SASB STANDARDS

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Road Transportation

Sustainability Accounting Standard

TRANSPORTATION SECTOR

Sustainable Industry Classification System® (SICS®) TR-RO

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

Road Transportation industry entities provide long- and short-haul freight trucking services. Important activities include containerised and bulk freight shipment, including consumer goods and a wide variety of commodities. Generally, the industry may be categorised two ways: truckload (vehicles carrying the goods of only one customer) and less-than-truckload (vehicles carrying the goods of multiple customers). Owner-operators comprise the vast majority of the industry because of the relative ease of entry. A few large operators maintain market share through contracts with major shippers. Large entities often subcontract with owner-operators to supplement their owned fleet.

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	Quantitative	Metric tonnes (t) CO_2-e	TR-RO-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	TR-RO-110a.2
	(1) Total fuel consumed, (2) percentage natural gas and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	TR-RO-110a.3
Air Quality	Air emissions of the following pollutants: (1) NO_x (excluding N_2O), (2) SO_x, and (3) particulate matter (PM_{10})	Quantitative	Metric tonnes (t)	TR-RO-120a.1
Workforce Conditions, Health & Safety	(1) Total recordable incident rate (TRIR) and (2) fatality rate for (a) direct employees and (b) contract employees	Quantitative	Rate	TR-RO-320a.1
	(1) Voluntary and (2) involuntary turnover rate for all employees	Quantitative	Percentage (%)	TR-RO-320a.2
	Description of approach to managing short-term and long-term driver health risks	Discussion and Analysis	n/a	TR-RO-320a.3
Accident & Safety Management	Number of road accidents and incidents	Quantitative	Number	TR-RO-540a.1
	(1) Number and (2) aggregate volume of spills and releases to the environment	Quantitative	Number, Cubic metres (m^3)	TR-RO-540a.3

Table 2. Activity Metrics

ACTIVITY METRIC	CATEGORY	UNIT OF MEASURE	CODE
Revenue tonne-kilometres (RTK)[1]	Quantitative	RTK	TR-RO-000.A
Load factor[2]	Quantitative	Number	TR-RO-000.B
Number of employees, number of truck drivers	Quantitative	Number	TR-RO-000.C

[1] Note to **TR-RO-000.A** –A revenue tonne-kilometre (RTK) is defined as one metric tonne of revenue traffic transported one kilometre. RTK is computed by multiplying the vehicle-kilometres travelled on each leg by the number of tonnes of revenue traffic carried on that leg.

[2] Note to **TR-RO-000.B** – Load factor is a measure of capacity utilisation and is calculated as cargo distance travelled divided by total distance travelled.

Greenhouse Gas Emissions

Topic Summary

The Road Transportation industry generates emissions mainly through the combustion of diesel and other fossil fuels in truck engines. Greenhouse gases (GHGs) including carbon dioxide (CO_2) are of particular importance to government regulators concerned about climate change and to consumers demanding low-carbon or carbon-neutral transportation solutions. Because GHG emissions from trucks constitute a significant portion of transportation-related emissions, the industry is a focal point for regulations to limit GHG emissions. Operational changes that increase fuel efficiency may reduce fuel costs while also limiting exposure to volatile fuel pricing, regulatory costs and other consequences of GHG emissions. Although newer trucks are more fuel-efficient, other measures also may improve efficiency and reduce emissions in existing fleets.

Metrics

TR-RO-110a.1. Gross global Scope 1 emissions

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 equivalents (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 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 may include:

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

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

2.1.3 India GHG Inventory Program

2.1.4 ISO 14064-1

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

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

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

3 The entity may discuss any change in 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.

4 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.

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

TR-RO-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 according to *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.

3.1 Relevant activities and investments may include fuel optimisation efforts such as route and load optimisation, adoption of technology such as engine and powertrain efficiency and aerodynamic improvements, use of electric- or natural gas-powered vehicles, weight reduction, improved tyre rolling resistance, hybridisation, and automatic engine shutdown.

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.

