SASB STANDARDS

Now part of IFRS Foundation

Construction Materials

Sustainability Accounting Standard

EXTRACTIVES & MINERALS PROCESSING SECTOR

Sustainable Industry Classification System® (SICS®) EM-CM

Under Stewardship of the International Sustainability Standards Board

INDUSTRY STANDARD | VERSION 2023-12

IFRS Sustainability

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ABOUT THE SASB STANDARDS

As of August 2022, the International Sustainability Standards Board (ISSB) of the IFRS Foundation assumed responsibility for the SASB Standards. The ISSB has committed to maintain, enhance and evolve the SASB Standards and encourages preparers and investors to continue to use the SASB Standards.

IFRS S1 *General Requirements for Disclosure of Sustainability-related Financial Information* (IFRS S1) requires entities to refer to and consider the applicability of disclosure topics in the SASB Standards when identifying sustainability-related risks and opportunities that could reasonably be expected to affect an entity's prospects. Similarly, IFRS S1 requires entities to refer to and consider the applicability of metrics in the SASB Standards when determining what information to disclose regarding sustainability-related risks and opportunities.

In June 2023, the ISSB amended climate-related topics and metrics in the SASB Standards to align them with the industry-based guidance accompanying IFRS S2 *Climate-related Disclosures*. In December 2023, the ISSB amended the non-climate-related topics and metrics in connection with the International Applicability of SASB Standards project.

Effective Date

This version 2023-12 of the Standard is effective for all entities for annual periods beginning or after January 1, 2025. Early adoption is permitted for all entities.

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INTRODUCTION

Overview of SASB Standards

The SASB Standards are a set of 77 industry-specific sustainability accounting standards ("SASB Standards" or "Industry Standards"), categorised pursuant to the Sustainable Industry Classification System® (SICS®).

SASB Standards include:

1. **Industry descriptions** – which are intended to help entities identify applicable industry guidance by describing the business models, associated activities and other common features that characterise participation in the industry.

2. **Disclosure topics** – which describe specific sustainability-related risks or opportunities associated with the activities conducted by entities within a particular industry.

3. **Metrics** – which accompany disclosure topics and are designed to, either individually or as part of a set, provide useful information regarding an entity's performance for a specific disclosure topic.

4. **Technical protocols** – which provide guidance on definitions, scope, implementation and presentation of associated metrics.

5. **Activity metrics** – which quantify the scale of specific activities or operations by an entity and are intended for use in conjunction with the metrics referred to in point 3 to normalise data and facilitate comparison.

Entities using the SASB Standards as part of their implementation of ISSB Standards should consider the relevant ISSB application guidance.

For entities using the SASB Standards independently from ISSB Standards, the *SASB Standards Application Guidance* establishes guidance applicable to the use of all Industry Standards and is considered part of the Standards. Unless otherwise specified in the technical protocols contained in the Industry Standards, the guidance in the SASB Standards Application Guidance applies to the definitions, scope, implementation, compilation and presentation of the metrics in the Industry Standards.

Historically, the *SASB Conceptual Framework* set out the basic concepts, principles, definitions and objectives that guided the SASB Standards Board in its approach to setting standards for sustainability accounting.

Use of the Standards

SASB Standards are intended to aid entities in disclosing information about sustainability-related risks and opportunities that could reasonably be expected to affect the entity's cash flows, its access to finance or cost of capital over the short, medium or long term. An entity determines which Industry Standard(s) and which disclosure topics are relevant to its business, and which associated metrics to report. In general, an entity should use the SASB Standard specific to its primary industry as identified in SICS® . However, companies with substantial business in multiple SICS® industries should refer to and consider the applicability of the disclosure topics and associated metrics in additional SASB Standards.

The disclosure topics and associated metrics contained in this Standard have been identified as those that are likely to be useful to investors. However, the responsibility for making materiality judgements and determinations rests with the reporting entity.

Industry Description

Construction Materials entities have global operations and produce construction materials for sale to construction entities or wholesale distributors. These primarily include cement and aggregates, but also glass, plastic materials, insulation, bricks and roofing material. Materials producers operate their own quarries, mining crushed stone or sand and gravel. They may also purchase raw materials from the mining and petroleum industries.

Note: Entities producing wood-building products are included the Building Products & Furnishings (CG-BF) industry, Forestry Management industry (RR-FM), and Pulp & Paper Products industry (RR-PP) under the Sustainable Industry Classification System (SICS) and are not included in the Construction Materials standard.

