions value (percentage)

5.71

(7.10.1.4) Please explain calculation

To obtain the reduction figure, we identify the difference between the absolute emission scope 1 + 2 of 2024 and 2023. Then from the absolute emission formula we traced what indicator contributes to significant difference. As a result, 1.560.941 tCO2e or 5,71% of emission reduction derived from utilization of alternative raw material as a substitution of clinker, this makes clinker substitution the main contributor for emission reduction. Second, 708.619 tCO2e of emission reduction came from the use of renewable energy-sourced electricity and alternative fuel such as biomass. The percentage of emission value is calculated from the difference of emission between 2024 and 2023 compared to 2023 emission.
[Fixed row]

(7.12) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

Select from:

☑ No

(7.15) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Select from:

☑ Yes

(7.15.1) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used global warming potential (GWP).

Row 1

(7.15.1.1) Greenhouse gas

Select from:

☑ CO2

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

22841263

(7.15.1.3) GWP Reference

Select from:

☑ IPCC Fifth Assessment Report (AR5 – 100 year)

[Add row]

(7.16) Break down your total gross global Scope 1 and 2 emissions by country/area.

	Scope 1 emissions (metric tons CO2e)	Scope 2, location-based (metric tons CO2e)
Indonesia	*22841263*	*2221219*

[Fixed row]

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

Select all that apply

☑ By facility

(7.17.2) Break down your total gross global Scope 1 emissions by business facility.

Row 1

(7.17.2.1) Facility

Semen Baturaja

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

1284200

(7.17.2.3) Latitude

-5.460112

(7.17.2.4) Longitude

105.315393

Row 2

(7.17.2.1) Facility

PT Semen Tonasa

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

4227332

(7.17.2.3) Latitude

-4.47879

(7.17.2.4) Longitude

119.61439

Row 3

(7.17.2.1) Facility

Group Head of Plant Operation

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

4828028

(7.17.2.3) Latitude

-6.86099

(7.17.2.4) Longitude

111.916906

Row 4

(7.17.2.1) Facility

PT Semen Padang

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

4063929

(7.17.2.3) Latitude

-0.94411

(7.17.2.4) Longitude

100.471005

Row 5

(7.17.2.1) Facility

PT Solusi Bangun Indonesia

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

7375355

(7.17.2.3) Latitude

-6.4562

(7.17.2.4) Longitude

106.93268

Row 6

(7.17.2.1) Facility

PT Semen Gresik

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

1062418

(7.17.2.3) Latitude

-6.861198

(7.17.2.4) Longitude

111.45929
[Add row]

(7.19) 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
Cement production activities	*22841263*	*22598049*

[Fixed row]

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

Select all that apply
☑ By facility

(7.20.2) Break down your total gross global Scope 2 emissions by business facility.

	Facility	Scope 2, location-based (metric tons CO2e)
Row 1	*PT Semen Baturaja*	*149777*
Row 2	*Group Head of Plant Operation*	*480980*
Row 3	*PT Solusi Bangun Indonesia*	*869558*

	Facility	Scope 2, location-based (metric tons CO2e)
Row 4	*PT Semen Padang*	*484156*
Row 5	*PT Semen Gresik*	*128634*
Row 6	*PT Semen Tonasa*	*108114*

[Add row]

(7.21) 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
Cement production activities	*2221219*

[Fixed row]

(7.22) Break down your gross Scope 1 and Scope 2 emissions between your consolidated accounting group and other entities included in your response.

	Scope 1 emissions (metric tons CO2e)	Scope 2, location-based emissions (metric tons CO2e)
Consolidated accounting group	*22841263*	*2221219*

	Scope 1 emissions (metric tons CO2e)	Scope 2, location-based emissions (metric tons CO2e)
All other entities	*0*	*0*

[Fixed row]

(7.23) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

Select from:

☑ Yes

(7.23.1) Break down your gross Scope 1 and Scope 2 emissions by subsidiary.

Row 1

(7.23.1.1) Subsidiary name

PT Semen Baturaja

(7.23.1.2) Primary activity

Select from:

☑ Cement

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply

☑ Ticker symbol

(7.23.1.7) Ticker symbol

SMBR

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

1284200

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

149777

Row 2

(7.23.1.1) Subsidiary name

PT Semen Gresik

(7.23.1.2) Primary activity

Select from:

☑ Cement

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply

☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

1062418

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

128634

Row 3

(7.23.1.1) Subsidiary name

PT Semen Tonasa

(7.23.1.2) Primary activity

Select from:

☑ Cement

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply

☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

4227332

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

108114

Row 4

(7.23.1.1) Subsidiary name

PT Solusi Bangun Indonesia, Tbk

(7.23.1.2) Primary activity

Select from:

☑ Cement

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply

☑ Ticker symbol

(7.23.1.7) Ticker symbol

SMCB

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

7375355

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

869558

Row 5

(7.23.1.1) Subsidiary name

PT Semen Padang

(7.23.1.2) Primary activity

Select from:

☑ Cement

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply

☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

4063929

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

484156

Row 6

(7.23.1.1) Subsidiary name

Group Head of Operation Planning

(7.23.1.2) Primary activity

Select from:

☑ Cement

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply

☑ Ticker symbol

(7.23.1.7) Ticker symbol

SMGR

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

4828028

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

480980

[Add row]

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

Select from:

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

(7.30) 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)	*Select from:* ☑ Yes
Consumption of purchased or acquired electricity	*Select from:* ☑ Yes
Consumption of purchased or acquired heat	*Select from:* ☑ No
Consumption of purchased or acquired steam	*Select from:* ☑ No
Consumption of purchased or acquired cooling	*Select from:* ☑ No
Generation of electricity, heat, steam, or cooling	*Select from:* ☑ No

[Fixed row]

(7.30.1) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

Consumption of fuel (excluding feedstock)

(7.30.1.1) Heating value

Select from:

☑ LHV (lower heating value)

(7.30.1.2) MWh from renewable sources

845302

(7.30.1.3) MWh from non-renewable sources

23987660

(7.30.1.4) Total (renewable + non-renewable) MWh

24832962.00

Consumption of purchased or acquired electricity

(7.30.1.1) Heating value

Select from:

☑ LHV (lower heating value)

(7.30.1.2) MWh from renewable sources

2340

(7.30.1.3) MWh from non-renewable sources

2972323

(7.30.1.4) Total (renewable + non-renewable) MWh

2974663.00

Total energy consumption

(7.30.1.1) Heating value

Select from:

☑ LHV (lower heating value)

(7.30.1.2) MWh from renewable sources

847672

(7.30.1.3) MWh from non-renewable sources

26959983

(7.30.1.4) Total (renewable + non-renewable) MWh

27807655.00
[Fixed row]

(7.30.2) Report your organization’s energy consumption totals (excluding feedstocks) for cement production activities in MWh.