TR-RO-110a.3. (1) Total fuel consumed, (2) percentage natural gas and (3) percentage renewable

1 The entity shall disclose (1) the total amount of fuel consumed from all sources as an aggregate figure, in gigajoules (GJ).

1.1 The calculation methodology for fuel consumed shall be based on actual fuel consumed as opposed to design parameters.

1.2 Acceptable calculation methodologies for fuel consumed may include methodologies based on:

1.2.1 Adding fuel purchases made during the reporting period to beginning inventory at the start of the reporting period, minus any fuel inventory at the end of the reporting period

1.2.2 Tracking fuel consumed by vehicles

1.2.3 Tracking fuel expenses

2 The entity shall disclose (2) the percentage of fuel consumed that is natural gas.

2.1 The percentage shall be calculated as the amount of natural gas consumed (in GJ) divided by the total amount of fuel consumed (in GJ).

3 The entity shall disclose (3) the percentage of fuel consumed that was renewable fuel.

3.1 Renewable fuel generally is defined as fuel that meets all of these requirements:

3.1.1 Produced from renewable biomass

3.1.2 Used to replace or reduce the quantity of fossil fuel present in a transportation fuel, heating oil or jet fuel

3.1.3 Achieved net greenhouse gas (GHG) emission reduction on a lifecycle basis

3.2 The entity shall disclose the standard or regulation used to determine if a fuel is renewable.

3.3 The percentage shall be calculated as the amount of renewable fuel consumed (in GJ) divided by the total amount of fuel consumed (in GJ).

4 The scope of disclosure only includes fuel directly consumed by the entity.

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

6 The entity shall apply conversion factors consistently for all data reported under this disclosure, such as the use of HHVs for fuel use (including biofuels).

Air Quality

Topic Summary

Compared to other modes of transport, road freight has a more localised negative effect on air quality from emissions of sulphur oxides (SOx), nitrogen oxides (NOx) and particulate matter (PM). Heavy reliance on diesel fuel is of particular concern. Although diesel engines realise better gas mileage than gasoline engines, they generate more harmful air pollutants. Using alternative fuels and filtering emissions prior to release may help entities comply with air quality regulations and avoid contributing to smog in cities and dense population centres, which may damage their social licence to operate.

Metrics

TR-RO-120a.1. Air emissions of the following pollutants: (1) NO_x (excluding N_2O), (2) SO_x, and (3) particulate matter (PM_{10})

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

1.1 The scope of the 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 or 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 (SO_x), 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 may discuss the calculation method for its emissions disclosure, such as whether data is from continuous emissions monitoring systems (CEMS), engineering calculations or mass balance calculations.

Workforce Conditions, Health & Safety

Topic Summary

The Road Transportation industry faces challenges with driver recruitment and retention. The industry has challenging working conditions and regulations that limit working hours. Possible labour shortages may raise labour costs and reduce industry revenue. Time-critical deliveries are demanding for drivers, who may experience long and often odd hours behind the wheel, lengthy stays away from home, lack of sleep and feelings of isolation. These factors, in combination with high injury and illness rates, largely because of accidents, make recruiting new drivers and retaining existing staff difficult. Entities that offer better driver working conditions may benefit from lower employee turnover rates, higher productivity and the ability to hire staff to expand operations and increase revenue.

Metrics

TR-RO-320a.1. (1) Total recordable incident rate (TRIR) and (2) fatality rate 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 fatality rate for work-related fatalities.

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 individuals on the entity's payroll, whether they are full-time, short service, part-time, executive, labour, salary, seasonal, migrant or hourly employees.

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.

TR-RO-320a.2. (1) Voluntary and (2) involuntary turnover rate for all employees

1 The entity shall disclose the employee turnover rate as a percentage for all employees.

1.1 Turnover shall be disclosed separately for (1) voluntary and (2) involuntary departures.

2 The entity shall calculate (1) the voluntary turnover rate as the number of employee-initiated separations (for example, resignation or retirement) during the reporting period, divided by the average number of workers employed during the reporting period.

3 The entity shall calculate (2) the involuntary turnover rate shall as the number of entity-initiated separations (for example, dismissal, downsizing, redundancy or non-renewal of contract) during the reporting period, divided by the average number of workers employed during the reporting period.