SUSTAINABILITY DISCLOSURE TOPICS & METRICS

Table 1. Sustainability Disclosure Topics & Metrics

TOPIC	METRIC	CATEGORY	UNIT OF MEASURE	CODE
Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	Quantitative	Metric tonnes (t) CO_2-e, Percentage (%)	EM-CM-110a.1
	Discussion of long- and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Discussion and Analysis	n/a	EM-CM-110a.2
Air Quality	Air emissions of the following pollutants: (1) NO_x (excluding N_2O), (2) SO_x, (3) particulate matter (PM_{10}), (4) dioxins/furans, (5) volatile organic compounds (VOCs), (6) polycyclic aromatic hydrocarbons (PAHs) and (7) heavy metals	Quantitative	Metric tonnes (t)	EM-CM-120a.1
Energy Management	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage alternative and (4) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	EM-CM-130a.1
Water Management	(1) Total water withdrawn, (2) total water consumed; percentage of each in regions with High or Extremely High Baseline Water Stress	Quantitative	Thousand cubic metres (m^3), Percentage (%)	EM-CM-140a.1
Waste Management	Amount of waste generated, percentage hazardous and percentage recycled	Quantitative	Metric tonnes (t), Percentage (%)	EM-CM-150a.1
Biodiversity Impacts	Description of environmental management policies and practices for active sites	Discussion and Analysis	n/a	EM-CM-160a.1
	Terrestrial land area disturbed, percentage of impacted area restored	Quantitative	Hectares (ha), Percentage (%)	EM-CM-160a.2
Workforce Health & Safety	(1) Total recordable incident rate (TRIR) and (2) near miss frequency rate (NMFR) for (a) direct employees and (b) contract employees	Quantitative	Rate	EM-CM-320a.1
	Number of reported cases of silicosis [1]	Quantitative	Number	EM-CM-320a.2

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[1] Note to **EM-CM-320a.2** – The disclosure shall include a discussion of efforts to minimise workers' exposure to crystalline silica.

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TOPIC	METRIC	CATEGORY	UNIT OF MEASURE	CODE
Product Innovation	Percentage of products that qualify for credits in sustainable building design and construction certifications	Quantitative	Percentage (%) by annual sales revenue	EM-CM-410a.1
	Total addressable market and share of market for products that reduce energy, water or material impacts during usage or production	Quantitative	Presentation currency, Percentage (%)	EM-CM-410a.2
Pricing Integrity & Transparency	Total amount of monetary losses as a result of legal proceedings associated with cartel activities, price fixing, and antitrust activities [2]	Quantitative	Presentation currency	EM-CM-520a.1

Table 2. Activity Metrics

ACTIVITY METRIC	CATEGORY	UNIT OF MEASURE	CODE
Production by major product line[3]	Quantitative	Metric tonnes (t)	EM-CM-000.A

[2] Note to **EM-CM-520a.1** – The entity shall briefly describe the nature, context and any corrective actions taken because of monetary losses.

[3] Note to **EM-CM-000.A** - The determination of major product line (for example, cement and aggregates, composites, roofing materials, fibreglass, brick, tile and others) should be based on revenue generation and may include a category of 'other' construction materials products that combines multiple smaller revenue streams.

Greenhouse Gas Emissions

Topic Summary

The production of construction materials, particularly cement, generates significant direct greenhouse gas (GHG) emissions from on-site fuel combustion and chemical processes. The industry has achieved efficiency gains in reducing emissions per tonne of materials produced. At the same time, increasing production is associated with increasing absolute emissions from cement production. The production of construction materials remains carbon-intensive relative to other industries, exposing the industry to higher operating and capital expenditures from emissions regulations. Strategies to reduce GHG emissions include energy efficiency, use of alternative and renewable fuels, carbon sequestration and clinker substitution. Operational efficiencies can be achieved through the cost-effective reduction of GHG emissions. Such efficiencies can mitigate the potential financial impact of increased fuel costs as well as direct emissions from regulations that limit—or put a price on—GHG emissions.

Metrics

EM-CM-110a.1. Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations

1 The entity shall disclose its gross global Scope 1 greenhouse gas (GHG) emissions to the atmosphere of the seven GHGs covered under the Kyoto Protocol—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).

1.1 Emissions of all GHGs shall be consolidated and disclosed in metric tonnes of carbon dioxide equivalent (CO_2-e) and calculated in accordance with published 100-year time horizon global warming potential (GWP) values. To date, the preferred source for GWP values is the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (2014).

1.2 Gross emissions are GHGs emitted into the atmosphere before accounting for offsets, credits or other similar mechanisms that have reduced or compensated for emissions.

2 Scope 1 emissions are defined and shall be calculated according to the methodology contained in *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard* (GHG Protocol), Revised Edition, March 2004, published by the World Resources Institute and the World Business Council on Sustainable Development (WRI/WBCSD).

2.1 These emissions include direct emissions of GHGs from stationary or mobile sources that include production facilities, office buildings and product transportation (marine, road and rail).