	Heating value	Total MWh
Consumption of fuel (excluding feedstocks)	*Select from:* ☑ LHV (lower heating value)	*24832962*
Consumption of purchased or acquired electricity	*Select from:* ☑ LHV (lower heating value)	*2974662*
Consumption of other purchased or acquired energy (heat, steam and/or cooling)	*Select from:* ☑ LHV (lower heating value)	*`Numeric input*
Total energy consumption	*Select from:* ☑ LHV (lower heating value)	*27807624*

[Fixed row]

(7.30.6) 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	*Select from:* ☑ Yes
Consumption of fuel for the generation of heat	*Select from:* ☑ Yes
Consumption of fuel for the generation of steam	*Select from:* ☑ No
Consumption of fuel for the generation of cooling	*Select from:* ☑ No
Consumption of fuel for co-generation or tri-generation	*Select from:* ☑ No

[Fixed row]

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

Sustainable biomass

(7.30.7.1) Heating value

Select from:

☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

845302

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

845302

(7.30.7.8) Comment

Rice husk from agricultural waste, kaliandra plants, and others

Other biomass

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

Other renewable fuels (e.g. renewable hydrogen)

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

3752

(7.30.7.3) MWh fuel consumed for self-generation of electricity

3752

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.8) Comment

Solar Photovoltaics and Hydro Power Plants

Coal

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

22754005

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

22754005

Oil

(7.30.7.1) Heating value

Select from:

☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

110606

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

110606

Gas

(7.30.7.1) Heating value

Select from:

☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

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

(7.30.7.1) Heating value

Select from:

☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

4095362

(7.30.7.3) MWh fuel consumed for self-generation of electricity

97492

(7.30.7.4) MWh fuel consumed for self-generation of heat

1025547

(7.30.7.8) Comment

Refused derived fuel from municipal solid waste, and industrial waste

Total fuel

(7.30.7.2) Total fuel MWh consumed by the organization

24726099

(7.30.7.3) MWh fuel consumed for self-generation of electricity

101242

(7.30.7.4) MWh fuel consumed for self-generation of heat

24624854

[Fixed row]

(7.30.8) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel for cement production activities.

Sustainable biomass

(7.30.8.1) Heating value

Select from:
☑ LHV

(7.30.8.2) Total MWh fuel consumed for cement production activities

0

(7.30.8.3) MWh fuel consumed at the kiln

845302

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

0

(7.30.8.5) MWh fuel consumed for the self-generation of electricity

0

(7.30.8.7) Comment

Rice husk from agricultural waste, kaliandra plants, and others

Other biomass

(7.30.8.1) Heating value

Select from:

☑ LHV

(7.30.8.2) Total MWh fuel consumed for cement production activities

0

(7.30.8.3) MWh fuel consumed at the kiln

0

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

0

(7.30.8.5) MWh fuel consumed for the self-generation of electricity

0

Other renewable fuels (e.g. renewable hydrogen)

(7.30.8.1) Heating value

Select from:

☑ LHV

(7.30.8.2) Total MWh fuel consumed for cement production activities

0

(7.30.8.3) MWh fuel consumed at the kiln

0

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

0

(7.30.8.5) MWh fuel consumed for the self-generation of electricity

0

(7.30.8.7) Comment

hydrogen-rich gas

Coal

(7.30.8.1) Heating value

Select from:
☑ LHV

(7.30.8.2) Total MWh fuel consumed for cement production activities

0

(7.30.8.3) MWh fuel consumed at the kiln

22754005

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

0

(7.30.8.5) MWh fuel consumed for the self-generation of electricity

0

Oil

(7.30.8.1) Heating value

Select from:

☑ LHV

(7.30.8.2) Total MWh fuel consumed for cement production activities

0

(7.30.8.3) MWh fuel consumed at the kiln

110616

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

0

(7.30.8.5) MWh fuel consumed for the self-generation of electricity

0

Gas

(7.30.8.1) Heating value

Select from:

☑ LHV

(7.30.8.2) Total MWh fuel consumed for cement production activities

0

(7.30.8.3) MWh fuel consumed at the kiln

0

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

0

(7.30.8.5) MWh fuel consumed for the self-generation of electricity

0

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

(7.30.8.1) Heating value

Select from:
☑ LHV

(7.30.8.2) Total MWh fuel consumed for cement production activities

0

(7.30.8.3) MWh fuel consumed at the kiln

1025547

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

0

(7.30.8.5) MWh fuel consumed for the self-generation of electricity

0

(7.30.8.7) Comment

Alternative fuel such as refused-derived fuel from municipal solid waste and industrial waste

Total fuel

(7.30.8.1) Heating value

Select from:

☑ LHV

(7.30.8.2) Total MWh fuel consumed for cement production activities

0

(7.30.8.3) MWh fuel consumed at the kiln

24735470

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

0

(7.30.8.5) MWh fuel consumed for the self-generation of electricity

0

[Fixed row]

(7.30.16) Provide a breakdown by country/area of your electricity/heat/steam/cooling consumption in the reporting year.

	Consumption of purchased electricity (MWh)	Consumption of self-generated electricity (MWh)	Consumption of self-generated heat, steam, and cooling (MWh)
Indonesia	*2974663*	*1390000*	*24624854*

[Fixed row]

(7.45) 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.

Row 1

(7.45.1) Intensity figure

0.683

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

25062482

(7.45.3) Metric denominator

Select from:

☑ unit of production

(7.45.4) Metric denominator: Unit total

36669396

(7.45.5) Scope 2 figure used

Select from:

☑ Location-based

(7.45.6) % change from previous year

8.3

(7.45.7) Direction of change

Select from:

☑ Decreased

(7.45.8) Reasons for change

Select all that apply

☑ Change in renewable energy consumption

☑ Other emissions reduction activities

[Add row]

(7.47) 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	*0.856*	*0.847*	*0.531*
Cement equivalent	*0.576*	*0.569*	*0.56*
Cementitious products	*0.615*	*0.608*	*0.6*

[Fixed row]

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

Row 1

(7.52.1) Description

Select from:

☑ Energy usage

(7.52.2) Metric value

2.68

(7.52.3) Metric numerator

GJ

(7.52.4) Metric denominator (intensity metric only)

GJ / t cem prod

(7.52.5) % change from previous year

3.5

(7.52.6) Direction of change

Select from:

☑ Decreased

[Add row]

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

Select all that apply

☑ Intensity target

(7.53.2) Provide details of your emissions intensity targets and progress made against those targets.

Row 1

(7.53.2.1) Target reference number

Select from:

☑ Int 1

(7.53.2.2) Is this a science-based target?