TR-RO-320a.3. Description of approach to managing short-term and long-term driver health risks

1 The entity shall describe its efforts to assess, monitor and reduce exposure of employees to human health hazards, which may include fatigue, sleep deprivation, obesity and associated diseases, hypertension, and mental and emotional health issues.

1.1 Relevant efforts to discuss may include risk assessments, participation in long-term health studies, health and wellness monitoring programmes, and use of electronic on-board recorders (EOBRs).

2 The entity shall describe its management approach in the context of short-term (acute) risks and long-term (chronic) risks.

3 The disclosure shall focus on truck drivers but may include other employees, as relevant.

4 The entity may discuss compliance with applicable jurisdictional laws or regulations and recommendations for hours of service, scheduling, sleep apnoea and fatigue management.

Accident & Safety Management

Topic Summary

Road transportation involves inherent dangers, including accidents resulting from mechanical failure or human error. Entities in this industry train drivers and maintenance staff to minimise accidents. Injury and fatality rates, associated costs, and investment in safety technologies show the significance of the issue for the industry. Entities with more effective safety management may improve operational efficiency, retain drivers, reduce delays and avoid costs associated with serious accidents. In contrast, those with poor safety management may experience regulatory penalties, higher insurance premiums and service disruptions that reduce revenues and impair brand value.

Metrics

TR-RO-540a.1. Number of road accidents and incidents

1 The entity shall disclose the total number of road accidents and incidents involving its direct or contracted employees during hours of employment.

1.1 Direct employees are defined as individuals on the entity's payroll, whether they are full-time, short service, part-time, executive, labour, salary, seasonal, migrant or hourly employees.

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

1.3 An accident is defined as an occurrence involving a commercial vehicle operating on a road and engaging in commercial activities that results in one or more vehicles incurring disabling damage because of the accident, requiring the vehicle(s) to be transported away from the scene by a tow truck or another vehicle or to be abandoned.

1.4 An accident does not include:

1.4.1 an occurrence involving only boarding and alighting from a stationary vehicle; or

1.4.2 an occurrence involving only the loading or unloading of cargo.

1.5 An incident is defined as any event involving a licensed vehicle while on business use resulting in a recordable incident vehicle damage or other property damage.

1.5.1 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.

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

1.5.3 The entity may use applicable jurisdictional legal or regulatory criteria for definitions of recordable incident and first aid.

2 The minimum scope of disclosure includes accidents and incidents reported to an applicable jurisdictional legal or regulatory authority.

TR-RO-540a.3. (1) Number and (2) aggregate volume of spills and releases to the environment

1 The entity shall disclose (1) the total number of spills and releases of hazardous material to the environment.

1.1 Hazardous material is defined as a substance or material that an applicable jurisdictional legal or regulatory authority has determined can pose an unreasonable risk to health, safety and property when transported in commerce (including explosives; radioactive materials; infectious substances; flammable or combustible liquids, solids or gases; toxic, oxidising or corrosive materials; and compressed gases), and has been designated as hazardous in accordance with hazardous materials transportation law.

1.1.1 The scope of hazardous materials includes hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, and materials designated as hazardous by the applicable jurisdictional legal and regulatory framework(s) where the materials were generated.

1.1.2 The entity may use definitions of hazardous waste from the United Nations Environment Programme's (UNEP) *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*.

2 The entity shall disclose (2) the total volume of spills and releases of hazardous material to the environment in cubic metres.

2.1 The volume shall be calculated as the total estimated amount spilled that reached the environment, without reducing that figure by the amount of such material that was subsequently recovered, evaporated or otherwise lost.

3 A spill that qualifies as a spill to both soil and water shall be reported as a single spill to water, with the volume properly apportioned to soil and water.

4 The entity additionally may disclose spills to soil and water separately.

4.1 A release that qualifies as a release to both soil and water may be reported as a single release to water, with the quantity of the release properly apportioned to soil and water.

5 If relevant, the entity may disaggregate spills and releases by type, such as hydrocarbons and hazardous substances.

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