2.2 Acceptable calculation methodologies include those that conform to the GHG Protocol as the base reference, but provide additional guidance, such as industry- or region-specific guidance. Examples include:

2.2.1 *GHG Reporting Guidance for the Aerospace Industry* published by the International Aerospace Environmental Group (IAEG)

2.2.2 *Greenhouse Gas Inventory Guidance: Direct Emissions from Stationary Combustion Sources* published by the US Environmental Protection Agency (EPA)

2.2.3 India GHG Inventory Program

2.2.4 ISO 14064-1

2.2.5 *Petroleum Industry Guidelines for reporting GHG emissions*, 2nd edition, 2011, published by Ipieca

2.2.6 *Protocol for the quantification of greenhouse gas emissions from waste management activities* published by Entreprises pour l'Environnement (EpE)

2.3 GHG emission data shall be consolidated according to the approach with which the entity consolidates its financial reporting data, which is generally aligned with the 'financial control' approach defined by the GHG Protocol and the approach provided by the Climate Disclosure Standards Board (CDSB) that is described in REQ-07, 'Organisational boundary,' of the *CDSB Framework for reporting environmental and social information.*

3 The entity shall disclose the percentage of its gross global Scope 1 GHG emissions covered under an emissions-limiting regulation or programme intended to limit or reduce emissions directly, such as cap-and-trade schemes, carbon tax/fee systems, and other emissions control (for example, command-and-control approach) and permit-based mechanisms.

3.1 Examples of emissions-limiting regulations include:

3.1.1 California Cap-and-Trade (California Global Warming Solutions Act)

3.1.2 European Union Emissions Trading Scheme (EU ETS)

3.1.3 Quebec Cap-and-Trade (Quebec Environment Quality Act)

3.2 The percentage shall be calculated as the total amount of gross global Scope 1 GHG emissions (CO_2-e) covered under emissions-limiting regulations divided by the total amount of gross global Scope 1 GHG emissions (CO_2-e).

3.2.1 For emissions subject to more than one emissions-limiting regulation, the entity shall not account for those emissions more than once.

3.3 The scope of emissions-limiting regulations excludes emissions covered under voluntary emissions-limiting regulations (for example, voluntary trading systems), as well as reporting-based regulations.

4 The entity may discuss any change in its emissions from the previous reporting period, including whether the change was because of emissions reductions, divestment, acquisition, mergers, changes in output or changes in calculation methodology.

5 In the case that current reporting of GHG emissions to the CDP or other entity (for example, a national regulatory disclosure programme) differs in terms of the scope and consolidation approach used, the entity may disclose those emissions. However, primary disclosure shall be according to the guidelines described above.

6 The entity may discuss the calculation methodology for its emissions disclosure, such as if data are from continuous emissions monitoring systems (CEMS), engineering calculations or mass balance calculations.

EM-CM-110a.2. Discussion of long- and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets

1 The entity shall discuss its long- and short-term strategy or plan to manage its Scope 1 greenhouse gas (GHG) emissions.

1.1 Scope 1 emissions are defined and shall be calculated according to the methodology contained in *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard* (GHG Protocol), Revised Edition, March 2004, published by the World Resources Institute and the World Business Council on Sustainable Development (WRI/WBCSD).

1.2 The scope of GHG emissions includes the seven GHGs covered under the Kyoto Protocol—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).

2 The entity shall discuss its emission reduction target(s) and analyse its performance against the target(s), including, if relevant:

2.1 The scope of the emission reduction target (for example, the percentage of total emissions to which the target is applicable);

2.2 Whether the target is absolute or intensity-based, and the metric denominator if it is an intensity-based target;

2.3 The percentage reduction against the base year, with the base year representing the first year against which emissions are evaluated towards the achievement of the target;

2.4 The time lines for the reduction activity, including the start year, the target year and the base year;

2.5 The mechanism(s) for achieving the target; and

2.6 Any circumstances in which the target or base year emissions have been, or may be, recalculated retrospectively or the target or base year has been reset.

3 The entity shall discuss the activities and investments required to achieve the plans or targets, and any risks or limiting factors that might affect achievement of the plans or targets.

4 The entity shall discuss the scope of its strategies, plans or reduction targets, such as whether they pertain differently to different business units, geographies or emissions sources.

5 The entity shall discuss whether its strategies, plans, or reduction targets are related to, or associated with, emissions limiting or emissions reporting-based programmes or regulations (for example, the EU Emissions Trading Scheme, Quebec Cap-and-Trade System, California Cap-and-Trade Program), including regional, national, international or sectoral programmes.

6 Disclosure of strategies, plans or reduction targets shall be limited to activities that were ongoing (active) or reached completion during the reporting period.

Air Quality

Topic Summary

On-site fuel combustion and production processes in the Construction Materials industry emit criteria air pollutants and hazardous chemicals, including small quantities of organic compounds and heavy metals. Emissions of particular concern include nitrogen oxides, sulphur dioxides, particulate matter, heavy metals (for example, mercury), dioxins and volatile organic compounds, among others. These air emissions can have significant, localised human health and environmental impacts. Financial impacts resulting from air emissions will vary depending on the specific location of operations and the applicable air emissions regulations, but they could include higher operating or capital expenditures and regulatory or legal penalties. Active management of the issue—through technological and process improvements—may allow entities to limit the impact of regulations and benefit from operational efficiencies that could lead to a lower cost structure over time.

Metrics

EM-CM-120a.1. Air emissions of the following pollutants: (1) NO_x (excluding N_2O), (2) SO_x, (3) particulate matter (PM_{10}), (4) dioxins/furans, (5) volatile organic compounds (VOCs), (6) polycyclic aromatic hydrocarbons (PAHs) and (7) heavy metals

1 The entity shall disclose its emissions of air pollutants, in metric tonnes per pollutant, released into the atmosphere.