Select from:

☑ Yes, and this target has been approved by the Science Based Targets initiative

(7.53.2.3) Science Based Targets initiative official validation letter

(7.53.2.4) Target ambition

Select from:

☑ 1.5°C aligned

(7.53.2.6) Target coverage

Select from:

☑ Organization-wide

(7.53.2.7) Greenhouse gases covered by target

Select all that apply

☑ Carbon dioxide (CO2)

☑ Methane (CH4)

☑ Nitrous oxide (N2O)

☑ Hydrofluorocarbons (HFCs)

(7.53.2.8) Scopes

Select all that apply

☑ Scope 1

☑ Scope 2

(7.53.2.9) Scope 2 accounting method

Select from:

☑ Location-based

(7.53.2.11) Intensity metric

Select from:

☑ Metric tons CO2e per metric ton of cement

(7.53.2.12) End date of base year

12/30/2019

(7.53.2.13) Intensity figure in base year for Scope 1

0.652

(7.53.2.14) Intensity figure in base year for Scope 2

0.055

(7.53.2.33) Intensity figure in base year for all selected Scopes

0.7070000000

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

100

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

100

(7.53.2.54) % of total base year emissions in all selected Scopes covered by this intensity figure

100

(7.53.2.55) End date of target

12/30/2032

(7.53.2.56) Targeted reduction from base year (%)

33.7

(7.53.2.57) Intensity figure at end date of target for all selected Scopes

0.4687410000

(7.53.2.58) % change anticipated in absolute Scope 1+2 emissions

33.4

(7.53.2.60) Intensity figure in reporting year for Scope 1

0.61

(7.53.2.61) Intensity figure in reporting year for Scope 2

0.06

(7.53.2.80) Intensity figure in reporting year for all selected Scopes

0.6700000000

(7.53.2.81) Land-related emissions covered by target

Select from:

☑ Yes, it covers land-related emissions/removals associated with bioenergy and non-land related emissions (e.g. non-FLAG SBT with bioenergy)

(7.53.2.82) % of target achieved relative to base year

15.53

(7.53.2.83) Target status in reporting year

Select from:

☑ Underway

(7.53.2.85) Explain target coverage and identify any exclusions

The target is SBTi near-term target, covering 100% of all scope 1 and 2 emissions. The target is emission intensity reduction where the metrics unit is tCO2e / t cementitious.

(7.53.2.86) Target objective

To achieve emission intensity target aligned with the 1,5 degree scenario which is 0,469 t CO2e / t cementitious for scope 1+2.

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

The company has internally made a simulation of scenario consisting of the most important variables to achieve the SBTi near-term target. This variables are: Clinker factor reduction, Thermal Substitution Rate (TSR), Specific Thermal Energy Consumption, and Calcination Emission Factor. Out of all variables, TSR is deemed to provide significant reduction and is the most practical to do from the check list. Thus, to obtain the desired % TSR to achieve the SBTi near-term target, the company do the outmost to secure significant amount of alternative fuels, especially biomass. At the same time, the company continuously strive to utilize alternative raw material to substitute clinker. The substitution of clinker will lead to lower STEC and clinker factor which would reduce emission in production signifivantly.

(7.53.2.88) Target derived using a sectoral decarbonization approach

Select from:

☑ Yes

Row 2

(7.53.2.1) Target reference number

Select from:

☑ Int 2

(7.53.2.2) Is this a science-based target?

Select from:

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

(7.53.2.6) Target coverage

Select from:

☑ Organization-wide

(7.53.2.7) Greenhouse gases covered by target

Select all that apply

☑ Carbon dioxide (CO2)

(7.53.2.8) Scopes

Select all that apply

☑ Scope 1

(7.53.2.11) Intensity metric

Select from:

☑ Other, please specify :Net Specific Ton CO2 per ton Cement Equivalent

(7.53.2.12) End date of base year

12/30/2010

(7.53.2.13) Intensity figure in base year for Scope 1

0.708

(7.53.2.33) Intensity figure in base year for all selected Scopes

0.7080000000

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

100

(7.53.2.54) % of total base year emissions in all selected Scopes covered by this intensity figure

100.0

(7.53.2.55) End date of target

12/30/2030

(7.53.2.56) Targeted reduction from base year (%)

27

(7.53.2.57) Intensity figure at end date of target for all selected Scopes

0.5168400000

(7.53.2.60) Intensity figure in reporting year for Scope 1

0.57

(7.53.2.80) Intensity figure in reporting year for all selected Scopes

0.5700000000

(7.53.2.82) % of target achieved relative to base year

72.19

(7.53.2.83) Target status in reporting year

Select from:

☑ Underway

(7.53.2.85) Explain target coverage and identify any exclusions

The target is internally made way before SBTi and is made as a commitment of decarbonization to investors, which then is published. the metrics unit for this target is tCO2/t cement eq.

(7.53.2.86) Target objective

To decarbonize our production process as committed towards the investor. The objective is to achieve 0.515 tCO2/t cement eq.

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

The company has conduct various initiatives to obtain this particular target as it has the closest deadline. Some major initiatives include: 1. Increasing alternative fuel utilization SIG gradually increase its alternative fuel utilization by cooperating with the regional government to become the off-taker of municipal solid waste as a source of refused-derived fuel. SIG also leverage this potential by establishing a waste management business line conducted by nathabumi business unit. Not only RDF and industrial waste, SIG also increase its biomass utilization 2. Clinker Substitution with low-carbon material Reducing the composition of clinker in a cement mix also plays a significant role in emission reduction, since clinker is a very energy-intensive material.Thus, the company utilized alternative raw material such as fly ash, bottom ash, copper slag, and used refractory materials while keep maintaining the high quality of the cement. 3. Energy efficency The company is equipped with advanced plant controller to automatically control energy variables. Therefore, making it more efficient.

(7.53.2.88) Target derived using a sectoral decarbonization approach

Select from:

☑ Yes

Row 3

(7.53.2.1) Target reference number

Select from:

☑ Int 3

(7.53.2.2) Is this a science-based target?

Select from:

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

(7.53.2.6) Target coverage

Select from:

☑ Organization-wide

(7.53.2.7) Greenhouse gases covered by target

Select all that apply

☑ Carbon dioxide (CO2)

(7.53.2.8) Scopes

Select all that apply

☑ Scope 2

(7.53.2.9) Scope 2 accounting method

Select from:

☑ Location-based

(7.53.2.11) Intensity metric

Select from:

☑ Other, please specify :Net Specific Ton CO2 per ton Cement Equivalent

(7.53.2.12) End date of base year

12/30/2019

(7.53.2.14) Intensity figure in base year for Scope 2

0.067

(7.53.2.33) Intensity figure in base year for all selected Scopes

0.0670000000

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

100

(7.53.2.54) % of total base year emissions in all selected Scopes covered by this intensity figure

100.0

(7.53.2.55) End date of target

12/30/2030

(7.53.2.56) Targeted reduction from base year (%)

23.9

(7.53.2.57) Intensity figure at end date of target for all selected Scopes

0.0509870000

(7.53.2.61) Intensity figure in reporting year for Scope 2

0.056

(7.53.2.80) Intensity figure in reporting year for all selected Scopes

0.0560000000

(7.53.2.82) % of target achieved relative to base year

68.69

(7.53.2.83) Target status in reporting year

Select from:

☑ Underway

(7.53.2.85) Explain target coverage and identify any exclusions

The target is internally made way before SBTi and is made as a commitment of decarbonization to investors, which then is published. the metrics unit for this target is tCO2/t cement eq.

(7.53.2.86) Target objective

To be less dependent from fossil fuel-based electricity and eventually decarbonize our production process as committed towards the investor. The objective is to achieve 0.051 tCO2/t cement eq.

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

To be less dependent to the commercial electricity grid, which most of the electricity is sourced from fossil fuel, the company has installed several renewable-energy sourced power generator, such as 1. Solar PV power plants The company has installed rooftop solar panels with the capacity of 6,5 MWp for pilot project and we will continuously expand the capacity and consumption of renewable energy with project expansion is now in the pipeline and procurement processes. 2. Hydro power plants SIG is also equipped with hydro power plants for several plants such as semen padang with the capacity of 4,5 MW and 40 KW.