1.1 The scope of disclosure includes air pollutants associated with the entity's direct air emissions resulting from all the entity's activities and sources of emissions, which may include stationary and mobile sources, production facilities, office buildings and transportation fleets.

2 The entity shall disclose its emissions of (1) oxides of nitrogen (NO_x), reported as NO_x.

2.1 The scope of NO_x includes NO and NO_2 but excludes N_2O.

3 The entity shall disclose its emissions of (2) oxides of sulphur (SOx), reported as SO_x.

3.1 The scope of SO_x includes SO_2 and SO_3.

4 The entity shall disclose its emissions of (3) particulate matter 10 micrometres or less in diameter (PM_{10}), reported as PM_{10}.

4.1 PM_{10} is defined as any airborne finely divided solid or liquid material with an aerodynamic diameter less than or equal to a nominal 10 micrometres.

5 The entity shall disclose its emissions of (4) dioxins/furans.

5.1 Dioxins/furans include, but are not limited to the sum of the 17 congeners of polychlorinated dibenzodioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) that contain chlorine

6 The entity shall disclose its emissions of (5) non-methane volatile organic compounds (VOCs).

6.1 VOCs are defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate and methane, that participates in atmospheric photochemical reactions, except those designated under applicable jurisdictional law or regulation as having negligible photochemical reactivity.

6.1.1 If applicable regulatory definitions of VOCs may conflict with this definition, the entity may define VOCs in accordance with the applicable regulatory definition.

7 The entity shall disclose its emissions of (6) polycyclic aromatic hydrocarbons (PAHs).

7.1 PAHs are a large group of organic compounds containing two or more fused aromatic (benzene) rings. A main source of emission is the incomplete combustion or pyrolysis of organic material.

7.2 PAHs include those listed in the World Health Organization's *2021 Human health effects of polycyclic aromatic hydrocarbons as ambient air pollutants: report of the Working Group on Polycyclic Aromatic Hydrocarbons of the Joint Task Force on the Health Aspects of Air Pollution*.

8 The entity shall disclose its emissions of (7) heavy metals.

8.1 The scope of heavy metals includes lead (Pb), mercury (Hg), and cadmium (Cd).

9 The entity may discuss the calculation methodology for its emissions disclosure, such as whether data are from continuous emissions monitoring systems (CEMS), engineering calculations or mass balance calculations.

Energy Management

Topic Summary

The production of construction materials requires significant energy, sourced primarily from direct fossil fuel combustion as well as from purchased electricity. Energy-intense production has implications for climate change, and electricity purchases from the grid can create indirect Scope 2 emissions. Construction materials entities also use alternative fuels for kilns, such as scrap tyres and waste oil—often waste generated by other industries. If properly managed, these can lower energy costs and greenhouse gas (GHG) emissions. However, potentially negative impacts could occur, such as releases of harmful air pollutants that entities need to minimise to obtain net benefits from using such fuels. Decisions about use of alternative fuels, renewable energy and on-site generation of electricity (versus purchases from the grid) can be important in influencing both the costs and reliability of energy supply. Affordable, easily accessible and reliable energy is an important competitive factor in this industry, with purchased fuels and electricity accounting for a significant proportion of total production costs. How a construction materials entity manages energy efficiency, reliance on different types of energy and associated sustainability risks, and access to alternative sources of energy may influence its profitability.

Metrics

EM-CM-130a.1. (1) Total energy consumed, (2) percentage grid electricity, (3) percentage alternative and (4) percentage renewable

1 The entity shall disclose (1) the total amount of energy it consumed as an aggregate figure, in gigajoules (GJ).

1.1 The scope of energy consumption includes energy from all sources, including energy purchased from external sources and energy produced by the entity itself (self-generated). For example, direct fuel usage, purchased electricity, and heating, cooling and steam energy are all included within the scope of energy consumption.

1.2 The scope of energy consumption includes only energy directly consumed by the entity during the reporting period.

1.3 In calculating energy consumption from fuels and biofuels, the entity shall use higher heating values (HHV), also known as gross calorific values (GCV), which are measured directly or taken from the Intergovernmental Panel on Climate Change (IPCC).

2 The entity shall disclose (2) the percentage of energy it consumed that was supplied from grid electricity.

2.1 The percentage shall be calculated as purchased grid electricity consumption divided by total energy consumption.

3 The entity shall disclose (3) the percentage of energy it consumed from alternative sources, in terms of its energy content.

3.1 Alternative sources of energy include used tyres, spent solvents and waste oils, processed municipal solid waste, household wastes, agricultural wastes such as rice, peanut shells and coffee husks, animal meal and sewage sludge.

4 The entity shall disclose (4) the percentage of energy it consumed that was renewable energy.

4.1 Renewable energy is defined as energy from sources that are replenished at a rate greater than or equal to their rate of depletion, such as geothermal, wind, solar, hydro and biomass.

4.2 The percentage shall be calculated as renewable energy consumption divided by total energy consumption.

4.3 The scope of renewable energy includes renewable fuel the entity consumed, renewable energy the entity directly produced and renewable energy the entity purchased, if purchased through a renewable power purchase agreement (PPA) that explicitly includes renewable energy certificates (RECs) or Guarantees of Origin (GOs), a Green-e Energy Certified utility or supplier programme, or other green power products that explicitly include RECs or GOs, or for which Green-e Energy Certified RECs are paired with grid electricity.

4.3.1 For any renewable electricity generated on-site, any RECs and GOs shall be retained (not sold) and retired or cancelled on behalf of the entity for the entity to claim them as renewable energy.

4.3.2 For renewable PPAs and green power products, the agreement shall explicitly include and convey that RECs and GOs be retained or replaced and retired or cancelled on behalf of the entity for the entity to claim them as renewable energy.

4.3.3 The renewable portion of the electricity grid mix that is outside of the control or influence of the entity is excluded from the scope of renewable energy.

4.4 For the purposes of this disclosure, the scope of renewable energy from biomass sources is limited to materials certified to a third-party standard (for example, Forest Stewardship Council, Sustainable Forest Initiative, Programme for the Endorsement of Forest Certification or American Tree Farm System), materials considered eligible sources of supply according to the *Green-e Framework for Renewable Energy Certification, Version 1.0* (2017) or Green-e regional standards, or materials eligible for an applicable jurisdictional renewable portfolio standard.

5 The entity shall apply conversion factors consistently for all data reported under this disclosure, such as the use of HHVs for fuel usage (including biofuels) and conversion of kilowatt hours (kWh) to GJ (for energy data including electricity from solar or wind energy).

Water Management

Topic Summary

Construction materials production requires substantial volumes of water. Entities face operational, regulatory and reputational risks associated with water scarcity, costs of water acquisition, regulations on effluents or amount of water used, and competition with local communities and other industries for limited water resources. Risks are likely to be higher in regions of water scarcity because of potential water availability constraints and price volatility. Entities unable to secure a stable water supply could face production disruptions, while rising water prices could directly increase production costs. Consequently, the adoption of technologies and processes that reduce water consumption could lower operating risks and costs for entities by minimising the impact of regulations, water supply shortages and community-related disruptions on entity operations.

Metrics

EM-CM-140a.1. (1) Total water withdrawn, (2) total water consumed; percentage of each in regions with High or Extremely High Baseline Water Stress

1 The entity shall disclose the amount of water, in thousands of cubic metres, withdrawn from all sources.

1.1 Water sources include surface water (including water from wetlands, rivers, lakes and oceans), groundwater, rainwater collected directly and stored by the entity, and water and wastewater obtained from municipal water supplies, water utilities or other entities.

2 The entity may disclose portions of its supply by source if, for example, significant portions of withdrawals are from non-freshwater sources.

2.1 Fresh water may be defined according to the local laws and regulations where the entity operates. If no legal definition exists, fresh water shall be considered to be water that has less than 1,000 parts per million of dissolved solids.

2.2 Water obtained from a water utility in compliance with jurisdictional drinking water regulations can be assumed to meet the definition of fresh water.

3 The entity shall disclose the amount of water, in thousands of cubic metres, consumed in its operations.

3.1 Water consumption is defined as:

3.1.1 Water that evaporates during withdrawal, use and discharge

3.1.2 Water that is directly or indirectly incorporated into the entity's product or service

3.1.3 Water that does not otherwise return to the same catchment area from which it was withdrawn, such as water returned to another catchment area or the sea

4 The entity shall analyse all its operations for water risks and identify activities that withdraw and consume water in locations with High (40–80%) or Extremely High (>80%) Baseline Water Stress as classified by the World Resources Institute's (WRI) Water Risk Atlas tool, Aqueduct.

5 The entity shall disclose water withdrawn in locations with High or Extremely High Baseline Water Stress as a percentage of the total water withdrawn.

6 The entity shall disclose water consumed in locations with High or Extremely High Baseline Water Stress as a percentage of the total water consumed.

Waste Management

Topic Summary

Construction materials production recycling rates are high. However, waste from production processes, pollution control devices and from hazardous waste management activities present a regulatory risk and can increase operating costs. Cement kiln dust (CKD)—consisting of fine-grained, solid, highly alkaline waste removed from cement kiln exhaust gas by air pollution control devices—is the most significant waste category in the industry. Regulatory risk remains high from evolving environmental laws. Entities that reduce waste streams—hazardous waste streams in particular—and recycle by-products, can reduce regulatory and litigation risks and costs.

Metrics

EM-CM-150a.1. Amount of waste generated, percentage hazardous and percentage recycled

1 The entity shall disclose the amount of waste generated in metric tonnes.

1.1 Waste is defined as anything for which the entity has no further use, and which is discarded or released to the environment.

1.2 The scope includes slags, dusts, sludges, used oil and other solid wastes that meet the above definition.

1.3 The scope excludes gaseous waste.

2 The entity shall disclose the percentage of waste generated that was hazardous.

2.1 The percentage of hazardous waste shall be calculated as the weight hazardous waste as defined in accordance with the applicable jurisdictional, legal or regulatory framework where the waste was generated divided by the total weight of waste material.