(7.53.2.88) Target derived using a sectoral decarbonization approach

Select from:

☑ Yes

[Add row]

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

Select all that apply

☑ No other climate-related targets

(7.55) 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.

Select from:

☑ Yes

(7.55.1) 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
To be implemented	*1*	*35121*
Implemented	*5*	*2269560*

[Fixed row]

(7.55.2) Provide details on the initiatives implemented in the reporting year in the table below.

Row 1

(7.55.2.1) Initiative category & Initiative type

Energy efficiency in production processes

☑ Waste heat recovery

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

82354

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

Select all that apply

☑ Scope 2 (location-based)

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in 1.2)

97174375428

Row 2

(7.55.2.1) Initiative category & Initiative type

Energy efficiency in production processes

☑ Fuel switch

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

708619

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

Select all that apply

☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in 1.2)

293000000000

Row 3

(7.55.2.1) Initiative category & Initiative type

Low-carbon energy consumption

☑ Small hydropower (<25 MW)

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

2038

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

Select all that apply

☑ Scope 2 (location-based)

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in 1.2)

2183847373

Row 4

(7.55.2.1) Initiative category & Initiative type

Low-carbon energy consumption

☑ Solar PV

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

1450

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

Select all that apply

☑ Scope 2 (location-based)

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in 1.2)

557822330

Row 5

(7.55.2.1) Initiative category & Initiative type

Non-energy industrial process emissions reductions

☑ Process material substitution

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

1126991

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

Select all that apply

☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in 1.2)

181000000000

[Add row]

(7.55.3) What methods do you use to drive investment in emissions reduction activities?

Row 2

(7.55.3.1) Method

Select from:

☑ Dedicated budget for low-carbon product R&D

(7.55.3.2) Comment

SIG, as a building material solution provider continuously develop high quality products and solutions, including sustainability products. Following our PCC Cement, in 2020, we have launched some products and solutions which support our commitment towards the sustainable living, such as masonry cement bag, various type of non-OPC cement, slag cement, slag product, as well as some type of concrete products and solutions (SpeedCrete, ThruCrete, DynaHome, DynaPump) that are created to support the effort towards sustainable living. Our core products is certified with green label (PCC cement, PwrPro cement, and Slag product) from Green Product Council Indonesia (Associate Member of Global Ecolabelling Network) and Singapore Environment Council. In 2024, our sustainable products made up 61% of our revenue. Making sustainable products a major part of our financial performance. Thus, SIG continuously develop the quality of sustainable products while aiming to reduce emission as well and making the products economically viable. Every year SIG also has a budget allocated for R&D initiatives as stated in the annual report, some parts of it are specifically used for sustainable products. Not only a dedicated division and budget for R&D, SIG also has an Indonesia Cement Research Institute, collaborating with the Infrastructure SOE and Cement Industries to further develop and keep up with the update of cement and

Row 3

(7.55.3.1) Method

Select from:

☑ Dedicated budget for other emissions reduction activities

(7.55.3.2) Comment

In 2023, SIG has brought ESG CAPEX topics to the investors in the Annual General Meeting. This allocation of IDR 200 Trillion CAPEX is approved by > 90% of shareholders to be allocated for expenses related to ESG. In spending this CAPEX, our company mainly focuses on initiatives that supports decarbonization: 1. Increased alternative fuel utilization To increased consumption of alternative fuel significantly, there are several necessary upgrades needed, which costly. Therefore, our ESG CAPEX revolves around upgrading alternative fuels facilities such as shredder and feeding facilities. Additionally, the CAPEX is also utilized to purchase and support sustainable biomass. 2. Increased alternative raw material Not only, alternative fuels, upgrading facilities are also necessary to process various alternative raw material before it mets the criteria for a cement mix. Research and development are also necessary is identifying the suitability of this alternative raw material for a cement mix.

Row 4

(7.55.3.1) Method

Select from:

☑ Compliance with regulatory requirements/standards

(7.55.3.2) Comment

Based on the Government's 2016–2020 roadmap for reducing GHG emissions in the cement industry, SIG has implemented initiatives to ensure regulatory compliance. One of the key measures includes increasing the utilization of waste as Alternative Fuel and Raw Material (AFR). To support this, SIG has invested in facilities such as kiln feed systems to supply AFR to the combustion process and gradually replaced electric precipitators with main baghouse filters across its plants, thereby enhancing air emission management in line with the growing use of AFR. Following that, this year, ministry of Industry has finished developing decarbonization roadmap for cement industry.Once the roadmap took place, it will only be a matter of time until carbon cap and tax will be implemented for cement industries. This will pushed the company for a more ambitious decarbonization initiatives, resulting to a significant emission reduction. High decarbonization performance will exposed SIG to a good reputation from investors (e.g., such as through IDX ESG Leaders) leading to a higher investment from the public.

Row 5

(7.55.3.1) Method

Select from:

☑ Partnering with governments on technology development

(7.55.3.2) Comment

One of the Government's programs under the 2020–2024 National Mid-Term Development Plan is to strengthen waste management by increasing the capacity to treat hazardous (B3) waste, reducing waste disposal into the sea, and expanding the national coverage of integrated waste treatment facilities. In alignment with this program, SIG, through its waste management unit Nathabumi, continues to enhance its capacity and capability in providing industrial and municipal waste treatment solutions through co-processing, where waste is combusted in our kilns and utilized as a source of thermal energy in cement production. Furthermore, certain types of industrial waste, such as fly ash, bottom ash, and copper slag, are used as alternative raw materials for cement. In 2020, SIG also formalized collaboration with the Cilacap City Government to manage municipal waste through a Refuse-Derived Fuel (RDF) system, which is utilized as an alternative fuel at the SIG Cilacap plant. This initiatives will result in decarbonization and also generate a new revenue stream for the company.
[Add row]

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

	Total production capacity coverage (%)
4+ cyclone preheating	*100*

	Total production capacity coverage (%)
Pre-calciner	*100*

[Fixed row]

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

Select from:

☑ Yes

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

Row 1

(7.74.1.1) Level of aggregation

Select from:

☑ Group of products or services

Row 2

(7.74.1.1) Level of aggregation

Select from:

☑ Group of products or services

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

Select from:

☑ The IEA Energy Technology Perspectives Clean Energy Technology Guide

(7.74.1.3) Type of product(s) or service(s)

Cement and concrete

☑ Other, please specify :Green cement products

(7.74.1.4) Description of product(s) or service(s)

SIG offers a range of products classified as low-carbon solutions. Our PCC and PwrPro cement have been awarded the Green Label certification by the Green Product Council Indonesia (an Associate Member of the Global Ecolabelling Network) in recognition of their reduced CO_2 emissions. In 2020, we introduced masonry cement with a lower clinker content, resulting in further emissions reduction. This product is designed for non-structural construction applications and provides a more cost-efficient alternative for customers. Referring to the low-carbon cement scale and definition from IEA and GCCA, SIG cement falls under the low-carbon cement class E - D. With clinker ratio of around 0.65 and emission intensity of 0.560/t cement equivalent.