2.2 Hazardous waste generally displays the following characteristics: ignitability, corrosivity, reactivity or toxicity.

2.3 The entity may use United Nations Environmental Programme (UNEP) *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal* for the purposes of defining hazardous waste for operations located in jurisdictions that lack applicable legal or regulatory definitions.

3 The entity shall disclose the percentage of waste generated that was recycled.

3.1 The percentage recycled shall be calculated as the weight of waste material reused, plus the weight recycled or remanufactured (through treatment or processing) by the entity, plus the amount sent externally for further recycling, divided by the total weight of waste material.

3.1.1 Reused materials are defined as those recovered products or components of products used for the same purpose for which they were conceived.

3.1.2 Recycled and remanufactured materials are defined as waste materials that have been reprocessed or treated by means of production or manufacturing processes and made into a final product or made into a component for incorporation into a product.

3.1.3 The scope of recycled and remanufactured products includes primary recycled materials, co-products (outputs of equal value to primary recycled materials) and by-products (outputs of lesser value to primary recycled materials).

3.1.4 Portions of products and materials discarded in landfills are not considered recycled; only the portions of products directly incorporated into new products, co-products or by-products shall be included in the percentage recycled.

3.1.5 Materials sent for further recycling include those materials transferred to a third party for the expressed purpose of reuse, recycling or refurbishment.

3.2 Materials incinerated, including for energy recovery, shall not be considered within the scope of recycled materials.

3.2.1 Energy recovery is defined as the use of combustible waste to generate energy through direct incineration, with or without other waste, but with recovery of the heat.

3.2.2 The entity may separately disclose the percentage of hazardous waste generated that was incinerated.

4 The entity shall disclose the legal or regulatory framework(s) used to define waste, hazardous waste and recycled hazardous waste.

Biodiversity Impacts

Topic Summary

Construction materials entities often operate their own quarries close to processing facilities. Quarrying requires the removal of vegetation and topsoil. It also requires the blasting and crushing of underlying stone deposits. The process can result in permanent landscape alterations, with associated biodiversity impacts. Because of an increasing awareness and protection of ecosystems, the environmental characteristics of the land where quarrying takes place could increase extraction costs. Entities could also face regulatory or reputational barriers to accessing sites in ecologically sensitive areas. This may include new protection status afforded to areas where reserves are located. Quarrying operations also may be subject to laws protecting endangered species. Entities that have an effective environmental management plan for each stage of the project lifecycle—including restoration during site decommissioning—could minimise their compliance costs and legal liabilities. These entities may face less community resistance in quarrying at new sites and avoid difficulties in obtaining permits and delays in project completion.

Metrics

EM-CM-160a.1. Description of environmental management policies and practices for active sites

1 The entity shall describe its environmental management plans implemented at active sites, including, if relevant:

1.1 the lifecycle stages to which the plans apply, such as pre-bid (when the entity is considering acquisition of a site), during exploration and appraisal, site development, production, closure, decommissioning and restoration;

1.2 the topics addressed by the plans, such as ecological and biodiversity impacts, waste generation, noise, emissions to air, discharges to water, natural resource consumption and hazardous chemical use;

1.3 the underlying references for its plans, including whether they are codes, guidelines, standards or regulations; and

1.4 whether they were developed by the entity, an industry organisation, a third-party organisation (for example, a non-governmental organisation), a governmental agency or some combination of these groups.

2 If relevant, the entity shall describe specific policies and practices that apply to areas with protected conservation status or areas of critical habitat, which are defined by the International Finance Corporation (IFC) Performance Standard 6, *Biodiversity Conservation and Sustainable Management of Living Natural Resources* as:

2.1 areas with high biodiversity value, including (i) habitat of significant importance to Critically Endangered or Endangered species; (ii) habitat of significant importance to endemic or restricted-range species; (iii) habitat supporting globally significant concentrations of migratory species or congregatory species; (iv) highly threatened or rare ecosystems; or (v) areas associated with important evolutionary processes.

3 If the management policies and practices do not apply to all the entity's sites or operations, it shall include the percentage of sites to which they were applied.

4 If environmental management policies and practices differ significantly by resource or mineral (for example, silica as compared to gypsum), then the entity shall describe the differences between these policies and practices for each resource.

5 The entity shall disclose the degree to which its policies and practices are aligned with the IFC's *Performance Standards on Environmental and Social Sustainability*, 2012, including:

5.1 Performance Standard 1, *Assessment and Management of Environmental and Social Risks and Impacts*;

5.2 Performance Standard 3, *Resource Efficiency and Pollution Prevention*;

5.3 Performance Standard 4, *Community Health, Safety, and Security*; and

5.4 Performance Standard 6, *Biodiversity Conservation and Sustainable Management of Living Natural Resources*.

6 Additional relevant references may include the latest editions of:

6.1 International Finance Corporation, *Environmental, Health and Safety Guidelines for Mining*; and

6.2 World Bank Multistakeholder Initiative, *Towards Sustainable Decommissioning and Closure of Oil Fields and Mines: A Toolkit to Assist Government Agencies*.