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

Select from:

☑ No

[Add row]

(7.79) Has your organization retired any project-based carbon credits within the reporting year?

Select from:

☑ No

C9. Environmental performance - Water security

(9.1) Are there any exclusions from your disclosure of water-related data?

Select from:

☑ Yes

(9.1.1) Provide details on these exclusions.

Row 1

(9.1.1.1) Exclusion

Select from:

☑ Facilities

(9.1.1.2) Description of exclusion

The use of water from packing plants outside our integrated plant locations.

(9.1.1.3) Reason for exclusion

Select from:

☑ Small volume [rainwater]

Row 2

(9.1.1.1) Exclusion

Select from:

☑ Business activities

(9.1.1.2) Description of exclusion

Thang Long Cement JSC, SIG subsidiary in cement manufacture business in Vietnam.

(9.1.1.3) Reason for exclusion

Select from:

☑ Data is not available

(9.1.1.4) Primary reason why data is not available

Select from:

☑ Challenges associated with data collection and/or quality

[Add row]

(9.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

Water withdrawals – total volumes

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

Measuring tool and manual calculation

(9.2.4) Please explain

Groundwater, surface water, and municipal water withdrawals are measured using flow meters. Rainwater, freshwater, and other water sources are measured using a combination of flow meters and standardized calculation methods in accordance with the WBCSD CSI Protocol. Seawater and third-party water withdrawals are

measured using water flow measuring devices installed at the intake or supply points. The total data is then compiled and calculated using a WBCSD CSI Protocol template resulting in a consolidate total of water withdrawal per month and per year.

Water withdrawals – volumes by source

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

Measuring tool and manual calculation

(9.2.4) Please explain

Surface water, groundwater, and third-party water (PDAM) withdrawals are recorded through calibrated flow meters. Rainwater withdrawals are using a combination of flow meters and standardized calculation methods in accordance with the WBCSD CSI Protocol.

Water withdrawals quality

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

Sample laboratorium testing

(9.2.4) Please explain

We measure water withdrawal quality by sampling from the water withdrawn and submit it to the laboratories to be analyzed. This procedure is to ensure the withdrawn water quality met all the criteria to be used.

Water discharges – total volumes

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

Measuring tool and manual calculation

(9.2.4) Please explain

Discharge water may not occur to all of our plants and may not occur regularly. Therefore, we monitor our discharge monthly using a measuring tool and we manually sum the total of discharge water using WBCSD CSI Protocol template.

Water discharges – volumes by destination

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

Measuring tool and manual calculation

(9.2.4) Please explain

All of our water discharges is dispatched to surface water (river). The water discharge is measured by two methods: 1. Direct measurement through water flow meter at water discharge pipe. 2. Volume calculations derived from the difference between withdrawal and consumption where the water withdrawal and consumption are measured by flow meter.

Water discharges – volumes by treatment method

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

Measuring tool & manual calculation

(9.2.4) Please explain

Our waste water treatment plants are designed to treat waste water before dispatching to surface water destination (river) in order to comply with the quality requirements set by Indonesian government. The treatment process include sedimentation, chemical injections, and oil/sludge separations.

Water discharge quality – by standard effluent parameters

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

Sample laboratorium testing

(9.2.4) Please explain

Effluent/wastewater that has undergone treatment is subject to periodic testing of wastewater quality standard parameters at least once a month at an environmental laboratory certified and registered with the Ministry of Environment and Forestry, or a laboratory designated by the local government. Commonly monitored parameters include pH, BOD, COD, TSS, oil and grease, ammonia, Total Coliform, and others. The measurement results are reported regularly to the Ministry of Environment and Forestry.

Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)

(9.2.1) % of sites/facilities/operations

Select from:

☑ Not monitored

(9.2.4) Please explain

Our production process does not incorporate these substances into our water treatment process.

Water discharge quality – temperature

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

Sample laboratorium testing

(9.2.4) Please explain

During water sampling, we conduct temperature measuring using specific type of thermometer.

Water consumption – total volume

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

Measuring tool & manual calculation

(9.2.4) Please explain

First, water consumption for each plant is measured with flow meter. This data is then compiled in the WBCSD CSI Protocol template to be summed and identify for monthly and annual water consumption.
[Fixed row]

(9.2.2) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, how do they compare to the previous reporting year, and how are they forecasted to change?

Total withdrawals

(9.2.2.1) Volume (megaliters/year)

7147

(9.2.2.2) Comparison with previous reporting year

Select from:
☑ Much lower

(9.2.2.3) Primary reason for comparison with previous reporting year

Select from:
☑ Increase/decrease in efficiency

(9.2.2.4) Five-year forecast

Select from:
☑ Lower

(9.2.2.5) Primary reason for forecast

Select from:
☑ Increase/decrease in efficiency

(9.2.2.6) Please explain

The reduction in water withdrawal is primarily attributed to better implementation of water efficiency measures. While lower production activities also contributed, they alone would not account for such a significant decrease, indicating that efficiency efforts played a more substantial role. Especially water efficiency through process optimization such as reduction from water consumption for cooling due to utilizing less-energy intensive material. Second, rainwater conservation and utilization plays a significant role in reducing water withdrawal and this year, rain water made up 26% of out total water withdrawal. Water recycling also increased around 2000 ML showing significant water efficiency.

Total discharges

(9.2.2.1) Volume (megaliters/year)

27.62

(9.2.2.2) Comparison with previous reporting year

Select from:

☑ Much lower

(9.2.2.3) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in efficiency

(9.2.2.4) Five-year forecast

Select from:

☑ Lower

(9.2.2.5) Primary reason for forecast

Select from:

☑ Increase/decrease in efficiency

(9.2.2.6) Please explain

The significant reduction of water discharge are mainly caused by better maintenance and water efficiency efforts. Such as, plant optimization that results with a better balance between water withdrawal and water consumption resulting in a lower water wasted. Improvement in maintenance also contributes to the decrease of water discharge by early detection of leakage and monitoring water balance. Improvement of water recycling also helps increase the water efficiency.

Total consumption

(9.2.2.1) Volume (megaliters/year)

7119

(9.2.2.2) Comparison with previous reporting year

Select from:

☑ Much lower

(9.2.2.3) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in efficiency

(9.2.2.4) Five-year forecast

Select from:

☑ Lower

(9.2.2.5) Primary reason for forecast

Select from:

☑ Increase/decrease in efficiency

(9.2.2.6) Please explain

The reduction in water consumption is primarily attributed to better implementation of water efficiency measures. While lower production activities also contributed, they alone would not account for such a significant decrease, indicating that efficiency efforts played a more substantial role. Especially water efficiency through process optimization such as reduction from water consumption for cooling due to utilizing less-energy intensive material. plant optimization that results with a better balance between water withdrawal and water consumption also contributes to water consumption reduction.

[Fixed row]

(9.2.4) Indicate whether water is withdrawn from areas with water stress, provide the volume, how it compares with the previous reporting year, and how it is forecasted to change.

(9.2.4.1) Withdrawals are from areas with water stress

Select from:

☑ Yes

(9.2.4.2) Volume withdrawn from areas with water stress (megaliters)

3106.73

(9.2.4.3) Comparison with previous reporting year

Select from:

☑ Lower

(9.2.4.4) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in efficiency

(9.2.4.5) Five-year forecast

Select from:

☑ Lower

(9.2.4.6) Primary reason for forecast

Select from:

☑ Increase/decrease in efficiency

(9.2.4.7) % of total withdrawals that are withdrawn from areas with water stress

43.47

(9.2.4.8) Identification tool

Select all that apply

☑ WRI Aqueduct

(9.2.4.9) Please explain

Based on the WRI Aqueduct Water Risk Atlas, SIG's high and very high water stress operations are in Java Island, specifically Tuban, Rembang, Cilacap, and Narogong. To mitigate these risks, SIG has reduced withdrawals through rainwater harvesting reservoirs, application of dry process technology, and optimization of water reuse in production. These measures are embedded in SIG's water risk action plan to strengthen resilience and ensure sustainable operations in high-risk areas.
[Fixed row]

(9.2.7) Provide total water withdrawal data by source.

Fresh surface water, including rainwater, water from wetlands, rivers, and lakes

(9.2.7.1) Relevance

Select from:

☑ Relevant

(9.2.7.2) Volume (megaliters/year)

6073

(9.2.7.3) Comparison with previous reporting year

Select from:

☑ Much lower

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in efficiency

(9.2.7.5) Please explain

The reduction in water withdrawal is primarily attributed to better implementation of water efficiency measures. While lower production activities also contributed, they alone would not account for such a significant decrease, indicating that efficiency efforts played a more substantial role. Especially water efficiency through process optimization such as reduction from water consumption for cooling due to utilizing less-energy intensive material. Second, rainwater conservation and utilization plays a significant role in reducing water withdrawal and this year, rain water made up 26% of out total water withdrawal. Water recycling also increased around 2000 ML showing significant water efficiency.

Brackish surface water/Seawater

(9.2.7.1) Relevance

Select from:

☑ Not relevant

Groundwater – renewable

(9.2.7.1) Relevance

Select from:

☑ Relevant

(9.2.7.2) Volume (megaliters/year)

997

(9.2.7.3) Comparison with previous reporting year

Select from:

☑ Lower

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in efficiency

(9.2.7.5) Please explain

The reduction in water withdrawal is primarily attributed to better implementation of water efficiency measures. While lower production activities also contributed, they alone would not account for such a significant decrease, indicating that efficiency efforts played a more substantial role. Especially water efficiency through process optimization such as reduction from water consumption for cooling due to utilizing less-energy intensive material. Second, rainwater conservation and utilization plays a significant role in reducing water withdrawal and this year, rain water made up 26% of out total water withdrawal. Water recycling also increased around 2000 ML showing significant water efficiency.

Groundwater – non-renewable

(9.2.7.1) Relevance

Select from:

☑ Not relevant

Produced/Entrained water

(9.2.7.1) Relevance

Select from:

☑ Not relevant

Third party sources

(9.2.7.1) Relevance

Select from:

☑ Relevant

(9.2.7.2) Volume (megaliters/year)

76

(9.2.7.3) Comparison with previous reporting year

Select from:

☑ Lower

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in efficiency

(9.2.7.5) Please explain

The reduction in water withdrawal is primarily attributed to better implementation of water efficiency measures. While lower production activities also contributed, they alone would not account for such a significant decrease, indicating that efficiency efforts played a more substantial role. Especially water efficiency through process optimization such as reduction from water consumption for cooling due to utilizing less-energy intensive material. Second, rainwater conservation and utilization plays a significant role in reducing water withdrawal and this year, rain water made up 26% of out total water withdrawal. Water recycling also increased around 2000 ML showing significant water efficiency.
[Fixed row]

(9.2.8) Provide total water discharge data by destination.

Fresh surface water

(9.2.8.1) Relevance

Select from:

☑ Relevant

(9.2.8.2) Volume (megaliters/year)

27.62

(9.2.8.3) Comparison with previous reporting year

Select from:

☑ Much lower

(9.2.8.4) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in efficiency

(9.2.8.5) Please explain

The significant reduction of water discharge are mainly caused by better maintenance and water efficiency efforts. Such as, plant optimization that results with a better balance between water withdrawal and water consumption resulting in a lower water wasted. Improvement in maintenance also contributes to the decrease of water discharge by early detection of leakage and monitoring water balance. Improvement of water recycling also helps increase the water efficiency and reduce water discharge. If water discharge was to occur, it is 100% sent to fresh surface water. However, prior to sending to the surface water, we conduct three tiers treatment plant, cooling, and laboratories testing to ensure this water discharge complied to the regulations and does not cause harm.

Brackish surface water/seawater

(9.2.8.1) Relevance

Select from:

☑ Not relevant

Groundwater

(9.2.8.1) Relevance

Select from:

☑ Not relevant

Third-party destinations

(9.2.8.1) Relevance

Select from:

☑ Not relevant
[Fixed row]

(9.2.9) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

Tertiary treatment

(9.2.9.1) Relevance of treatment level to discharge

Select from:
☑ Relevant

(9.2.9.2) Volume (megaliters/year)

27.62

(9.2.9.3) Comparison of treated volume with previous reporting year

Select from:
☑ Much lower

(9.2.9.4) Primary reason for comparison with previous reporting year

Select from:
☑ Increase/decrease in efficiency

(9.2.9.5) % of your sites/facilities/operations this volume applies to

Select from:
☑ 100%

(9.2.9.6) Please explain

Prior to being send to surface water, our water discharge went through three-tier treatment which consist of sedimentation, chemical injections, and oil/sludge separation.

Secondary treatment

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Not relevant

Primary treatment only

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Not relevant

Discharge to the natural environment without treatment

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Not relevant

Discharge to a third party without treatment

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Not relevant

Other

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Not relevant

[Fixed row]

(9.3) In your direct operations and upstream value chain, what is the number of facilities where you have identified substantive water-related dependencies, impacts, risks, and opportunities?

Direct operations

(9.3.1) Identification of facilities in the value chain stage

Select from:

☑ Yes, we have assessed this value chain stage and identified facilities with water-related dependencies, impacts, risks, and opportunities

(9.3.2) Total number of facilities identified

9

(9.3.3) % of facilities in direct operations that this represents

Select from:

☑ 100%

Upstream value chain

(9.3.1) Identification of facilities in the value chain stage

Select from:

☑ No, we have assessed this value chain stage but did not identify any facilities with water-related dependencies, impacts, risks, and opportunities

[Fixed row]

(9.3.1) For each facility referenced in 9.3, provide coordinates, water accounting data, and a comparison with the previous reporting year.