EM-CM-160a.2. Terrestrial land area disturbed, percentage of impacted area restored

1 The entity shall disclose the total area of disturbed land, measured in hectares, including land in the exploration, development, production, closure and post-closure project phases.

1.1 This disclosure shall be a cumulative total of all currently active sites and sites being restored; it is not limited to land newly disturbed during the reporting period.

1.2 Land shall no longer be considered disturbed once post-closure restoration and remediation efforts are substantially complete (even if monitoring is ongoing).

2 The entity shall disclose the percentage of disturbed land, measured in hectares, that was restored during the reporting period. At a minimum, restoration should meet the Society for Ecological Restoration definition: 'the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed'.

2.1 Restoration may be further defined by applicable jurisdictional laws or regulations, industry standards or the entity's own guidelines.

2.2 The entity shall disclose the definition of restoration and accompanying practices it follows.

Workforce Health & Safety

Topic Summary

Employees and contractors of construction materials entities face significant health and safety risks. Industry hazards include those arising from heavy equipment use and quarrying operations. In addition to acute impacts, workers can develop chronic health conditions from silica dust inhalation, among other factors. Because of these hazards, the industry has relatively high mortality rates, and many entities have implemented a strong safety culture and health and safety policies to mitigate associated risks. Worker injuries, illnesses and fatalities can result in regulatory penalties, negative publicity, low worker morale and productivity, and increased health care and compensation costs.

Metrics

EM-CM-320a.1. (1) Total recordable incident rate (TRIR) and (2) near miss frequency rate (NMFR) for (a) direct employees and (b) contract employees

1 The entity shall disclose (1) its total recordable incident rate (TRIR) for work-related injuries and illnesses.

1.1 An injury or illness is considered a recordable incident if it results in death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, or loss of consciousness. Additionally, a significant injury or illness diagnosed by a physician or other licensed health care professional is considered a recordable incident, even if it does not result in death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness.

1.1.1 First aid is defined as emergency care or treatment for an ill or injured person before regular medical aid can be provided.

1.1.2 The entity may use applicable jurisdictional criteria for definitions of a recordable incident and a non-recordable incident such as first aid. The entity shall disclose the legal, regulatory or industry framework used as the source for these criteria and definitions.

2 The entity shall disclose (2) its near miss frequency rate (NMFR) for work-related near misses.

2.1 A near miss is defined as an unplanned or uncontrolled event or chain of events that has not resulted in a recordable injury, illness, physical damage or environmental damage, but had the potential to do so in other circumstances.

2.2 The entity may disclose its process for classifying, identifying and reporting near misses.

3 All disclosed rates shall be calculated as: (statistic count × 200,000) / total number of hours worked by all employees in the year reported.

3.1 The ‘200,000’ in the rate calculation represents the total number of hours 100 full-time workers working 40 hours per week for 50 weeks per year can provide annually.

4 The scope of the disclosure includes work-related incidents only.

4.1 Work-related incidents are injuries and illnesses resulting from events or exposures in the work environment.

4.2 The work environment is the establishment and other locations where one or more employees are working or are present as a condition of their employment.

4.3 The work environment includes not only physical locations, but also the equipment or materials used by the employee during the course of work.

4.4 Incidents that occur while an employee is travelling are work-related if, at the time of the injury or illness, the employee was engaged in work activities in the interest of the employer.

4.5 A work-related incident must be a new case, not a previously recorded injury or illness being updated.

5 The entity shall disclose the rates for each of these employee categories:

5.1 direct employees, defined as those individuals on the entity's payroll, whether they are full-time, short service, part-time, executive, labour, salary, seasonal, migrant or hourly employees; and

5.2 contract employees, defined as individuals who are not on the entity's payroll, but whom the entity supervises or manages, including independent contractors and those employed by third parties (for example, temp agencies and labour brokers).

6 The scope of the disclosure includes all employees regardless of employee location or type of employment.

EM-CM-320a.2. Number of reported cases of silicosis

1 The entity shall disclose the total number of reported cases of silicosis affecting the entity's current workforce or past employees.

1.1 Silicosis is defined in accordance with the World Health Organization's International Classification of Diseases as pneumoconiosis resulting from exposure to dust containing silica.

1.2 The scope of the disclosure includes clinically diagnosed cases of chronic, acute and accelerated silicosis.

Note to **EM-CM-320a.2**

1 The entity shall disclose its efforts to minimise workers' exposure to crystalline silica, such as respirator programmes, engineering controls or safety training programmes.

2 The entity shall describe its processes (for example, for rules and their enforcement), procedures, trainings and technologies used to minimise its workforce's exposure to crystalline silica.

2.1 This may include systems for maintaining compliance with applicable jurisdictional laws or regulations on ventilation, air and air contaminants, focusing on mineral dusts.