Row 1

(9.3.1.1) Facility reference number

Select from:

☑ Facility 1

(9.3.1.2) Facility name (optional)

Group Head of Plant Operation

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals and discharges

(9.3.1.8) Latitude

-6.866882

(9.3.1.9) Longitude

111.914713

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

1308

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Lower

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

766.2

(9.3.1.17) Withdrawals from groundwater - renewable

552

(9.3.1.21) Total water discharges at this facility (megaliters)

0

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:

☑ This is our first year of measurement

(9.3.1.27) Total water consumption at this facility (megaliters)

1308

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Lower

Row 2

(9.3.1.1) Facility reference number

Select from:

☑ Facility 2

(9.3.1.2) Facility name (optional)

PT Solusi Bangun Indonesia (Narogong Plant)

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals and discharges

(9.3.1.7) Country/Area & River basin

Indonesia

☑ Other, please specify :Sungai Cileungsi

(9.3.1.8) Latitude

-6.458456

(9.3.1.9) Longitude

106.932791

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

809.7

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Lower

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

742

(9.3.1.17) Withdrawals from groundwater - renewable

67.6

(9.3.1.21) Total water discharges at this facility (megaliters)

16.2

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:

☑ This is our first year of measurement

(9.3.1.23) Discharges to fresh surface water

16.2

(9.3.1.27) Total water consumption at this facility (megaliters)

793.5

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Much lower

Row 3

(9.3.1.1) Facility reference number

Select from:

☑ Facility 3

(9.3.1.2) Facility name (optional)

PT Semen Padang

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals and discharges

(9.3.1.8) Latitude

-0.952358

(9.3.1.9) Longitude

100.472288

(9.3.1.10) Located in area with water stress

Select from:

☑ No

(9.3.1.13) Total water withdrawals at this facility (megaliters)

1447

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Much lower

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

1447

(9.3.1.21) Total water discharges at this facility (megaliters)

0

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:

☑ This is our first year of measurement

(9.3.1.27) Total water consumption at this facility (megaliters)

1447

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Lower

Row 4

(9.3.1.1) Facility reference number

Select from:

☑ Facility 4

(9.3.1.2) Facility name (optional)

PT Semen Gresik

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals and discharges

(9.3.1.8) Latitude

-6.862109

(9.3.1.9) Longitude

111.458849

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

264.7

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Higher

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

231.8

(9.3.1.17) Withdrawals from groundwater - renewable

32.8

(9.3.1.21) Total water discharges at this facility (megaliters)

0

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:

☑ This is our first year of measurement

(9.3.1.27) Total water consumption at this facility (megaliters)

264.7

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Higher

Row 5

(9.3.1.1) Facility reference number

Select from:

☑ Facility 5

(9.3.1.2) Facility name (optional)

PT Semen Tonasa

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals and discharges

(9.3.1.8) Latitude

-4.788756

(9.3.1.9) Longitude

119.613413

(9.3.1.10) Located in area with water stress

Select from:

☑ No

(9.3.1.13) Total water withdrawals at this facility (megaliters)

1505

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Much lower

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

1505

(9.3.1.21) Total water discharges at this facility (megaliters)

0

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:

☑ This is our first year of measurement

(9.3.1.27) Total water consumption at this facility (megaliters)

1505

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Much lower

Row 6

(9.3.1.1) Facility reference number

Select from:

☑ Facility 6

(9.3.1.2) Facility name (optional)

PT Semen Baturaja

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals and discharges

(9.3.1.7) Country/Area & River basin

Indonesia

☑ Other, please specify :Sungai Ogan

(9.3.1.8) Latitude

-4.114779

(9.3.1.9) Longitude

104.158201

(9.3.1.10) Located in area with water stress

Select from:

☑ No

(9.3.1.13) Total water withdrawals at this facility (megaliters)

840.3

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Lower

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

840.3

(9.3.1.21) Total water discharges at this facility (megaliters)

8

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:

☑ This is our first year of measurement

(9.3.1.23) Discharges to fresh surface water

8

(9.3.1.27) Total water consumption at this facility (megaliters)

832.4

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Lower

Row 7

(9.3.1.1) Facility reference number

Select from:

☑ Facility 7

(9.3.1.2) Facility name (optional)

PT Solusi Bangun Indonesia (Tuban Plant)

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals and discharges

(9.3.1.8) Latitude

-6.813778

(9.3.1.9) Longitude

111.885863

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

325.8

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Higher

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

325.8

(9.3.1.21) Total water discharges at this facility (megaliters)

0

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:

☑ This is our first year of measurement

(9.3.1.27) Total water consumption at this facility (megaliters)

325.8

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Higher

Row 8

(9.3.1.1) Facility reference number

Select from:

☑ Facility 8

(9.3.1.2) Facility name (optional)

PT Solusi Bangun Indonesia (Cilacap Plant)

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals and discharges

(9.3.1.7) Country/Area & River basin

Indonesia

☑ Other, please specify :Sungai Donan

(9.3.1.8) Latitude

-7.687802

(9.3.1.9) Longitude

109.02239

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

398.2

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Much lower

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

328.9

(9.3.1.20) Withdrawals from third party sources

69.3

(9.3.1.21) Total water discharges at this facility (megaliters)

1.3

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:

☑ This is our first year of measurement

(9.3.1.23) Discharges to fresh surface water

1.3

(9.3.1.27) Total water consumption at this facility (megaliters)

396.8

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Much lower

Row 9

(9.3.1.1) Facility reference number

Select from:

☑ Facility 9

(9.3.1.2) Facility name (optional)

PT Solusi Bangun Indonesia (Lhoknga Plant)

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals and discharges

(9.3.1.7) Country/Area & River basin

Indonesia

☑ Other, please specify :Sungai Krueng Bale

(9.3.1.8) Latitude

5.451348

(9.3.1.9) Longitude

95.246467

(9.3.1.10) Located in area with water stress

Select from:

☑ No

(9.3.1.13) Total water withdrawals at this facility (megaliters)

247.5

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Much lower

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

211

(9.3.1.17) Withdrawals from groundwater - renewable

29.4

(9.3.1.20) Withdrawals from third party sources

7

(9.3.1.21) Total water discharges at this facility (megaliters)

2

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:

☑ This is our first year of measurement

(9.3.1.23) Discharges to fresh surface water

2

(9.3.1.27) Total water consumption at this facility (megaliters)

245.4

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Much lower

[Add row]

(9.3.2) For the facilities in your direct operations referenced in 9.3.1, what proportion of water accounting data has been third party verified?

Water withdrawals – total volumes

(9.3.2.1) % verified

Select from:

☑ Not verified

Water withdrawals – volume by source

(9.3.2.1) % verified

Select from:

☑ Not verified

Water withdrawals – quality by standard water quality parameters

(9.3.2.1) % verified

Select from:

☑ Not verified

Water discharges – total volumes

(9.3.2.1) % verified

Select from:

☑ Not verified

Water discharges – volume by destination

(9.3.2.1) % verified

Select from:

☑ Not verified

Water discharges – volume by final treatment level

(9.3.2.1) % verified

Select from:

☑ Not verified

Water discharges – quality by standard water quality parameters

(9.3.2.1) % verified

Select from:

☑ Not verified

Water consumption – total volume

(9.3.2.1) % verified

Select from:

☑ Not verified

[Fixed row]

(9.5) Provide a figure for your organization's total water withdrawal efficiency.

(9.5.1) Revenue (currency)

36186127000000

(9.5.2) Total water withdrawal efficiency

5063121169.72

(9.5.3) Anticipated forward trend

SIG expects water withdrawal efficiency to improve through ongoing initiatives. By 2030, SIG targets each cement subsidiary to meet at least 10% of its water needs from rainwater and achieve at least a 3% reduction in freshwater withdrawals through the installation of closed-loop cooling systems.
[Fixed row]

(9.13) Do any of your products contain substances classified as hazardous by a regulatory authority?

	Products contain hazardous substances	Comment
	Select from: ☑ No	*No, not currently but we intend to within two years*

[Fixed row]

(9.14) Do you classify any of your current products and/or services as low water impact?

(9.14.1) Products and/or services classified as low water impact

Select from:
☑ Yes

(9.14.2) Definition used to classify low water impact

Cement products can contribute to reducing water impacts through both their formulation and application. By optimizing clinker composition and incorporating supplementary cementitious materials, our low-carbon cement products require less water during the hydration process while maintaining performance standards. In addition, when applied in construction, these products improve durability and reduce the frequency of repairs or reconstruction, which indirectly lowers long-term water consumption associated with material production and construction activities. Through these innovations, cement products can play a role in supporting sustainable water management in the built environment.

(9.14.4) Please explain

With advancement of technology, there is no process that required much within the process. The process of cement making relied to dry process in which there is less water in processing cement product
[Fixed row]

(9.15) Do you have any water-related targets?

Select from:
☑ Yes

(9.15.1) Indicate whether you have targets relating to water pollution, water withdrawals, WASH, or other water-related categories.

	Target set in this category
Water pollution	*Select from:* ☑ Yes
Water withdrawals	*Select from:* ☑ Yes

[Fixed row]

(9.15.2) Provide details of your water-related targets and the progress made.

Row 1

(9.15.2.1) Target reference number

Select from:

☑ Target 1

(9.15.2.2) Target coverage

Select from:

☑ Organization-wide (direct operations only)

(9.15.2.3) Category of target & Quantitative metric

Water withdrawals

☑ Reduction in withdrawals per unit of production

(9.15.2.4) Date target was set

12/31/2019

(9.15.2.5) End date of base year

12/30/2019

(9.15.2.6) Base year figure

297

(9.15.2.7) End date of target year

12/30/2030

(9.15.2.8) Target year figure

262.8

(9.15.2.9) Reporting year figure

132

(9.15.2.10) Target status in reporting year

Select from:

☑ Achieved and maintained

(9.15.2.13) Explain target coverage and identify any exclusions

The target is to reduce freshwater withdrawal intensity (liter / t cem eq). This target covers 100% of withdrawals from all cement manufacturing plants.

(9.15.2.15) Actions which contributed most to achieving or maintaining this target

The Company carries out conservation and efforts to expand water access through the construction of rainwater reservoirs. Reservoirs are one of the facilities for collecting rainwater that can be used for factory and office needs. By utilizing rainwater collected in reservoirs, the use of groundwater can be reduced. SIG carries out routine maintenance on pump and piping facilities to maintain the smooth supply of water from reservoirs. Reservoir facilities are available in almost all plants (Tuban SI, Rembang, Tonasa, Narogong, LhokNga, and Cilacap). Throughout 2024, the volume of water taken and utilized from reservoirs was 1,887,931 m3, or 26% of the Company's total water withdrawal. Additionally, the Company has implemented the 3R principle (Reduce, Reuse, Recycle) in its production process. In 2024, surface water withdrawals amounted to 7.15 million m3, a 17% decrease compared to the previous reporting year.

(9.15.2.16) Further details of target

This target was established on 2020, during the making of SIG Sustainability Roadmap 2030. However, with the achievement of reducing freshwater withdrawal beyond the desired target, the company felt the urgency to refresh the target as soon as possible.
[Add row]

C11. Environmental performance - Biodiversity

(11.2) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

(11.2.1) Actions taken in the reporting period to progress your biodiversity-related commitments

Select from:

☑ Yes, we are taking actions to progress our biodiversity-related commitments

(11.2.2) Type of action taken to progress biodiversity- related commitments

Select all that apply

☑ Land/water management

[Fixed row]

(11.3) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
	Select from: ☑ Yes, we use indicators	*Select all that apply* ☑ Other, please specify :Progress of Biodiversity Management Plan

[Fixed row]

(11.4) Does your organization have activities located in or near to areas important for biodiversity in the reporting year?

UNESCO World Heritage sites

(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity

Select from:

☑ Yes

(11.4.2) Comment

SIG has world heritage of pre-historic rock art sites called Bulusipong. We are committed to managed this site using Cultural Heritage Management Plan that observed periodically and assisted by local and international archeologist
[Fixed row]

(11.4.1) Provide details of your organization’s activities in the reporting year located in or near to areas important for biodiversity.

Row 1

(11.4.1.2) Types of area important for biodiversity

Select all that apply

☑ UNESCO World Heritage sites

(11.4.1.4) Country/area

Select from:

☑ Indonesia

(11.4.1.5) Name of the area important for biodiversity

Bulusipong Rock Art Sites

(11.4.1.6) Proximity

Select from:

☑ Adjacent

(11.4.1.8) Briefly describe your organization’s activities in the reporting year located in or near to the selected area

Bulusipong rock art sites was the oldest hunting scene rock-art in the world. We are preserving this sites by implementing cultural heritage management plan. Beside, we are also implementing monitoring and evaluation system such as for vibration, dust, and air humidity control. Also we have a dedicated team to manage Bulu Sipong and we have a protection partnership with the Cultural Preservation Center, Maros Pangkep Geopark, and Hasanudin University.

(11.4.1.9) Indicate whether any of your organization’s activities located in or near to the selected area could negatively affect biodiversity

Select from:

☑ Yes, but mitigation measures have been implemented

(11.4.1.10) Mitigation measures implemented within the selected area

Select all that apply

☑ Site selection

☑ Physical controls

(11.4.1.11) Explain how your organization’s activities located in or near to the selected area could negatively affect biodiversity, how this was assessed, and describe any mitigation measures implemented

The increasing mining activity near the location has the potential to the apperance of rock-art negatively. But, we redesign preliminary mine location to be further away from rock-art location. Moreover, we control periodicaly not only the vibration affected by mining activity but also the dust produced.
[Add row]

C13. Further information & sign off

(13.1) Indicate if any environmental information included in your CDP response (not already reported in 7.9.1/2/3, 8.9.1/2/3/4, and 9.3.2) is verified and/or assured by a third party?

	Other environmental information included in your CDP response is verified and/or assured by a third party
	Select from: ☑ Yes

[Fixed row]

(13.1.1) Which data points within your CDP response are verified and/or assured by a third party, and which standards were used?

Row 1

(13.1.1.1) Environmental issue for which data has been verified and/or assured

Select all that apply

☑ Climate change

(13.1.1.2) Disclosure module and data verified and/or assured

Environmental performance – Climate change

☑ Year on year change in absolute emissions (Scope 1 and 2)

☑ Other data point in module 7, please specify :Scope 1, 2, 3 emission

(13.1.1.3) Verification/assurance standard

General standards

☑ AA1000AS

☑ ISAE 3000

[Add row]

(13.3) Provide the following information for the person that has signed off (approved) your CDP response.

(13.3.1) Job title

Wahyudhi Eko Prasetyo

(13.3.2) Corresponding job category

Select from:

☑ Other, please specify :ESG Advisor

[Fixed row]

(13.4) Please indicate your consent for CDP to share contact details with the Pacific Institute to support content for its Water Action Hub website.

Select from:

☑ No