3 The entity may discuss the recommended and permissible silica exposure limits and standards it follows.

Product Innovation

Topic Summary

Innovations in building materials are an essential component in the growth of sustainable construction. Consumer and regulatory trends are driving adoption of sustainable building materials and processes that are more resource efficient and can reduce health impacts of buildings throughout their lifecycle. This is creating new business drivers for construction materials entities, with an opportunity to increase revenue. Furthermore, some new products require less energy to produce, or use largely recycled inputs, reducing production costs. Therefore, sustainable construction materials can contribute to an entity's long-term growth and competitiveness.

Metrics

EM-CM-410a.1. Percentage of products that qualify for credits in sustainable building design and construction certifications

1 The entity shall calculate the percentage as the revenue during the reporting period from products that qualify for credits in recognised sustainable design and construction certifications divided by the total revenue from building products.

1.1 The scope of products excludes raw or intermediate materials that would require additional manufacturing before being incorporated into a building; the entity shall exclude these products from the numerator and denominator of the calculation.

2 Recognised sustainable building design and construction certifications and guidelines include BREEAM® (BRE Global), Green Globes® (Green Building Initiative), LEED® (US Green Building Council) and ICC-700 National Green Building Standard® (National Association of Home Builders).[4]

2.1 If the entity's products can be used to obtain credits in certifications other than those described above, it shall provide the name of the certification and evidence of why it is equal to or more rigorous than those standards listed here.

3 The entity may disclose and discuss which specific products contribute to sustainable building practices, as well as its plans to address market demand for these types of products.

EM-CM-410a.2. Total addressable market and share of market for products that reduce energy, water or material impacts during usage or production

1 The entity shall provide an estimate of the total addressable market for products that show reduced environmental impacts at various lifecycle stages, including during material sourcing, manufacturing and product usage (hereafter, 'reduced environmental impact products').

[4] The ISSB is not affiliated with any of the standards or organisations listed, and listing should not be taken as an endorsement of any standard or organisation. Listing of standards is not meant to imply that standards are identical in scope, underlying requirements or criteria, or that standards are interchangeable.

1.1 Total addressable market is defined as potential revenue should the entity capture 100% of the market share of the product category (for example, the global market for reduced environmental impact products).

2 The scope of products includes those:

2.1 With product attributes that reduce energy consumption or increase energy efficiency for users, such as by providing improved insulation compared to typical products

2.2 With process or product attributes that reduce the amount of water required in manufacturing, during product assembly or product usage

2.3 That use secondary or recycled materials in place of virgin materials such that upstream impacts are reduced

2.4 Made with design innovations that reduce carbon emissions during manufacturing, such as use of renewable fuels, energy efficiency improvements or the use of materials requiring less processing

3 If a significant difference exists between the total addressable market and the market that the entity can serve through its existing or planned capabilities, sales channels or products (the serviceable available market), then the entity should disclose this information.

4 The entity shall disclose the share of the total addressable market for reduced environmental impact products it currently captures with its products.

4.1 Market share shall be calculated as revenue from these products divided by the size of the total addressable market.

5 The entity may provide a projection of growth of this market, where the projected addressable market is represented—based on a reasonable set of assumptions about changes in market conditions—as a percentage of year-on-year growth or as an estimate of the market size after a defined period (the market size in 10 years).

5.1 The entity may disclose its target three-year market share as a measurement of targeted growth, where the target is the percentage of the total addressable market the entity plans to address over a three-year time horizon.

Pricing Integrity & Transparency

Topic Summary

The construction materials market has been subject to instances of anti-competitive behaviour, such as artificially high prices maintained through cartel activity. Most countries have well-established fair business practice laws to prevent such behaviour. Business activity leading to price fixing or other manipulation of prices can result in material legal fines or business disruption. Managing anti-competitive behaviour within an organisation can effectively mitigate regulatory risks, including those related to investigations of mergers and acquisitions or compliance costs.

Metrics

EM-CM-520a.1. Total amount of monetary losses as a result of legal proceedings associated with cartel activities, price fixing, and antitrust activities

1 The entity shall disclose the total amount of monetary losses incurred during the reporting period resulting from legal proceedings associated with anti-competitive behaviour, such as those related to cartel activities, price fixing and antitrust activities.

2 The legal proceedings shall include any adjudicative proceeding involving the entity, whether before a court, a regulator, an arbitrator or otherwise.

3 The losses shall include all monetary liabilities to the opposing party or to others (whether as the result of settlement, verdict after trial or otherwise), including fines and other monetary liabilities incurred during the reporting period as a result of civil actions (for example, civil judgements or settlements), regulatory proceedings (for example, penalties, disgorgement or restitution) and criminal actions (for example, criminal judgements, penalties or restitution) brought by any entity (for example, governmental, business or individual).

4 The scope of monetary losses shall exclude legal and other fees and expenses incurred by the entity in its defence.

Note to **EM-CM-520a.1**

1 The entity shall briefly describe the nature (for example, judgement or order issued after trial, settlement, guilty plea, deferred prosecution agreement or non-prosecution agreement) and context (for example, cartel activities, price fixing or antitrust) of all monetary losses resulting from legal proceedings.

2 The entity shall describe any corrective actions implemented in response to the legal proceedings. This may include specific changes in operations, management, processes, products, business partners, training or technology.

SASB STANDARDS

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